



# Microsoft Dynamics 365

## 2019 RELEASE WAVE 2 PLAN

Features releasing from October 2019 through March 2020

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# Dynamics 365: 2019 release wave 2 plan

The Dynamics 365 release plan (formerly release notes) for the 2019 release wave 2 describes all new features releasing from October 2019 through March 2020. You can either browse the release plan [online](#) or download the document as a [PDF file](#). The PDF file also includes information about Power Apps, Power Automate, Power Virtual Agents, and Common Data Model and data integration.

New for wave 2: The Power Platform features coming in the 2019 release wave 2 have been summarized in a separate [release plan](#) as well as a downloadable [PDF](#).

## 2019 release wave 2 overview

The 2019 release wave 2 for Dynamics 365 brings new innovations that provide you with significant capabilities to transform your business.

## Dynamics 365 applications

The enhancements to Dynamics 365 applications include hundreds of new capabilities across the business process applications:

- Sales
- Marketing
- Customer Service
- Field Service
- Project Service Automation
- Finance
- Supply Chain Management
- Talent
- Retail
- Business Central

## New addition to the Dynamics 365 applications

Starting in October 2019, we will have a new business process application.

**Dynamics 365 Commerce** – Built on the proven Dynamics 365 Retail capabilities—delivers a comprehensive omnichannel solution that unifies back-office, in-store, call center, and digital experiences.

Starting in December 2019, we will have a new business process application.

**Dynamics 365 Human Resources** – Helps HR professionals get the workforce insights needed to build data-driven employee experiences across multiple areas. It connects people and operations data to ensure businesses can optimize workforce costs and take better care of employees.

## Artificial intelligence

The 2019 release wave 2 enhances artificial intelligence capabilities to help organizations accelerate their transformation of customer service, sales, and marketing functions:

- **Sales Insights** empowers teams with more foresight, to enhance productivity and better anticipate outcomes across the sales lifecycle.
- **Customer Service Insights** provides an actionable view into critical performance metrics, operational data, and emerging trends using industry-leading artificial intelligence.
- **Customer Insights** enables every organization to unify and understand their customer data to harness it for intelligent insights and actions.
- **Market Insights** enables business users to gather actionable insights based on what consumers say, seek, and feel about their brands and products.
- **Fraud Protection** enables the e-commerce merchants to drive down fraud loss, increase bank acceptance rates to yield higher revenue, and improve the online shopping experience.

**NOTE** As of November 2019, Dynamics 365 Virtual Agent for Customer Service will be known as **Power Virtual Agents** and moved under [Power Platform Release Plan](#).

## New additions to the AI apps

Starting in October 2019, we will have two additional artificial intelligence apps:

- **Product Insights** enables organizations to transform their product development, marketing, sales, and support by acting on real-time insight into their customers' usage and experience.
- **Connected Store** enables merchants of brick-and-mortar stores with actionable insights by using data from cloud-connected sensors.

## Mixed reality

The 2019 release wave 2 continues to add a whole new set of experiences to enhance employee productivity using mixed reality:

- **Dynamics 365 Remote Assist** empowers technicians to solve problems faster the first time.
- **Dynamics 365 Layout** provides a new way for space planners to bring designs from concept to completion with confidence and speed.
- **Dynamics 365 Product Visualize** empowers salespeople to convey the true potential of their products to their customers by harnessing the power of augmented reality on their mobile devices.
- **Dynamics 365 Guides** is a mixed-reality application for Microsoft HoloLens that enables employees to learn in the flow of work by providing holographic instructions when and where they need them.

## Key dates for the 2019 release wave 2

This release plan describes functionality that may not have been released yet. Delivery timelines and projected functionality may change or may not ship (see [Microsoft policy](#)).

Here are the [key dates](#) for the 2019 release wave 2.

Milestone	Date	Description
Release plans available	June 10, 2019	Learn about the new capabilities coming in the 2019 release wave 2 (October 2019 – March 2020) across Dynamics 365 and the PowerPlatform.
Release plans available in additional 11 languages	July 8, 2019	The Dynamics 365 and Power Platform release plans are published in <a href="#">Danish</a> , <a href="#">Dutch</a> , <a href="#">Finnish</a> , <a href="#">French</a> , <a href="#">German</a> , <a href="#">Italian</a> , <a href="#">Japanese</a> , <a href="#">Norwegian</a> , <a href="#">Portuguese (Brazilian)</a> , <a href="#">Spanish</a> , and <a href="#">Swedish</a> .
Early access available	August 2, 2019	Try and validate the new features and capabilities that will be a part of the 2019 release wave 2, October update, before they get enabled automatically for your users.
General availability	October 1, 2019	Production deployment for the 2019 release wave 2 begins. Specific deployment dates for each country or region or instance will be communicated in advance.

## We are listening: New for 2019 release wave 2

In the April '19 release, we heard feedback that it was not clear which features were turned on automatically and when exactly each feature would be delivered. To address this, we specify when each feature will be available. In addition, we call out how each feature is enabled:

- **Users, automatically:** These features include changes to the user experience for users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **Users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their users.

You can get ready with confidence knowing which features will be enabled automatically.

We've done this work to help you—our partners, customers, and users—drive the digital transformation of your business on your terms. We're looking forward to engaging with you as you put these new services and capabilities to work, and we're eager to hear your feedback as you dig into the 2019 release wave 2.

Let us know your thoughts. Share your feedback on the [Dynamics 365 community forum](#). We will use your feedback to make improvements.

# Change history

This topic is updated when a feature's release date changes or when a feature is added or removed. You can see the full topic in the Dynamics 365 [Change history](#) online.



# 2019 release wave 2 features available for early access

This topic lists the Dynamics 365 features that can be enabled for testing in your environment beginning August 2, 2019.

Features from the following apps are available as part of early access:

- Dynamics 365 Marketing
- Dynamics 365 Sales
- Dynamics 365 Customer Service
- Dynamics 365 Field Service
- Dynamics 365 Retail
- Dynamics 365 Finance
- Dynamics 365 Supply Chain Management

The features from these apps update the existing user experiences. You can opt in early to enable these features in your environment. This will allow you to test these features and then adopt them across your environments. For information on how to enable these features, see [Opt in to 2019 release wave 2 updates](#).

**IMPORTANT** If you are using UCI or Power Automate, there may be early access features that could impact your users. For Power Platform early access features, see [Release wave 2 features available for early access](#).

## Dynamics 365 Marketing

For a complete list of the Dynamics 365 Marketing features, see [What's new and planned for Dynamics 365 Marketing](#).

**IMPORTANT** Dynamics 365 Marketing requires additional steps to activate the 2019 release wave 2 features (you must first opt in for early access on the instance and then update the Marketing app). See the [instructions](#) for complete details.

Feature	Enabled for	Early access	General availability
<a href="#">Customer Insights integration</a>	Users, automatically	August 2, 2019	October 2019

Feature	Enabled for	Early access	General availability
<a href="#">Easy setup for subscription lists</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Email A/B testing</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Layout editor</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Support approvals using Power Automate</a>	Users, automatically	August 2, 2019	October 2019

## Dynamics 365 Sales

For a complete list of the Dynamics 365 Sales features, see [What's new and planned for Dynamics 365 Sales](#).

Feature	Enabled for	Early access	General availability
<a href="#">Business card scan</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Customization of Opportunity Close dialog box*</a>	Users by admins, makers, or analysts	August 2, 2019	October 2019
<a href="#">Enhance the adding or editing Opportunity/Quote/Order/Invoice products experience</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Improve or simplify most common sales workflows</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">LinkedIn Sales Navigator integration enhancements</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Microsoft Teams integration enhancements</a>	Users, automatically	August 2, 2019	October 2019

Feature	Enabled for	Early access	General availability
<a href="#">Out-of-the-box hierarchical relationship on the Territory entity</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Simplified lead management experience</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Softphone dialer</a> *	Users by admins, makers, or analysts	August 2, 2019	October 2019

\* These features will not be rolled out automatically; an admin must enable them for the users.

## Dynamics 365 Customer Service

For a complete list of the Dynamics 365 Customer Service features, see [What's new and planned for Dynamics 365 Customer Service](#).

Feature	Enabled for	Early access	General availability
<a href="#">Knowledge article templates</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Knowledge management search and rendering enhancement</a>	Users, automatically	August 2, 2019	October 2019
<a href="#">Timeline usability enhancements</a>	Users, automatically	August 2, 2019	October 2019

## Dynamics 365 Field Service

For a complete list of the Dynamics 365 Field Service features, see [What's new and planned for Dynamics 365 Field Service](#).

Feature	Enabled for	Early access	General availability
<a href="#">Mixed reality Guides for Field Service</a> *	Users by admins, makers, or analysts	August 2, 2019	October 2019

\* This feature will not be rolled out automatically; an admin must enable it for users.

## Dynamics 365 Retail

For a complete list of the Dynamics 365 Retail features, see [What's new and planned for Dynamics 365 Retail](#).

Feature	Enabled for	Public preview	General availability
<a href="#">Enhancements to Retail statement posting</a>	Users by admins, makers, or analysts	August 5, 2019	October 2019
<a href="#">Improved CDX scalability through Cloud Async Client</a>	Users, automatically	August 5, 2019	October 2019
<a href="#">Modern POS offline availability improvements</a>	Users, automatically	August 5, 2019	October 2019
<a href="#">Numpad to remain on-screen in POS inventory receiving form</a>	Admins, makers, or analysts, automatically	August 5, 2019	October 2019
One Version – Auto-update for Retail Cloud Scale Unit	Admins, makers, or analysts, automatically	August 5, 2019	October 2019

Feature	Enabled for	Public preview	General availability
<a href="#">POS and Headquarters extensions</a>	Admins, makers, or analysts, automatically	August 5, 2019	October 2019
<a href="#">Store Scale Unit improvements</a>	Admins, makers, or analysts, automatically	August 5, 2019	October 2019
<a href="#">Translations for charges codes in POS</a>	Users by admins, makers, or analysts	August 5, 2019	October 2019
<a href="#">Merchandising improvements</a>	Users by admins, makers, or analysts	August 5, 2019	October 2019

## Dynamics 365 Finance

Feature	Enabled for	Public preview	General availability
<a href="#">Unlock journals</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">"Select consolidation amount from" control on the consolidate online for dual currency consolidation</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Cancel bank reconciliation</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Create checks with a blank status on the Checks page</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Reset workflow status for vendor invoices from Unrecoverable to Draft</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Revenue Recognition</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Cash control</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

## Dynamics 365 Supply Chain Management

Feature	Enabled for	Public preview	General availability
<a href="#">Dynamics 365 Asset Management</a>	End users, automatically	✓ Jul 23, 2019	✓ Oct 1, 2019
<a href="#">Wave status visualization</a>	End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Inventory value report storage</a>	End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Oct 8, 2019

## Finance and Operations cross-app capabilities

Feature	Enabled for	Public preview	General availability
<a href="#">Configurable business documents reporting in Word and Excel</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Embed Power BI solutions directly into analytical workspaces</a>	End users by admins, makers, or analysts	✓ May 1, 2019	✓ Oct 1, 2019
<a href="#">Preview documents using embedded viewer control</a>	End users by admins, makers, or analysts	✓ Jul 5, 2019	✓ Oct 1, 2019
<a href="#">Attachment recovery</a>	End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Extended chart control options now include Solid Gauge visualizations</a>	Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Turn insights into action using context menu commands for embedded Power BI reports</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Visual refresh of the web client to align with the Fluent design language</a>	End users, automatically	✓ Aug 5, 2019	✓ Oct 1, 2019

# Dynamics 365 Marketing

## Overview of Dynamics 365 Marketing 2019 release wave 2

Dynamics 365 Marketing is a marketing automation solution that can help businesses turn more prospects into business relationships. Since its launch in April 2018, Dynamics 365 Marketing has seen increasing adoption by organizations looking to align sales and marketing, make smarter decisions, and grow with an adaptable platform. The app goes beyond basic email marketing to provide deep insights and generate qualified leads for your sales teams. Its graphical content-creation and design tools make visually rich emails, landing pages, and customer journeys easy to design and execute.

Our customers are looking to achieve more with less effort through an intuitive experience that doesn't require the assistance of technical experts to perform common tasks. The 2019 release wave 2 doubles down on ease of use and simplification while continuing to invest in intelligent scenarios. Here are the key investment areas for this release:

- **Marketing made simple:** Having simplified trial sign-ups, we are continuing to streamline the rest of the product by concentrating on the scenarios most often mentioned in user feedback. We've simplified processes, eliminated extra clicks, and added many small improvements that help make marketers' lives easier. Improvements include: new email layouts, subscription-list management, and much more.
- **Personalized marketing:** The system helps marketers build effective content effortlessly. With A/B testing, marketers can set up powerful experiments with a few clicks and let the system take care of the rest. Thanks to a robust platform, large organizations can customize their marketing execution to run independently for each business unit.
- **Connected business apps:** Sales teams are looking for marketing-powered insights that let them drill down into details to learn more about their customers, for example while preparing for meetings or replying to emails.
- **Actionable intelligence** lets you build optimized audiences and orchestrate effective communication strategies. With Dynamics 365 Customer Insights, marketers can leverage the power of the Microsoft ecosystem to increase the effectiveness of their marketing initiatives.
- **Fundamental investments** continue to deliver improved performance, scalability, system management, extensibility, and throughput for campaign execution and email marketing. Improved provisioning makes life easier for admins and power users.

[Watch overview video](#)



## What's new and planned for Dynamics 365 Marketing

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Marketing support for business units</a>	End users by admins, makers, or analysts	-	-	✓ Oct 1, 2019
<a href="#">Customer Insights integration</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Easy setup for subscription lists</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Email A/B testing</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Improved segmentation experience</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Layout editor</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Support approvals using Power Automate</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Quick send</a>	End users by admins, makers, or analysts	-	-	✓ Dec 1, 2019

\* Some features are available for you to opt-in as part of early access on August 2, 2019, including all mandatory changes that impact end users. Learn more about [early access](#).

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Marketing support for business units

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 1, 2019

### Feature details

Large organizations with multiple customer bases often use multiple *business units* to manage their marketing datasets and campaigns. On top of these, a parent business unit often manages centralized reporting or creates templates to be propagated across all the child business units. The Common Data Service platform supports this model, and the Marketing app now supports this during all aspects of marketing execution, including: access to contact records, display of segment members, access to contact insights, availability of email templates, and more.

### See also

[Feature exploration](#) (video)

[Use business units to control access to Marketing records](#) (docs)

## Customer Insights integration

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

The new Customer Insights app for Dynamics 365 applies artificial intelligence to analyze rich pools of customer data collected from across other apps like Dynamics 365 Sales, Service, and Marketing. Its standard functionality generates powerful analytical displays for each contact, which makes the information easy to understand and use. The integrated solution can:

- Push marketing interactions to the Customer Insights data lake to produce a complete 360-degree view for each contact.
- Apply data cleansing, enrichment, and fuzzy matching.
- Use segments created by Customer Insights to target customer journeys in Dynamics 365 Marketing.

### See also

[Feature exploration](#) (video)

[August update and early access](#) (blog)

[Use segments from Customer Insights with Marketing](#) (docs)

## Easy setup for subscription lists

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

Marketers often run campaigns that target subscription lists directly, without applying any additional filters or criteria to establish the target segment. We now make this scenario easy to accomplish by helping marketers to work end-to-end with subscription lists throughout the marketing lifecycle.

Key improvements include:

- Subscription lists are now available natively from the main navigator in the Dynamics 365 Marketing app.
- Read, create, edit, and delete subscription lists directly in Dynamics 365 Marketing.
- Use the new *subscription lists* design element to add lists to subscription forms.

### See also

[August update and early access](#) (blog)

[Set up subscription lists and subscription centers](#) (docs)

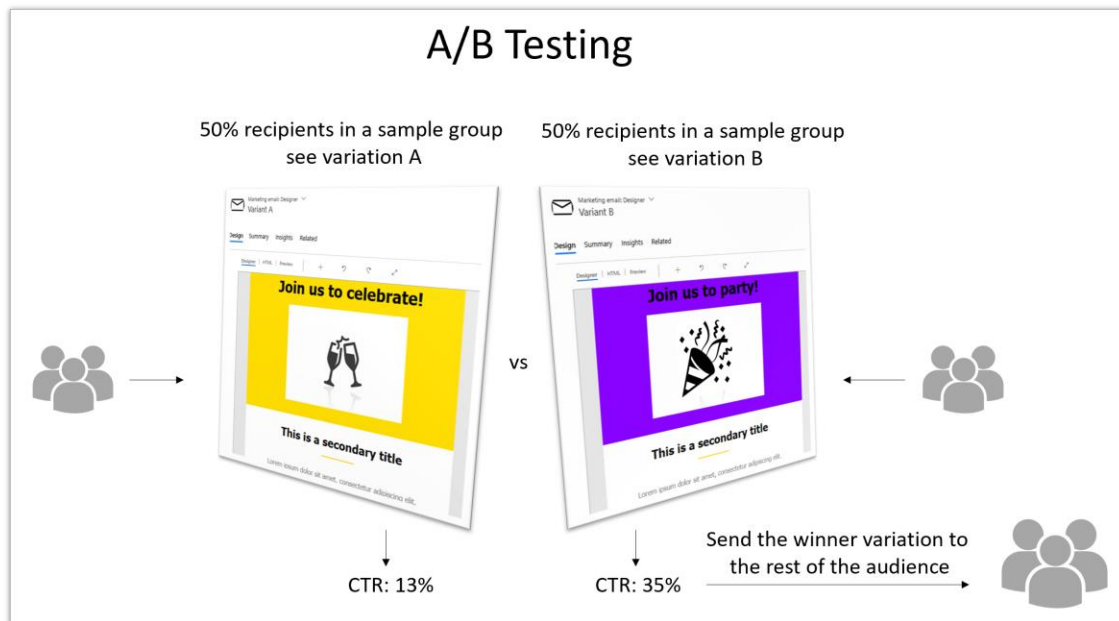
## Email A/B testing

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

One of the best ways to find out which of several possible email designs will produce the best results is to try each design on a different subset of your audience and then analyze interaction records to see how each design was received. Marketers call this *A/B testing*.

We've now built this capability right into the Marketing product by allowing marketers to create alternative versions of a message and define their business goals for it. The system establishes a few small test groups within the target segment and sends a different version of the message to each group, followed by statistical analysis that automatically identifies the winning design based on the stated business goal. The winner is then delivered to the rest of the segment.



*A/B testing process overview diagram*

## See also

[Feature exploration](#) (video)

[August update and early access](#) (blog)

[Design and run A/B test on your email designs](#) (docs)

## Improved segmentation experience

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

## Business value

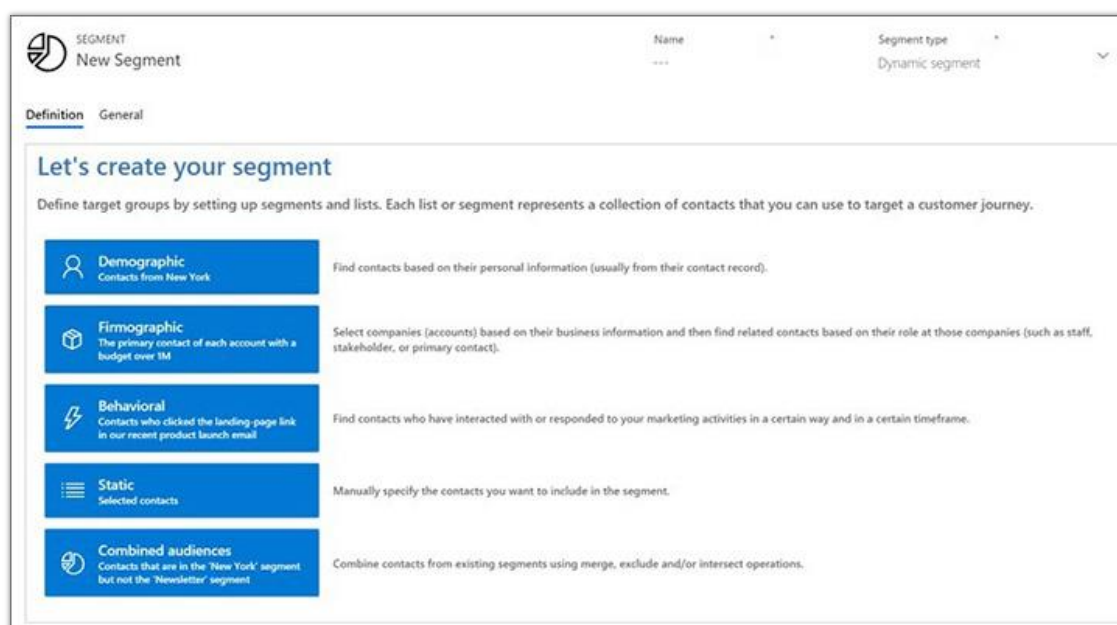
Build targeted audiences for demand generation easily.

## Feature details

Choosing the right target audience is key for running a successful campaign, so we're continuing to improve the design and performance of the segmentation designer in Dynamics 365 Marketing. This release brings a fresh, intuitive segment builder that addresses many of the usability pain points of the previous design.

Improvements include:

- A new segmentation hub that helps you get started quickly when creating the most-used types of segments, such as interaction-based, demographics-based, and compound segments.
- A redesigned query builder that lets you design queries from the bottom up, starting from contacts, which provides an experience that's more intuitive and similar to the "advanced find" feature.
- Accurate segment-size estimates, which you can request and refresh at any time while building a segment, prior to going live.
- A new views selector that lets you filter the contacts list while browsing segment members.



*The new segmentation hub*

## See also

[Feature exploration](#) (video)

[August update and early access](#) (blog)

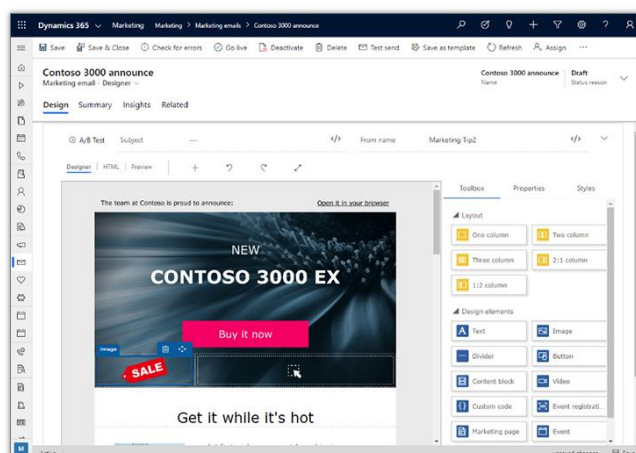
[Working with segments](#) (docs)

## Layout editor

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

With this release, we continue to make it easier for marketers to design and modify published content. The visual email designer now provides a layout editor for designing multi-column layouts. This provides a quick and easy way to alter the appearance of email messages, which is a feature that marketers often look for.



*The layout editor*

### See also

[August update and early access](#) (blog)

[Design your digital content](#) (docs)

## Support approvals using Power Automate

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

## Feature details

Dynamics 365 Marketing now supports a customizable approval workflow that helps make sure new marketing materials and campaigns are properly approved before going into effect.

After marketers finish setting up a new record, such as a marketing email or customer journey, they can send that record for approval with just a single click. Based on how the approval workflow is set up, the relevant manager is then notified of the approval request. Core approval scenarios include:

- Request approval for a record
- Cancel request for approval
- Approve or reject an approval request
- Delegate a request for approval
- Manage an overdue approval request

The approval system is delivered as a Power Automate app that can enforce a simple approval process based on core marketing entities. Because each organization probably has its own business process and hierarchy, Power Automate provides the flexibility required for easy customization by business users, makers, or partners.



The screenshot displays the 'Approval workflow designer' interface. At the top, a trigger step 'When an Event is Updated' is configured with 'Organization Name' set to 'marketingfallupdate' and 'Entity Name' set to 'Events'. An arrow points down to a 'Condition' step, which is set to 'Publish status' is equal to 'Ready to go live'. Below the condition, there are two paths: 'If yes' (green background) and 'If no' (red background). The 'If yes' path leads to a 'Start an approval' step. This step is configured with 'Approval type' as 'Anyone from the assigned list', 'Title' as 'List of Approvers for Event', 'Assigned to' as a list of email addresses, 'Requestor' as 'Add the email of the person generating this request', 'Details' as '#This event ( Event name ) is ready to be approved', 'Item link' as 'Event URL', and 'Item link description' as 'Describe the link to the item'.

### Approval workflow designer

### See also

[August update and early access](#) (blog)

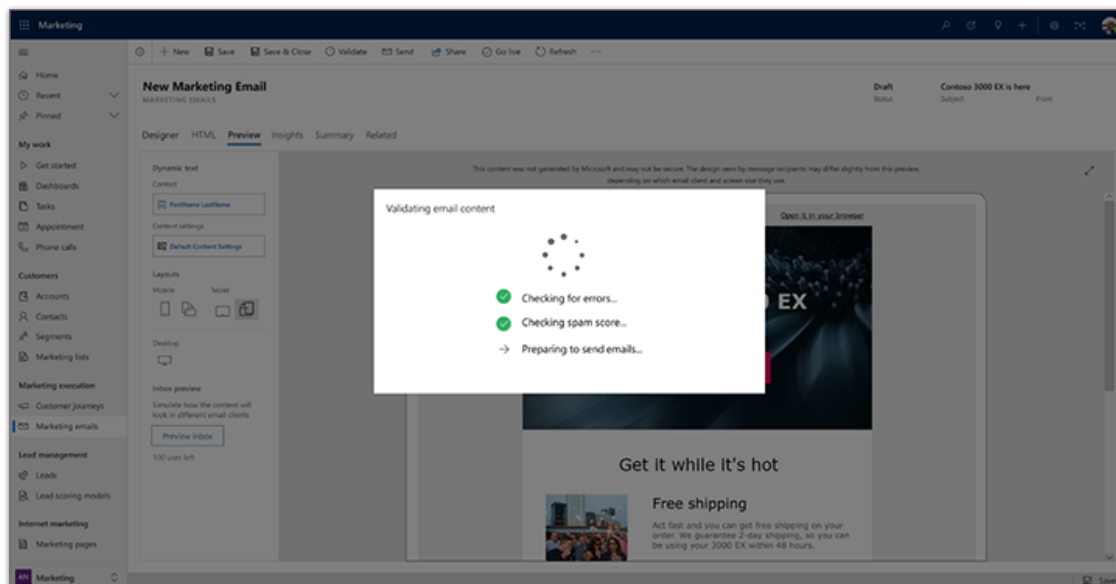
[Build an approvals feature](#) (docs)

### Quick send

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Dec 1, 2019

## Feature details

Often, marketers just need to send out a quick email blast to a target audience without requiring follow-up automation or behavioral triggers. We've optimized this experience by making it easy to craft and send emails to a large audience in just a few clicks. Users can gradually move on to create more complex, multistep customer journeys when needed.



*Quick send*

## See also

[Quickly design and deliver a marketing email with send now](#) (docs)

# Dynamics 365 Sales

## Overview of Dynamics 365 Sales 2019 release wave 2

Dynamics 365 Sales is an enterprise-grade customer engagement software that enables sales teams to build strong relationships with their customers, take actions based on insights, and close deals faster. As the most popular application on the Dynamics 365 platform, Sales encompasses many scenarios that range from traditional outbound sales models to complex configurations that meet many large enterprise business needs.

The product is designed to offer a turn-key solution for lightweight needs with Dynamics 365 Sales Professional, supporting customized experiences as these organizations grow and expand. Dynamics 365 Sales is purpose-built, helping organizations increase revenue with actionable insights that drive more relevant and authentic customer engagements, all while maximizing productivity.

Our customers and prospects seek stability and satisfaction in their investment with Dynamics 365. To bet their sales strategies on Dynamics 365 Sales, these customers need to trust the stability of our software. Stability includes standard fundamentals like availability, performance, and supportability but also other important aspects, such as compliance, data protection, security, and communications. Satisfaction needs are primarily centered on the ease of use of the product and a minimum number of steps to complete each scenario.

In 2019 release wave 2, we are investing heavily in the stability and satisfaction of the platform, delivering more value to our customers. These improvements are centered around the following themes:

- **Reliability and performance:** Continue to provide improved performance, scalability, availability, extensibility, and supportability to help sellers focus on customer relationships.
- **Modern and simple user interface:** Continue to streamline and simplify key scenarios most mentioned in user feedback. Simplified processes, eliminating extra clicks, and improvements that help make sellers' lives easier.
- **Relationship-selling enhancements:** Invest in integrations that let sellers quickly transition between CRM and communications, without the need to switch context, ensuring conversations are authentic and meaningful.
- **Sales productivity:** Go beyond simplification to offer intelligence, turning data into insights that can help organizations increase revenue and empower sellers to have more personal conversations.
- **Ecosystem enablement:** With Dynamics 365 Sales, sellers can leverage the power of the Microsoft ecosystem to increase the effectiveness of their selling activities.

[Watch overview video](#)

## What's new and planned for Dynamics 365 Sales

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Customization of Opportunity Close dialog box</a>	End users by admins, makers, or analysts	-	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">LinkedIn Sales Navigator integration enhancements</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Out-of-the-box hierarchical relationship on the Territory entity</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Simplified lead management experience</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Business card scan</a>	End users, automatically	-	✓ Aug 1, 2019	✓ Oct 6, 2019
<a href="#">Enhance the adding or editing Opportunity/Quote/Order/Invoice products experience</a>	End users, automatically	-	✓ Aug 1, 2019	✓ Oct 6, 2019
<a href="#">Improve or simplify most common sales workflows</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 6, 2019

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Softphone dialer</a>	End users by admins, makers, or analysts	-	-	✓ Oct 22, 2019
<a href="#">Microsoft Teams integration enhancements</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 31, 2019
<a href="#">LinkedIn Sales Navigator Data validation</a>	End users by admins, makers, or analysts	-	-	✓ Nov 15, 2019
<a href="#">Simplified sign-up experience for Sales Professional</a>	End users by admins, makers, or analysts	-	-	✓ Feb 1, 2020
<a href="#">Customize forecast models</a>	End users by admins, makers, or analysts	-	-	✓ Feb 3, 2020
<a href="#">Improve and adjust forecast accuracy</a>	End users by admins, makers, or analysts	-	-	✓ Feb 3, 2020
<a href="#">Understand forecasts with precision pipeline management</a>	End users by admins, makers, or analysts	-	-	✓ Feb 3, 2020
<a href="#">Contextual email communication</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	-	To be announced

\* Some features are available for you to opt-in as part of early access on August 2, 2019, including all mandatory changes that impact end users. Learn more about [early access](#).

Description of **Enabled for** column values:

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## Customization of Opportunity Close dialog box

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

A top request by customers.

When closing an opportunity, businesses often need to understand why the opportunity was lost or won, to build upon past losses and successes or to try new strategies for improving win rates. By supporting customization of the Opportunity Close dialog box, Dynamics 365 Sales helps companies capture close/win details based on their strategic sales initiatives. Furthermore, sales managers can see which competitors are trending in losses, or what drove success in wins. This information helps managers identify products and services that are performing well, to form future product and service strategies. In addition, the data captured can benefit analysis and machine learning models, helping to predict the likelihood of future opportunities to close.

### Feature details

- Administrators can add fields such as Profit Margin or Winning Product in the Close as Won form/dialog box of the Opportunity entity.
- Administrators can add fields such as Competitive Advantage in the Close as Lost form/dialog box of the Opportunity entity.
- Administrators can introduce new client-side business validations or remove existing ones.
- Administrators can customize the Opportunity Close entity.
- Administrators can choose between the non-customizable modal dialog experience (default setting) and the customizable form experience.
- Sales reps can close an opportunity via the desktop or mobile app and provide relevant details required by their organization for closing the opportunity.

**Admin Setting**

**Customize close opportunity form**

Enable [custom fields on closing form](#) to get more info on the closed opportunity ☐ Yes ☒ No

---

**Customizable Quick Create form experience**

**Quick Create: Close Opportunity**

Add closing details below

Opportunity	* Media Equipment
State	* Lost
Status Reason	* Lost to Competitor
Actual Revenue	* \$0.00
Close Date	1/31/2019
Competitor	---
Description	---

[Save and Close](#) [Cancel](#)

**Non-customizable Modal dialog experience**

**Close Opportunity**

Provide the following information about why this opportunity is being closed.

Status Reason	* Value Proposition
Actual Revenue	* \$0.00
Close Date	* 5/15/2019
Competitor	---
Description	---

[OK](#) [Cancel](#)

### Opportunity Close

**NOTE** This feature is available in the Unified Interface only. This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Customize the Opportunity Close form](#) (docs)

## LinkedIn Sales Navigator integration enhancements

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

The Microsoft Relationship Sales solution brings together LinkedIn Sales Navigator and Dynamics 365 Sales to empower sellers to drive more personalized and meaningful engagements with buyers. InMails by LinkedIn are a commonly used communication channel for sales representatives to connect with their customers. Dynamics 365 Sales will foster efficient customer engagement by allowing sales reps to compose and send InMail from within Dynamics 365 Sales entities.

To help sellers more easily identify contacts, profile pictures from LinkedIn will now be available within Dynamics 365 Sales.

### Feature details

- A new LinkedIn widget will be introduced inside a Dynamics 365 Sales record to host the LinkedIn InMail component. This LinkedIn widget will allow sales representatives to send InMails to their contact, opportunity, lead, and account entity contacts while viewing the LinkedIn profile information alongside.
- Sales users will be able to access the InMail component while working on the Org chart feature in Dynamics 365 Sales. They can just double-click the Org chart node and select the InMail icon to send LinkedIn InMails directly from Dynamics 365 Sales.
- If organizations have enabled the sync, the sent InMail is also added as an activity in the activity timeline of the contact, opportunity, lead, and account entity from where the InMail was sent.
- If organizations have enabled the sync, profile photos from LinkedIn will show as the contact picture within Dynamics 365 Sales. This will replace any existing picture that has been uploaded as the contact picture.

### NOTE

- This feature is available in the Unified Interface only.
- This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.



## See also

[Enable default LinkedIn Sales Navigator controls](#) (docs)

## Out-of-the-box hierarchical relationship on the Territory entity

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

## Business value

Organizations will be able to get valuable insights by visualizing hierarchically related territories.

## Feature details

A hierarchical relationship will now be available out of the box on the Territory entity. This will allow organizations to model and visualize their sales territories in a hierarchical format.

**NOTE** This feature is available in the Unified Interface only. This capability is intended only for Dynamics 365 Sales Enterprise.

## See also

[Select a template](#) (docs)

## Simplified lead management experience

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

## Business value

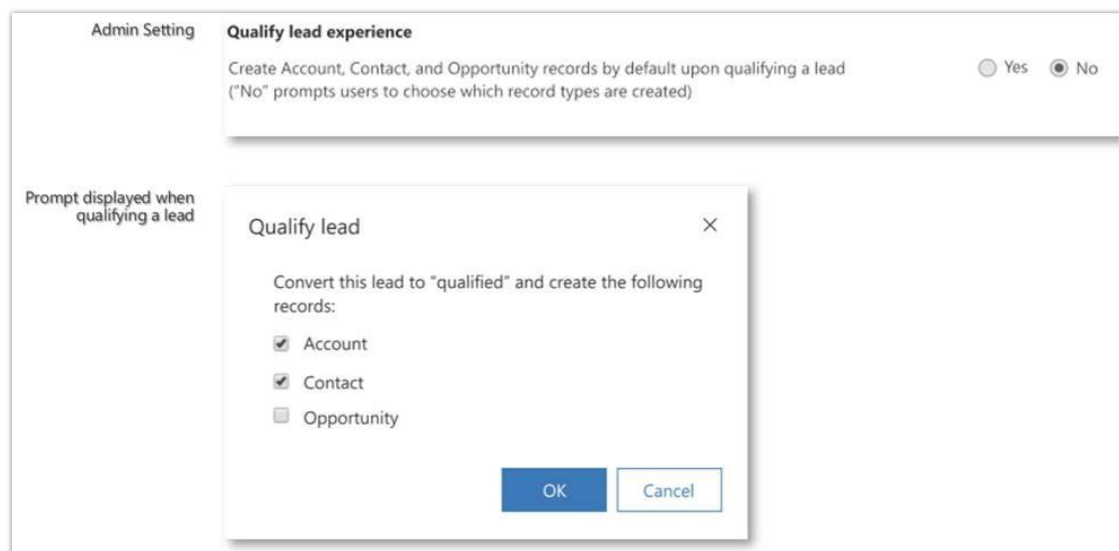
To help our customers maximize productivity, we are introducing improvements across top scenarios related to lead management.

## Feature details

Top scenarios include:

- Autopopulate contact and/or company-related fields when a sales rep selects an existing contact and/or account at the time of creating a new lead.

- Display notes and attachments captured by a sales rep when promoting a lead in the opportunity record after the lead is qualified.
- Enable sales reps to qualify leads and quickly move to the next stage of the sales cycle; optionally create opportunity, account, or contact records based on the organization-level settings configured by the admin for the lead creation experience. The default setting would be **Yes**, which would automatically create an account, contact, and opportunity when qualifying a lead.



### *Options while qualifying a lead*

**NOTE** This feature is available in both the legacy web client and Unified Interface. This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.

### See also

[Feature exploration](#) (video)

[Qualify Lead](#) (docs)

### Business card scan

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 1, 2019	✓ Oct 6, 2019

## Business value

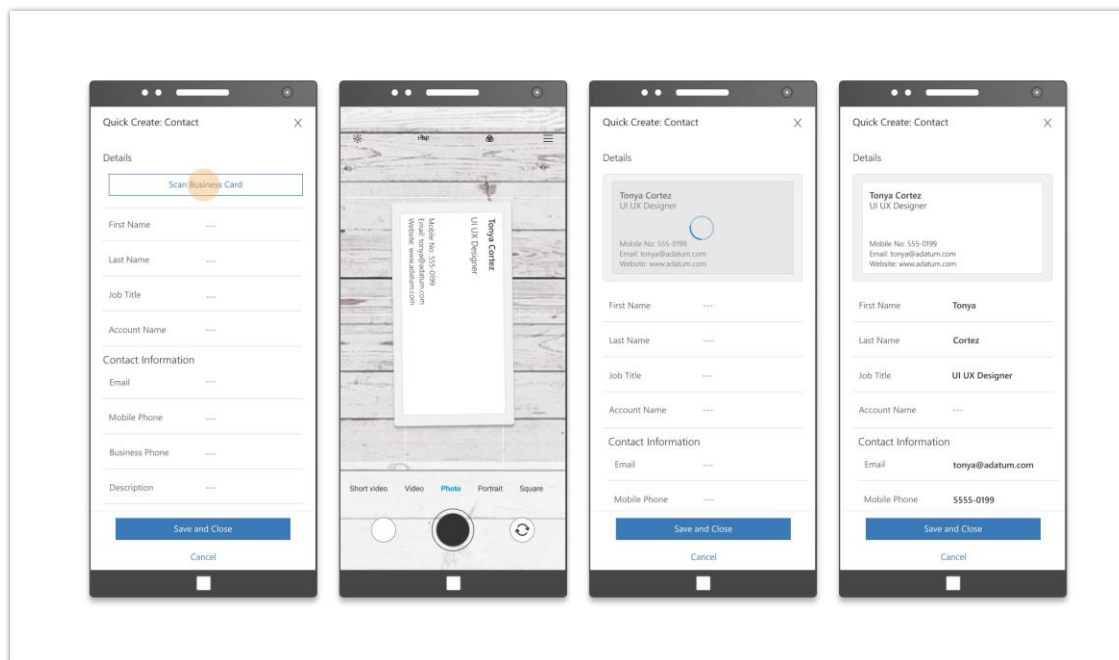
A top request by customers.

Business cards are typically handed out at meetings, then often misplaced or lost. Sales professionals need a way to quickly capture information from these cards, freeing them to focus on more important tasks. Scanning business cards is particularly useful when on the go, at conferences, or at offsite meetings.

## Feature details

Business cards can be scanned via mobile or web. The scanner will analyze the card for relevant information and automatically update respective fields in the system. The feature also offers configuration, allowing users to select alternative fields to populate.

To learn about the availability of the business card feature, see [Feature availability by region](#).



### Business card scan

**NOTE** This feature is available in the Unified Interface only. It is intended only for Dynamics 365 Sales Enterprise.

## See also

[Scan business cards](#) (docs)

## Enhance the adding or editing Opportunity/Quote/Order/Invoice products experience

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 1, 2019	✓ Oct 6, 2019

### Business value

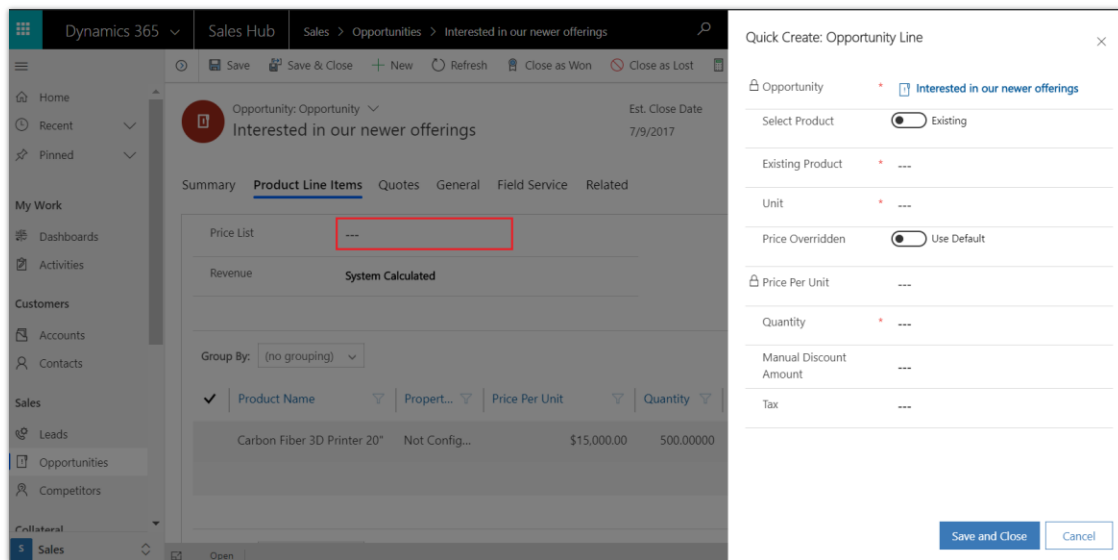
A top request by customers.

Enhancements to this feature help improve searching and filtering experiences by allowing salespeople to select a product on any line item, empowering them to be more productive and avoid unnecessary context switching.

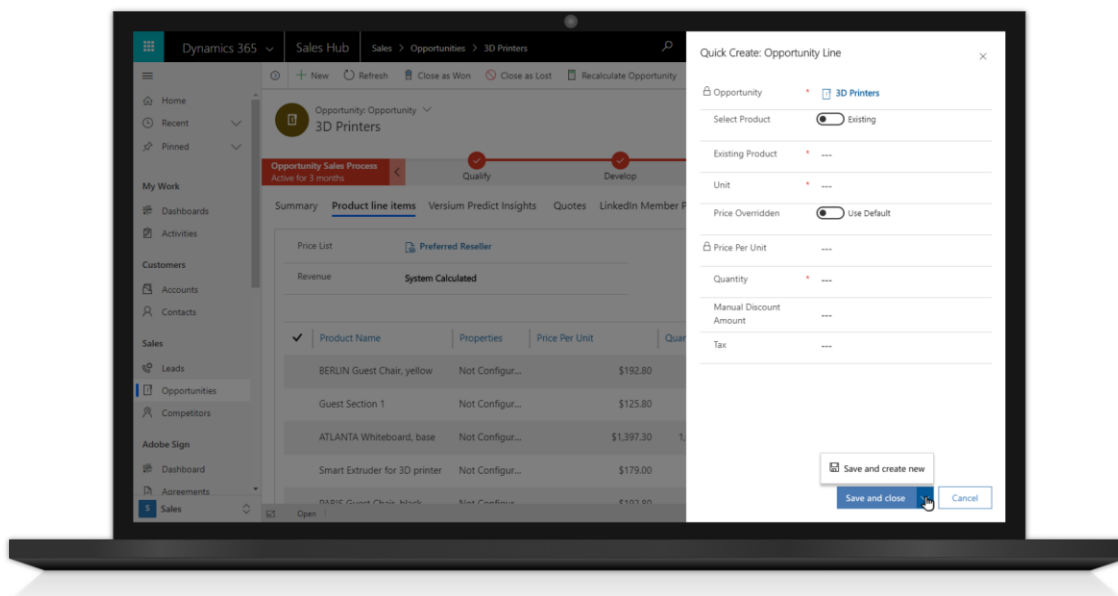
### Feature details

Creation of multiple product line items, which can be a repetitive task, is now streamlined with the new Create and Add capability. By quickly iterating on adding new products to an opportunity, salespeople can save time and quickly shift focus to more important tasks. In addition:

- Salespeople can add an existing product to an Opportunity, Quote, Order, and Invoice, with or without a price list.
- Administrators can choose whether to enforce selection of a price list.
- Salespeople can quickly view and edit properties for a product, even while editing Opportunity or Quote line items.
- Administrators can use additional customization options on the price list item entity.



*Price list optional*



*Option to Save and create new*

## NOTE

- This feature is available in the Unified Interface only.
- This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional

## See also

[Make selection of price list optional](#) (docs)

## Improve or simplify most common sales workflows

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 6, 2019

## Business value

Simplified workflows will introduce ease of access to commonly used components. Enhancements to sales stakeholder and sales team management processes will help improve their productivity while offering flexibility in product management and UI-based product reparenting.

## Feature details

- Make the **Documents** tab visible in the main form for Contact, Opportunity, Lead, and Account entities.
- Enhance the Opportunity form user experience.
- Support reparenting of products and the addition of properties at the product level (supported on both the legacy web client and Unified Interface). While defining a product catalog, admins can update the parent of a product, bundle, or family in cases where products need to be realigned. Additionally, they can add properties directly at the product or bundle level.

## NOTE

- This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.
- This feature is available in the Unified Interface only.

## See also

[Use properties to describe a product](#) (docs)

## Softphone dialer

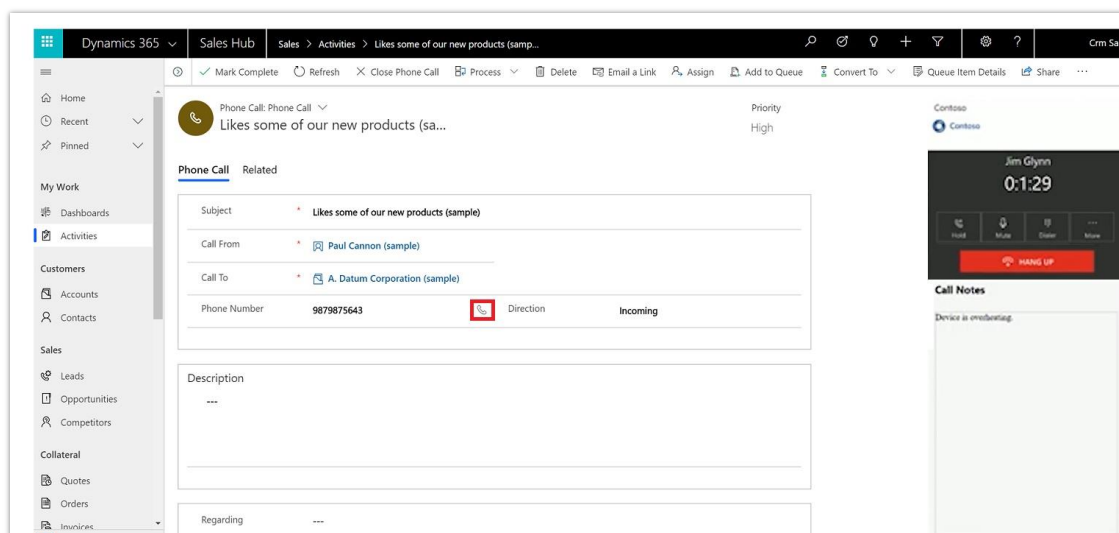
Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 22, 2019

## Business value

Remote selling is a constantly growing segment, driven by the increasing trend of online and over-the-phone purchasing. Sellers and inside sellers reach out to their customers over the phone every day, always seeking to simplify and streamline these communications. By integrating the calling experience and automating how these communications are captured in Dynamics 365 Sales, we help sellers be more productive and focus on having more meaningful conversations.

## Feature details

Customers can leverage the Dynamics 365 Channel Integration Framework to integrate the softphone dialer from their telephony provider within the Dynamics 365 Sales app. Sales reps can quickly dial numbers directly from the browser to call contacts by selecting a phone number. The softphone dialer immediately appears and initiates the call.



## Softphone dialer

**NOTE**

- This feature is available in the Unified Interface only.
- This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.

**See also**

[Integrate a sample softphone with Dynamics 365 Sales](#) (docs)

**Microsoft Teams integration enhancements**

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 31, 2019

**Business value**

Dynamics 365 Sales integration with Teams was introduced in April 2019. Enhancements help to connect Dynamics 365 Sales records to Microsoft Teams channels without leaving the Dynamics 365 Sales app. Sellers will receive team member recommendations, during the connection flow, based on Dynamics 365 Sales access privileges. To further improve the extensibility, file sharing can now be enabled for any out-of-the-box and custom entities, across Dynamics 365 Sales and Teams connections. Connections refer to the ability to add a Dynamics 365 tab to a Teams channel.

**Feature details**

- When connecting a Dynamics 365 Sales record to a Microsoft Teams channel, relevant members are suggested based on users associated with the Dynamics 365 Sales record. Member suggestions will be available to a user if designated as a channel owner.
- SDK support is now available for the Microsoft Teams integration feature for any entity type, including custom entity types.
- When creating a Teams channel from the Dynamics 365 Sales record page, users can automatically connect the Dynamics 365 Sales record to the selected channel.

**NOTE**

- This feature is available in the Unified Interface only.
- This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.



## See also

[Feature exploration](#) (video)

[Enhanced Collaboration Experience with Microsoft Teams](#) (docs)

## LinkedIn Sales Navigator Data validation

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Nov 15, 2019

## Business value

The Data validation capability that we are introducing as part of the LinkedIn integration will enable salespeople to stay up to date on the career movements of their contacts. They can use this information to quickly refine their deal strategies, assess new opportunities that might open up, and foster relevant engagement with their connections.

## Feature details

For Microsoft Relationship Sales users with CRM sync enabled, the Data validation capability can be turned on from **Admin Settings**.

Once this feature is on, users will be notified of job changes of all of their owned contacts that are posted on LinkedIn. The organization chart capability of Dynamics 365 Sales will indicate all contacts with a recent job change and allow users to update their contact information within Dynamics 365 Sales.

### NOTE

- This feature is available in the Unified Interface only.
- This capability is available in Dynamics 365 Sales Enterprise and Dynamics 365 Sales Professional.

## See also

[Install, enable, and disable default LinkedIn Sales Navigator controls](#) (docs)

## Simplified sign-up experience for Sales Professional

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Feb 1, 2020

### Business value

Reduced time and effort for users to sign up for a trial of Dynamics 365 Sales Professional.

### Feature details

A simplified trial experience for Dynamics 365 Sales Professional is being shipped so that new customers can easily and quickly reach the Sales Professional app and get started. The app is enhanced to look modern and welcoming, enabling users to discover its value instantly.

- Future users can sign up for trials easily and quickly. On signing up, they will land in the Sales Professional app quickly, with minimal administrative tasks.
- New users will be greeted with a welcome screen that helps them understand the key scenarios that the application helps them achieve immediately.

### NOTE

- This capability is intended only for Dynamics 365 Sales Professional.
- No preview will be available for this capability.
- This feature is available in the Unified Interface only.

### See also

[Sign up for a free trial of Dynamics 365 Sales Professional](#) (docs)

## Customize forecast models

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Feb 3, 2020

### Business value

Although many organizations follow a common methodology of requiring sellers to forecast best, most likely, and worst-case revenue, there are variations to this approach across industries,

products, and geographies. The native forecast capabilities provide flexible configurations and filtering to support multiple types of forecasting, rollup categories, and measurements.

### Feature details

- **Use flexible column modeling:** Create custom rollup and calculated columns.
- **Support different organizational structures:** Create forecasts based on product, territory, or reporting hierarchy.
- **Benefit from quota management:** Enable quotas in the forecast grid or upload quotas for entire forecast time periods using an Excel template.
- **Benefit from advanced filtering:** Use limits to filter out specific opportunities included in the forecast with the new query builder.
- **Adapt security modeling to meet business needs:** Select who has access to specific forecast models and fields.

### NOTE

- This feature is available in the Unified Interface only.
- This capability is intended only for Dynamics 365 Sales Enterprise.

### See also

[Choose layout and columns](#) (docs)

## Improve and adjust forecast accuracy

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Feb 3, 2020

### Business value

Although bottom-up forecasting is based on existing opportunity data, sales managers know that in certain cases their experience requires subjective judgment. Sellers might not have the expertise required to accurately predict the confidence or the value of a deal. This might lead some sellers to hide ongoing deals until the period comes to an end, to increase their chance of exceeding quota.

To ensure sales managers can provide leadership with meaningful forecast numbers that they trust, forecasting offers great flexibility. Sales managers are empowered to adjust any of the enabled forecast values.

## Feature details

- **Adjust forecasts seamlessly:** Easily make adjustments to any forecasted values that are propagated based on existing forecast or organizational hierarchy, including deleting adjustments or reverting back to an older adjustment.
- **Gain deeper understanding with forecast adjustments:** Identify the underlying records that contribute to changes and capture reasons to analyze the history of adjustments.

## NOTE

- This feature is available in the Unified Interface only.
- This capability is intended only for Dynamics 365 Sales Enterprise.

## See also

[Adjust values in a forecast](#) (docs)

## Understand forecasts with precision pipeline management

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Feb 3, 2020

## Business value

A forecast can contain a lot of information and in some cases a deep hierarchy. Often, the organization's forecast and opportunities are disjointed. Sellers and sales managers need to understand where forecast values are coming from in order to introduce necessary changes that can help to resolve these gaps. In the forecasting capabilities for Dynamics 365 Sales, both the forecast and the underlying opportunity data are part of one fluid experience, allowing sellers to directly modify deal information in the flow and to instantly see changes to the forecast reflected.

## Feature details

- **Benefit from a responsive forecast grid with visual cues:** Enable visual representation of the whole forecast hierarchy and quota attainment in each cell, directly from the grid.
- **Edit participating records inline:** View and edit underlying opportunities for any calculated metric to instantly modify the forecast.

- **Manage pipeline and visualization:** Easily manage and update the full forecast with the drag-and-drop feature to move opportunities across different stages, to instantly update forecast data.
- **Benefit from near real-time updates:** Enjoy automatic recalculation of forecast values to ensure data is always as fresh as possible.

**NOTE** This feature is available in the Unified Interface only.

### See also

[View and manage underlying opportunities](#) (docs)

## Contextual email communication

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	-	To be announced

### Business value

A top request by customers.

Because Microsoft provides several integrations of Dynamics 365 Sales with Outlook, we have relied on lightweight email editor experiences for many years. Email is a central component every day in the life of salespeople, who are in constant contact with their leads and stakeholders. When composing emails, sales teams frequently refer to data displayed on a page and they don't want to navigate away from it. By overlaying an email composition screen on top of the existing form, sellers will be able to compose an email without having to navigate away from the screen they are on. This allows them to compose more thoughtful emails to their customers and improve the quality of engagement.

### Feature details

With a rich text editor and a pop-up, non-blocking window, composing email has never been better in Dynamics 365 Sales. Salespeople will be able to write email with context of the record they are working on, navigate between records, have multiple active draft emails open simultaneously, preview the content before sending, add attachments, and use email templates to optimize commonly used tasks. The email opening up in a non-blocking window gives salespeople all the relevant content at a glance while they compose their email to the customer.

**NOTE**

- This feature is available in the Unified Interface only.
- This capability is intended only for Dynamics 365 Sales Enterprise

**See also**

[Feature exploration](#) (video)

[Send email using enhanced email experience](#) (docs)

# Dynamics 365 Customer Service

## Overview of Dynamics 365 Customer Service 2019 release wave 2

Dynamics 365 Customer Service is an end-to-end, self-support and assisted-support service that supports multiple channels of customer engagement, provides comprehensive and efficient case routing and management for agents, and enables authoring and consumption of knowledge management articles. For wave 2 of 2019, we are focused on the following three areas:

- **Agent productivity:** Delivering improvements that help agents be more productive such as improved email authoring experiences and timeline enhancements.
- **Omnichannel for Customer Service:** Enabling customers to experience a seamless personalized service as they switch across support channels.
- **Service insights:** Investing in improved insights for supervisors and managers to drive better business decisions.

The next sections offer details on the specific features being released across these areas.

[Watch overview video](#)

## What's new and planned for Dynamics 365 Customer Service

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

### Customer Service

Dynamics 365 Customer Service aims to enable businesses to differentiate themselves from their competition by providing world-class customer experiences.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Knowledge management inline image enhancement</a>	End users by admins, makers, or analysts	-	-	✓ Oct 1, 2019
<a href="#">Knowledge management search and rendering enhancement</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Timeline usability enhancements</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Service scheduling migration tool</a>	End users by admins, makers, or analysts	✓ Aug 1, 2019	-	✓ Oct 6, 2019
<a href="#">Knowledge article templates</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 7, 2019

## Omnichannel for Customer Service

Omnichannel for Customer Service offers a suite of capabilities that extend the power of Dynamics 365 Customer Service to enable organizations to instantly connect and engage with their customers across digital messaging channels.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Unified routing for entity records</a>	End users by admins, makers, or analysts	✓ Aug 31, 2019	-	✓ Oct 25, 2019
<a href="#">Enable customers to integrate Microsoft Bot Framework bots with channels</a>	End users by admins, makers, or analysts	✓ Apr 1, 2019	-	✓ Nov 1, 2019



Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">SMS channel</a>	End users by admins, makers, or analysts	✓ Apr 1, 2019	-	✓ Nov 1, 2019
<a href="#">Integration with Power Virtual Agents</a>	End users by admins, makers, or analysts	✓ Oct 31, 2019	-	✓ Dec 2, 2019
<a href="#">Facebook messaging</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	-	✓ Dec 20, 2019
<a href="#">Proactive chat</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Dec 20, 2019
<a href="#">Sentiment analysis enhancements</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	-	✓ Jan 24, 2020
<a href="#">Dynamics 365 Channel Integration Framework v2</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 24, 2020
<a href="#">Guide customer interactions with agent scripts</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 24, 2020
<a href="#">Multiple-provider support</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 24, 2020
<a href="#">Analytics for third-party channels</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Bot-assisted agent guidance</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020
<a href="#">Enhanced search experience</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020
<a href="#">Macros</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020
<a href="#">Notification customization</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020
<a href="#">Skill-based routing</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020
<a href="#">User navigation history</a>	End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

\* Some features are available for you to opt-in as part of early access on August 2, 2019, including all mandatory changes that impact end users. Learn more about [early access](#).

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#).

For more information about geographic areas, data centers (regions), data storage, and replication, click **expand all** on the [Where your data is located page](#) and find the Microsoft cloud service for this feature.

## Customer Service

### Overview

Dynamics 365 Customer Service is a comprehensive and efficient case routing and management solution for agents. Agents can rapidly resolve customer issues with a unified interface that provides complete visibility into customer profiles, service level agreements, case timelines and access to productivity tools such as business process flows and knowledge article recommendations. The community portal empowers customers to resolve issues on their own or through community engagement. All these capabilities are designed to help streamline customer issues resolution in a consistent and effortless manner.

### Knowledge management inline image enhancement

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 1, 2019

### Feature details

Investments in improving knowledge management will benefit knowledge authors, customer service agents, and customers. Knowledge authors will be able to author more easily. The ability to create professional presentations of articles will help drive self-service adoption by making knowledge base articles more effective at shifting customers toward self-help.

Knowledge authors will have an improved inline image experience in which they can directly copy, paste, and drag and drop images, or select them from File Explorer and add them to knowledge articles, instead of sourcing them from links, as is done today.

### See also

[Create and manage knowledge articles](#) (docs)

## Knowledge management search and rendering enhancement

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

Investments in improving knowledge management will benefit knowledge authors, customer service agents, and end customers. Currently knowledge base search control supports filtering only on status and language of articles. To provide a better knowledge search experience for agents, this feature extends the filtering capability to other attributes.

### See also

[Feature exploration](#) (video)

[Knowledge Base Search control](#) (docs)

## Timeline usability enhancements

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

The current timeline experience provides users with an overview of notes and activities associated with the entity for which it is shown (case, account, contact, and so on); however, the interaction model and a lack of information density prevent users from finding the information that they need efficiently.

Updates to the timeline experience will enable customers to see larger amounts of information and filter to see specific activities. Sales managers, salespeople, and customer service agents who are looking at the history of interactions with an account, contact, or case will benefit from the ability to find data more quickly.

Timeline enhancements include the following:

- Improved information density for greater visibility of items without the need to scroll.
- Improved filtering by activity type, ability to set multiple filters simultaneously, and visual indications that the list is filtered.

**See also**

[Feature exploration](#) (video)

[Learn the basics of the Customer Service Hub](#) (docs)

**Service scheduling migration tool**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Aug 1, 2019	-	✓ Oct 6, 2019

**Business value**

Allows customers to migrate from the legacy Service scheduling to the new Service scheduling.

**Feature details**

The Service scheduling migration tool allows migration of legacy configuration and service appointment data to the new service scheduling experience. The migration tool provides a simple user interface to migrate data and troubleshoot any error scenarios that might occur during migration.

**See also**

[Service scheduling guide](#) (docs)

**Knowledge article templates**

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 7, 2019

**Business value**

Knowledge article templates help knowledge authors reuse the common content and maintain consistent branding, language, and messaging.

**Feature details**

Customers will get out-of-the-box templates that they can readily use. They will also have the ability to create, edit, or delete templates as per the needs of the business. Knowledge authors in the customer's organization can use these templates to quickly create knowledge articles.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Create knowledge articles using templates](#) (docs)

# Omnichannel for Customer Service

## Overview

Omnichannel for Customer Service provides a modern, customizable, high-productivity app that allows agents to engage with customers across different channels. This app offers contextual customer identification, real-time notification, integrated communication, and agent productivity tools like knowledge base (KB) integration, search, and case creation to ensure agents are effective.

Supervisors get real-time and historical visibility and insights into the operational efficiency of agents and the utilization across various channels.

The enterprise-grade routing and work distribution engine allows customers to configure agent presence, availability, and routing rules, thus ensuring agents are working on the most relevant engagements.

## Unified routing for entity records

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Aug 31, 2019	-	✓ Oct 25, 2019

## Feature details

Today, customer service case routing in Dynamics 365 enables organizations to route cases to static queues. These cases are either manually distributed by supervisors or manually picked by agents. With unified routing, now cases can be routed to omnichannel enabled queues along with work items that originate from other channels such as Chat and SMS.

**NOTE** Omnichannel leverages the existing CDS queue entity, and if you have already setup queues for cases or other entities, you can continue to use the same with omnichannel work distribution.

This allows organizations to tightly define the work profile that their agents are supposed to handle, and organizations can automate the work flow assignment across channels and assign the work items based on agents capacity, availability, and skill.

This unified customer service routing will also be opened up for any activity enabled CDS entity records like custom entities or other out of the box entities.

Agents can use the Omnichannel for Customer Service app, which is the same multi-session experience, to handle these entity record work items alongside work items coming from other channels, such as Chat and SMS.

**NOTE** Today, it's possible for customers to request support using Dynamics 365 Portal. With unified routing, these support work items originating from Portal can be routed and automatically assigned to best available agents.

**NOTE** Routing for case entity records is available in public preview release. Routing for other entity records will be available with GA release.

### See also

[Entity records routing](#) (docs)

## Enable customers to integrate Microsoft Bot Framework bots with channels

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Apr 1, 2019	-	✓ Nov 1, 2019

### Feature details

Introduce intelligent conversational bots at the frontline to help deflect routine queries away from agents so that they can focus on complex, higher-value activities to address their customers issues while retaining a consistent experience with customers.

Following capabilities are available when Microsoft Bot Framework bots are integrated:

- Configuration experience to enable routing of conversations to bots.
- Provide seamless and contextual handoff to agents with a consistent experience for end-users.
- Enable agent productivity with rich bot-user conversation transcript and chat context.
- Transcripts for all bot conversations.

**See also**

[Integrate an Azure bot](#) (docs)

**SMS channel**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Apr 1, 2019	-	✓ Nov 1, 2019

**Feature details**

SMS channel is a powerful mechanism for organizations to reach and interact with their customers in a timely and convenient manner. Two-way conversational messaging through SMS can help organizations increase their customer satisfaction, improve agent productivity, and reduce support cost (when compared to phone or voice channel).

Key capabilities of SMS channel are:

- Seamless setup experience of SMS channel inside the application.
- Two-way texting between customers and agents. Customers can interact with organizations for product inquiry, installation query, support issues, and more through text messages.
- Conversational view of SMS messages will help increase the productivity of support agents.

Customers will need an SMS subscription with TeleSign to leverage the two-way texting capabilities.

**See also**

[Configure an SMS channel](#) (docs)

**Integration with Power Virtual Agents**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 31, 2019	-	✓ Dec 2, 2019

**Feature details**

This feature enables Power Virtual Agents integration with Chat. Power Virtual Agents allows organizations to automate routine conversations, letting agents focus on high-value interactions.



The key capabilities from integration of virtual agents with Chat include:

- Routing incoming chat requests to virtual agents created with Power Virtual Agents.
- Enabling seamless escalation of conversations from virtual agents to a human agent.
- Providing complete context to human agents by making available the full transcript of virtual agent conversations while human agents engage with customers.

### See also

[Feature exploration](#) (video)

[Preview: Integrate a Power Virtual Agents bot](#) (docs)

### Facebook messaging

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	-	✓ Dec 20, 2019

### Feature details

While large numbers of consumers are using social messaging channels like Facebook Messenger for their personal communication needs, they also prefer to use these mobile messaging channels to engage with businesses. The asynchronous nature of these channels gives consumers the convenience of getting their issues resolved as and when they find time, unlike real-time channels like live chat where the session ends when the chat window is closed.

The social messaging feature gives companies an opportunity to capitalize on this trend and engage with their customers right where they are, providing them with a seamless and personalized experience that can help them become fans and brand advocates.

This feature has the following capabilities:

- Administrators can configure social channels like Facebook Messenger to engage with their customers.
- Customers can reach out to the company through these channels and seek support in an asynchronous nature.
- Agents can use the same unified, contextual, and productive interface used by Chat to engage with customers and resolve their issues.
- Supervisors and managers have access to rich reports to help them run the support center efficiently and effectively.

**See also**

[Dynamics 365 Customer Service adds Facebook Messenger capabilities](#) (blog)

[Configure a Facebook channel](#) (docs)

**Proactive chat**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Dec 20, 2019

**Feature details**

Chat channel allows users to effortlessly engage with organizations via a chat widget on the website. Proactive chat enables organizations to engage with users by automatically inviting them to a chat conversation based on the configured rules. Organizations can use end-user data, user journey information, time spent on web page, and more to decide when to best engage with them. Organizations can control the proactive chat experience using personalized trigger messages and configurable rules to define the target audience, time frame, and target location.

**See also**

[Configure proactive chat](#) (docs)

**Sentiment analysis enhancements**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	-	✓ Jan 24, 2020

**Business value**

Understanding customer sentiment helps agents provide more personalized and empathetic service to customers. Enhancing sentiment features with additional language support, new icons, and accessibility features helps agents improve customer service delivery.

**Feature details**

The ability to identify negative sentiment events in ongoing messaging sessions is key as it provides an opportunity for agents and supervisors to act on that data and ensure a positive

customer outcome. This feature introduces additional sentiment enhancements that enable agents to use sentiment to better serve customers:

- **Additional language support:** Sentiment analysis support includes additional languages, making the text analytics feature available to additional markets.
- **Improved agent sentiment visibility:** The real-time sentiment experience now has updated icons and accessibility enhancements including supporting features for the visually impaired. Agents can more easily identify when a support session doesn't go well, and they can proactively request supervisor or peer help in addressing the issue.

### See also

[Enable sentiment analysis](#) (docs)

## Dynamics 365 Channel Integration Framework v2

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 24, 2020

### Business value

Dynamics 365 Channel Integration Framework v2 helps customers who already have a telephony provider easily integrate that provider into a seamless agent experience in Omnichannel for Customer Service. Agents can avoid toggling between tools and instead handle customer calls coming in through their telephony provider and take conversation requests all in the agent experience in Omnichannel for Customer Service.

### Feature details

Here are the new features introduced in Dynamics 365 Channel Integration Framework version 2.0:

- **Integration with the multi-session experiences in Omnichannel for Customer Service.**

Dynamics 365 Channel Integration Framework version 2.0 provides APIs to integrate with the multi-session experiences in the Omnichannel for Customer Service app. These APIs allow providers to show notifications on incoming conversations with relevant information, start new sessions for conversations from predefined templates, and open application tabs when needed. For more information about the new agent experience, see [Agents using Omnichannel for Customer Service app](#).

- **New modes and locations for the conversation control.**

Providers can define experiences for the minimized mode of the conversation controls they build. Agents can manually change the mode of the control from docked to minimized and vice versa. They can also change them programmatically.

- **Support for multiple providers.**

Using Dynamics 365 Channel Integration Framework version 2.0, organizations can configure multiple providers in the Omnichannel for Customer Service app. This enables agents to simultaneously work on multiple sessions that cater to different customers on different channels (for example, live chat and telephony), where each of these sessions belongs to different providers.

**NOTE** All conversation controls built using the APIs of Dynamics 365 Channel Integration Framework version 1.0 will continue to work with version 2.0 in the single-session Unified Interface apps, such as Customer Service Hub.

The new capabilities of Dynamics 365 Channel Integration Framework are available only with the Omnichannel for Customer Service app, which supports the multi-session paradigm.

### See also

[Channel Integration Framework](#) (docs)

## Guide customer interactions with agent scripts

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 24, 2020

### Business value

Agent scripts help businesses quickly and consistently train agents and ensure they are helping all customers in a consistent way for similar types of support issues.

### Feature details

Businesses have a critical need to continuously train agents on the latest processes and products due to a high degree of churn in people, products, and processes. Despite regular trainings, recurrent errors and delays in service delivery are common, resulting in customer dissatisfaction. To ensure the required levels of regulatory compliance and offer a consistently positive customer experience, process adherence is critical. This feature provides organizations a means to configure scripts that provide step-by-step guidance to agents. These steps can be

configured and automated based on session types (such as chat or phone calls) to ensure adherence to the appropriate processes.

### See also

[Guide agents with scripts](#) (docs)

## Multiple-provider support

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 24, 2020

### Feature details

For a true omnichannel experience, agents should be able to work on different channels from different providers in a unified and consistent manner. This capability helps maximize the agent capacity use for contact centers and enables Dynamics 365 customers to reach their users in channels of their choice while the agent continues to have a consistent experience.

The multi-provider support enables user-interface level integration where agents get a unified agent experience, while third-party channels are routed by respective channel providers. This allows channel providers to bring their existing routing infrastructure to coexist with Chat for Dynamics 365 Customer Service at the agent experience level.

### See also

[Channel Integration Framework – Support for multiple providers](#) (docs)

## Analytics for third-party channels

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

### Feature details

Omnichannel for Customer Service already provides several out-of-the-box channel-specific metrics for first-party channels—for example, average handling time and conversation volume. As part of this feature, third-party channel providers using Dynamics 365 Channel Integration Framework can provide relevant measures for their channels. This enables organizations to get a holistic view of KPIs and insights across different channels and providers.

**See also**

[Channel Analytics](#) (docs)

**Bot-assisted agent guidance**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

**Feature details**

Bot-driven conversation context-based recommendations can help agents resolve issues faster. Some potential capabilities that can be built are:

- Suggest quick replies based on the conversation context.
- Knowledge article suggestions for agent to share with customer.
- Suggestions on the next best action that can be taken by the agent.
- Similar-case suggestion for current conversation.

**See also**

[Smart Assist](#) (docs)

**Enhanced search experience**

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

**Feature details**

The existing search experience allows the agent to search based on account, contact, and case attributes. The upcoming enhancements make the search experience suitable for enterprises with more complex requirements.

Key enhancements include:

- **Search customization:** Enterprises need agents to search based on attributes that are not included in the out-of-the-box list of attributes. The enhancements in search experience allow easy customization of the search fields.

- **Faster and more intuitive experience for agents:** The agents benefit from an improved search and link experience with increased usability, thus enabling them to meet their productivity KPIs.

### See also

[Configure Link to conversation button in model-driven app entity form](#) (docs)

## Macros

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

### Feature details

Macros enable agents to stay efficient and productive by automating a series of repetitive tasks with a single click. For example, agents will be able to automate tasks like resolving a case after updating a field, assigning it to a different user after capturing notes, or sending an acknowledgement email with contextual data from the session using macros.

Administrators will be able to configure macros to suit their specific business or process needs.

### See also

[Productivity tools](#) (docs)

## Notification customization

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

### Feature details

Notifications alert the agents when a record is assigned to them or when there are incoming requests from users who need assistance. These notifications include additional context about important customer attributes like name and location of the user.

Notification customization allows users to customize the notification pop-ups to include relevant information based on their business needs, like user entitlements and relationship type.

This helps the agent get a quick glimpse of the user information prior to accepting an incoming request.

### See also

[Manage notification templates](#) (docs)

## Skill-based routing

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

### Feature details

Skill-based routing enables conversations to be routed to agents based on their skills and proficiencies. This improves the efficiency of automatic work distribution by looking for an agent with the right skills who can handle a conversation and resolve a customer issue most effectively.

Administrators and supervisors can optimize the work distribution by assigning the right skills to the agents based on their proficiency. They can directly route the conversations to agents without managing the queues.

### See also

[Overview of skill-based routing](#) (docs)

## User navigation history

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Oct 24, 2019	-	✓ Jan 31, 2020

### Business value

The user navigation history helps agents offer more efficient, relevant, and personalized support for customers by knowing more about what pages the customer has already viewed and what self-help the customer has already consumed.



## Feature details

Agents can provide a more personalized service if they have visibility into the user's activity on the website that led the user to request support. Today, the Recent activities view on the **Customer Summary** page displays the activities recorded as part of the Account/Contact/Case record in Dynamics 365 Customer Service. With the **User navigation history** enhancement, agents can view additional information on the **Customer Summary** page to understand the user's activity on the website, such as pages visited by the user on the website, knowledge base articles viewed by the user, and more.

## See also

[Enable self-service settings for customer actions in a conversation summary](#) (docs)

# Dynamics 365 Field Service

## Overview of Dynamics 365 Field Service 2019 release wave 2

Dynamics 365 Field Service is an end-to-end solution for on-site service that empowers organizations to move from being reactive to providing proactive or predictive field service, and to embrace new business models such as outcome-based service or “anything-as-a-service.”

For the 2019 release wave 2, we are focused on the following areas:

- Technician success through integration with Dynamics 365 Guides.
- Continued investment in proactive service with Azure IoT.
- Ongoing improvements in resource scheduling.

## What's new and planned for Dynamics 365 Field Service

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Mixed reality guides for Field Service</a>	End users by admins, makers, or analysts	-	✓ Aug 2, 2019	✓ Oct 1, 2019

\* Some features are available for you to opt-in as part of early access on August 2, 2019, including all mandatory changes that impact end users. Learn more about [early access](#).

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.

- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#).

For more information about geographic areas, data centers (regions), data storage, and replication, click **expand all** on the [Where your data is located page](#) and find the Microsoft cloud service for this feature.

## Mixed reality guides for Field Service

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

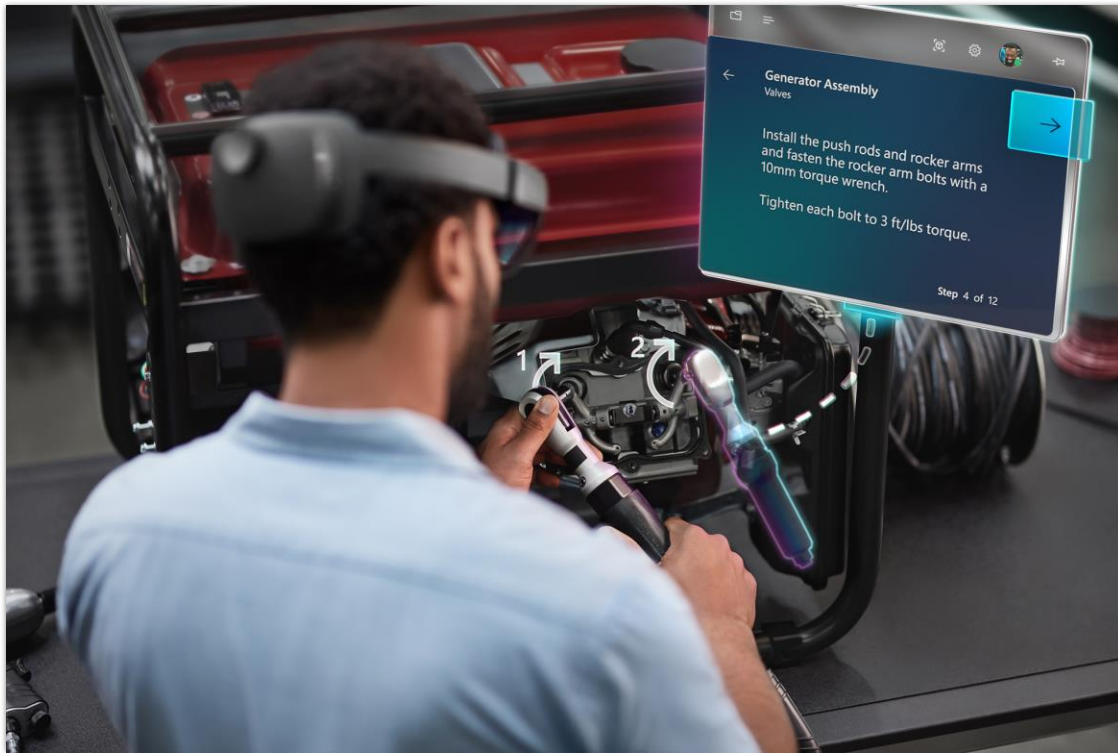
Dynamics 365 Guides on HoloLens is a new mixed reality app that empowers employees to learn by doing. Dynamics 365 Guides enhances learning with step-by-step instructions that guide employees to the tools and parts they need, and shows them how to use these tools in real-world situations.

With Dynamics 365 Guides, we've eliminated a longstanding problem for augmented reality (AR) and virtual reality (VR) experiences: the need for an easy way to create content. In addition to the experience of using Dynamics 365 Guides on HoloLens, a Guides PC app makes it easy to create interactive content, attach photos and videos, import 3D models, and customize training to turn institutional knowledge into a repeatable learning tool.

The included Analytics feature provides insight into details behind every step of each guide, which can be used to assess production line processes, measure improvements, and drive efficiencies by modifying processes and updating the corresponding guide.

Mixed reality Guides for Field Service enables the Dynamics 365 Guides capability to be seamlessly integrated within the Field Service experience. Service tasks can have associated Dynamics 365 Guides that can be easily accessed by technicians when out on the jobsite.

Visit the [documentation for Dynamics 365 Guides](#) to learn more about integration with Field Service.



*A field technician wearing a HoloLens device, looking at a virtual guide*

**NOTE** This feature is available in the Unified Interface only.

### See also

[Integrate Dynamics 365 Field Service with Dynamics 365 Guides](#) (docs)

# Dynamics 365 Project Service Automation

## Overview of Dynamics 365 Project Service Automation 2019 release wave 2

Dynamics 365 Project Service Automation helps you to win and deliver projects on time and within budget, while optimizing resource utilization. The application has pricing, sales, resourcing, time and expense, and invoicing management capabilities, along with some project task and work breakdown structure (WBS) functionality. The product team's investments for this release and the next one focus on providing a modular offering for organizations with project-based services. This offering will seamlessly bring together capabilities across Microsoft Project, Project Service Automation, and the Service industries module within Dynamics 365 Finance to enable a frictionless and functionally rich Quote to Cash for projects.

Dynamics 365 Project Service Automation currently leverages Microsoft Power Platform and Common Data Service to help our customers connect and build end-to-end business solutions for project organizations with rich pricing, costing, and resource management experiences. With Microsoft Project replatforming to Common Data Service, we will be uniquely positioned to deliver a competitive set of project-planning and task-scheduling capabilities. Our customers will be able to deliver successful projects with this expanded project management functionality.

The Service Industries module within Dynamics 365 Finance delivers project accounting, with revenue recognition and customer-facing invoicing that leverages date-effective exchange rates and a rich sales tax feature set. Our customers will be able to better manage invoicing, cash flow, and project accounting with this expanded financial capability brought into our solution.

The themes for this and the next release wave are:

- **Leverage the best of Office and Dynamics 365 solutions for project management**
- **Model alignment with project functionality in Finance**

We are currently reworking our engineering and release timelines for this feature set so stay tuned as we strategize on the best path forward for our customers. The timelines will be updated in the coming weeks.

# Dynamics 365 Finance

## Overview of Dynamics 365 Finance 2019 release wave 2

The 2019 release wave 2 focuses on risk reduction, a subscription-based economy, and usability enhancements for routine processes.

### Reduce risk with automated revenue recognition and credit management

This feature provides the capability to be compliant with IFRS 15 and ASC 606 standards with revenue pricing and schedules that automatically create the allocations needed to recognize revenue. You can also automatically assign credit limits to your customers according to rules that meet the risk tolerance of your organization.

### Enhancing the user experience

Routine periodic tasks are easier to perform (or are automated) through the ongoing enhancements that we've made to finance processes. These enhancements have been driven by direct observation of customers' work.

### What's new and planned for Dynamics 365 Finance

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Unlock journals</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Cancel bank reconciliation</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Create checks with a blank status on the Checks page</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Reset workflow status for vendor invoices from Unrecoverable to Draft</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Revenue Recognition</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Select consolidation amount from control on the consolidate online for dual currency consolidation</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Ability to export records from the Accounts payable invoice pool form</a>	End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 26, 2019
<a href="#">Prohibit submission to workflow when there are unallocated charges on a vendor invoice</a>	End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 26, 2019
<a href="#">Financial report retention policies</a>	Admins, makers, or analysts, automatically	-	✓ Feb 3, 2020
<a href="#">Reverse journal posting</a>	End users by admins, makers, or analysts	-	✓ Feb 3, 2020

Description of **Enabled for** column values:

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For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Unlock journals

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

A new button is available on the journal page to unlock a journal with a status of **Locked by system** set to Yes. A system admin who has analyzed the batch jobs that are running and has confirmed that this journal is no longer actively being processed by a batch job can unlock it. This button is enabled by the feature named **Journal Unlock button** on the **Feature management** page.

### See also

[General journal processing](#) (docs)

## Cancel bank reconciliation

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

### Feature details

Users will be able to cancel bank reconciliations in chronological order of reconciliation starting with the most recent. History is tracked to show when and by whom the reconciliation was reversed. This will prevent users from having to manually adjust journals to correct any errors that occurred during the periodic process.



## Create checks with a blank status on the Checks page

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

### Feature details

The **Checks** page is where you perform maintenance tasks on checks, such as creating new check numbers and deleting checks. During the payment process, when this feature is enabled, you can't create checks with a blank status during the payment process. This enhancement helps prevent wasting checks unnecessarily.

## Reset workflow status for vendor invoices from Unrecoverable to Draft

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

### Feature details

You can use the **Workflow history** page to reset the workflow status to Draft. This page can be opened from the **Vendor invoice** page or by going to **Common > Inquires > Workflow**. To reset the workflow status to Draft, select **Recall**. You can also reset the workflow status to Draft by selecting the Recall action on either the **Vendor invoice** or **Pending vendor invoices** page. After the workflow status is reset to Draft, it becomes available for editing on the **Vendor invoice** page.

## Revenue Recognition

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

### Feature details

New capabilities will include support for product bundles and kits such as:

- Software and maintenance

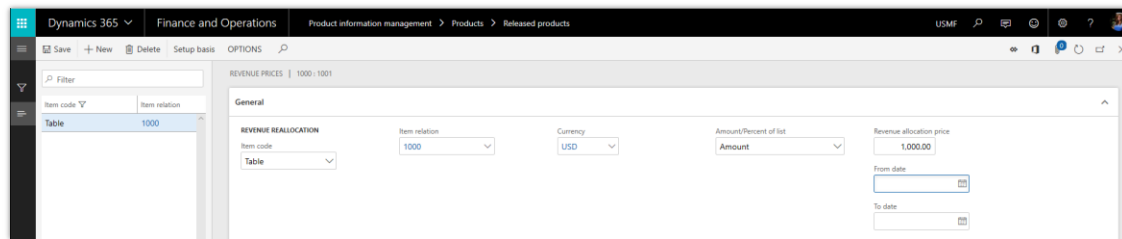
- Software and services
- Software
- Hardware and service

These capabilities will handle the following features:

- Revenue pricing
- Revenue schedules
- Bundle setup
- Multiple sales order reallocation
- Workspace navigation and reporting

## Revenue pricing

Users can enter a different price that they will recognize as different from what they charge the customer.



### *Revenue pricing*

## Revenue schedules

Revenue schedules determine the number of months for the revenue deferral. Options are available to create the schedule based on actual days of the month, splitting equally across month or based on a set number of occurrences.

**Revenue recognition schedule**

Overview

Show: ☐ Processed ☐ On hold ☐ Multiple journals ☐ Invoice ☐ Project ID ☐ Period number ☐ Recognize revenue account ☐ Revenue schedule ☐ Occurrences ☐ Invoice date ☐ Sales order ☐ Line number

Processed	On hold	Multiple journals	Invoice	Project ID	Period number	Recognize revenue account	Revenue schedule	Occurrences	Invoice date	Sales order	Line number
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CV-00000718			401100	12m	1	12/4/2018	000789	2.000000000
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CV-00000718			401100	12m	2	12/4/2018	000789	2.000000000
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CV-00000718			401100	12m	3	12/4/2018	000789	2.000000000
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CV-00000718			401100	12m	4	12/4/2018	000789	2.000000000
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CV-00000718			401100	12m	5	12/4/2018	000789	2.000000000
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CV-00000718			401100	12m	6	12/4/2018	000789	2.000000000

Financial dimensions

## Revenue schedules

## Multiple sales order reallocation

**Reallocate Multiple Orders**

Revenue Reallocation

Setup **Sales**

Select all Clear all

**HEADERS**

Select	Sales order	Customer account	Name	Status	Invoice account	Project ID	Created date time
<input type="checkbox"/>	000748	US-003		Open order	US-003		1/12/2017 11:33:25 AM
<input type="checkbox"/>	000753	US-003		Open order	US-003		1/15/2017 12:00:24 PM
<input type="checkbox"/>	000784	US-003		Open order	US-003		8/25/2017 04:22:51 AM
<input type="checkbox"/>	000800	US-003		Open order	US-003		9/17/2018 06:32:55 AM
<input checked="" type="checkbox"/>	000810	US-003		Invoiced	US-003		9/19/2018 07:43:03 AM
<input checked="" type="checkbox"/>	000811	US-003		Open order	US-003		9/19/2018 07:54:19 AM

**LINES**

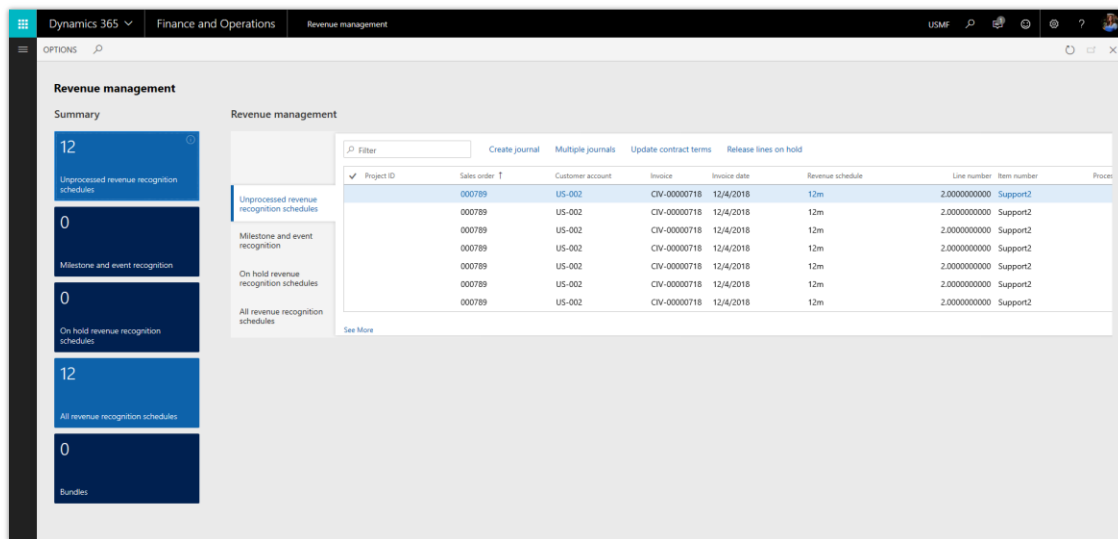
Mark	Sales order	Item number	Product name	Sales quantity	Unit	Sales price	Amount	Discount	Discount percent	@REF
<input checked="" type="checkbox"/>	000811	50001	Installation services	1.00	ea	250.00	250.00	0.00	0.00	
<input checked="" type="checkbox"/>	000810	1000	Surface Pro 128 GB	1.00	ea	2,500.00	2,500.00	0.00	0.00	2.5
<input checked="" type="checkbox"/>	000810	Support	Support	1.00	ea	500.00	500.00	0.00	0.00	4

OK Cancel

## Multiple sales order reallocation

## Workspace

The new workspace is used to look at the status of the revenues schedule records created for deferred revenue.



*Revenue recognition workspace*

## See also

[Revenue recognition overview](#) (docs)

## 'Select consolidation amount from' control on the consolidate online for dual currency consolidation

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

## Business value

This feature helps you control the currency (either the accounting or reporting currency) that's used as the transaction currency in the consolidation company and can automatically copy amounts from the source company to the consolidation company if the currencies are the same.

## Feature details

- **Add the "Select consolidation amount from" control on the consolidate online form.**

When the feature is enabled, the user can choose whether the accounting currency or the reporting currency from the source company will be used as the transaction currency in the consolidation company.

- **Directly copy amounts from the source company to the consolidation company if the currencies are the same.**

When the feature is enabled, the accounting or reporting currency amounts from the source company will be copied directly to the accounting or reporting currency amounts in the consolidation company if either of the currencies are the same. The accounting and reporting currency amounts in the consolidation company are calculated using the exchange rate if neither of the currencies is the same.

## Ability to export records from the Accounts payable invoice pool form

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 26, 2019

### Feature details

This feature lets you export records from the **Accounts payable invoice pool form** to Excel. This capability provides a productive environment to review and analyze the grid data in Excel.

### See also

[Accounts Payable changes in 10.0.5](#) (blog)

## Prohibit submission to workflow when there are unallocated charges on a vendor invoice

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 26, 2019

### Business value

Finding issues before invoices are submitted to workflow helps prevent errors that might stop posting and require resubmitting the vendor invoice to workflow, thereby saving submitters and approvers time in the long run.

## Feature details

This feature lets you prevent a vendor invoice from being submitted to the workflow process when it contains unallocated charges. Instead, the person who submitted the invoice receives an alert that it has unallocated charges and lets them correct it before submitting it to workflow.

## See also

[Accounts Payable changes in 10.0.5](#) (blog)

## Financial report retention policies

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Feb 3, 2020

## Business value

This mandatory feature will reduce effort needed to maintain multiple financial reports by automatically deleting expired reports after 90 days.

## Feature details

This feature helps you manage retention of generated financial reports. It applies a default expiration policy to all reports so that expired reports are automatically deleted after a period of time. Reports that need to be retained for regulatory purposes can still be marked for retention indefinitely. Refer to "Report deletions and expirations" in the [Financial reporting overview](#) topic.

## See also

[Financial reporting overview](#) (docs)

## Reverse journal posting

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Feb 3, 2020

## Business value

The capability to reverse multiple lines, or all the lines, in a general journal makes a common accounting practice easier to complete and more efficient.

## Feature details

Reversals have been improved to let you reverse multiple general journal lines or all the lines in a general journal. From the **Voucher transaction** page, you can reverse a limited number of subledger journal entries. You can also reverse subledger journal entries from the **Accounting source explorer**. For more information, see [Reverse journal posting](#).

## See also

[Reverse journal posting](#) (docs)

# Dynamics 365 Supply Chain Management

## Overview of Dynamics 365 Supply Chain Management 2019 release wave 2

### Trade, product information, and inventory management

The continuous feedback obtained by operating the service allows us to identify specific subprocesses within the inventory management area that can be subject to tangible performance improvements. This is an ongoing effort with broad impact on several areas of the service, allowing for faster feedback, less waiting time, and the ability to unblock resources that otherwise would be waiting for a process to finish.

We continue to invest in both our product information management and inventory management capabilities. New classes of products and production processes will drive an evolution of the product definition and supporting elements. The inventory-valuation capabilities will be expanded to support scenarios where multiple valuation methods and multiple currencies are required—for example, in cases of different managerial reporting and statutory reporting requirements. We will also invest in making inventory on-hand information more readily available in distributed scenarios—for example, in the retail industry.

This release will bring usability enhancements in sales and procurement that increase users' productivity and satisfaction. Super users will be able to propose filtered views and to purpose-build forms where unnecessary fields or actions can be removed, allowing for a quick understanding of the purpose of the form and fast interaction with it. The benefits are two-fold. The knowledge of super users can be disseminated to the organization, and all skill levels of users can benefit from targeted views crafted to fit the task at hand.

The focus for the sales, procurement, and sourcing areas will be on improving franchising capabilities, Evaluated Receipt Settlement (ERS) capabilities, hazardous material handling, business support within areas of supplier collaboration (looking into extended self-service, data sharing, and data maintenance capabilities), and improving business support within integration scenarios covering purchase requisition, request for quotation, and purchase ordering relative to data flow and accounting distribution constraints.

Going forward, across the sales and procurement areas, the primary focus will be on improvements in our ability to track and account for goods in transit scenarios. Enhancing support of business scenarios within kit to stock as well as kit to order and extending our



support for sales price and promotion management by adding extended price-management flexibility leads to improved efficiency and lower cost of maintenance.

## Warehouse management

The Warehouse Management System (WMS) is a recent successful addition to the application suite that serves several industries, each with specific requirements on how to operate a warehouse. The solution has been gradually enhanced since the introduction in Microsoft Dynamics AX 2012, and a large suite of enhancements has recently been licensed from an ISV.

With the 2019 release wave 2, we will continue enhancing the released catch weight feature by adding capabilities of the second catch weight purpose-built solutions, with the aim of allowing existing customers to upgrade to the April release or its following monthly releases. The solution will both fit the needs of distributors as well as manufacturers. The lack of this integration has been hampering the uptake of the WMS solution for certain customers—this reservation will be removed. The suite of 30-plus distinct features will be integrated as a preview after the April '19 release as part of the subsequent monthly releases. For example, a feature like “enable label printing during wave” adds flexibility in configuration and operation.

All feature exposures will be achieved through flighting to allow for a controlled roll-out. Investments include enabling warehouse automation using Microsoft HoloLens and enabling spatial data analytics using video feeds.

## Manufacturing and planning

It is a core priority to leverage the continuous feedback obtained from operating the service to drive tangible performance improvements as well as optimize core manufacturing business processes. Public preview for the Planning Optimization is planned to launch in October 2019.

We are continuously enhancing and evolving current manufacturing functionality to support the connected, intelligent operations of modern manufacturers. We will integrate with the intelligent Microsoft Azure IoT service to help manufacturing customers close the digital feedback loop. This will consolidate close-to-real-time information from the shop floor with business data to generate business events and actionable insights. With the acquisition, we will introduce enterprise asset management capabilities that will enable customers to track the total cost of ownership of operations assets, as well as to manage the ongoing maintenance of those assets.

## What's new and planned for Dynamics 365 Supply Chain Management

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Asset Management</a>	End users, automatically	✓ Jul 23, 2019	✓ Oct 1, 2019
<a href="#">Wave status visualization</a>	End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Inventory value report storage</a>	End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Oct 8, 2019
<a href="#">Report as finished to a license plate-controlled location from the job card device</a>	End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Oct 8, 2019
<a href="#">Warehouse app task validation with RSAT</a>	Admins, makers, or analysts, automatically	✓ Sep 6, 2019	✓ Nov 1, 2019
<a href="#">Location product dimension mixing</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Nov 17, 2019
<a href="#">Master planning progress Gantt chart</a>	End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 29, 2019
<a href="#">Purchase agreement enhancements</a>	End users by admins, makers, or analysts	-	✓ Nov 30, 2019
<a href="#">Parallelized firming of planned orders</a>	End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Dec 1, 2019
<a href="#">Confirm and transfer</a>	End users by admins, makers, or analysts	✓ Mar 4, 2019	✓ Dec 19, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Additional location zone</a>	End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Dec 19, 2019
<a href="#">Location status</a>	End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Dec 19, 2019
<a href="#">Pick-line grouping</a>	End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Dec 19, 2019
<a href="#">Cluster position full</a>	End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019
<a href="#">Location directive inventory picking aging</a>	End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019
<a href="#">Warehouse release rule</a>	End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019
<a href="#">Work line details</a>	End users, automatically	✓ Apr 8, 2019	✓ Dec 19, 2019
<a href="#">Zone threshold replenishment</a>	End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019
<a href="#">Wave template grouping</a>	End users by admins, makers, or analysts	✓ May 6, 2019	✓ Dec 19, 2019
<a href="#">Split work</a>	End users by admins, makers, or analysts	✓ Jun 3, 2019	✓ Dec 19, 2019
<a href="#">Change work pool on work</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Dec 19, 2019
<a href="#">System-directed cluster picking</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Dec 19, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Cancel work</a>	End users by admins, makers, or analysts	✓ Jun 7, 2019	✓ Jan 3, 2020
<a href="#">Inventory aging report storage</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 3, 2020
<a href="#">Shipment auto update</a>	End users by admins, makers, or analysts	✓ Nov 25, 2019	✓ Jan 8, 2020
<a href="#">Advanced load building during a wave</a>	End users by admins, makers, or analysts	✓ Mar 4, 2019	✓ Jan 17, 2020
<a href="#">Outbound sorting</a>	End users by admins, makers, or analysts	✓ Jun 3, 2019	✓ Jan 17, 2020
<a href="#">Inbound quality check</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Jan 17, 2020
<a href="#">Put to wall/Put to store</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Jan 17, 2020
<a href="#">Split demand replenishment work from create pick work step</a>	End users by admins, makers, or analysts	✓ Apr 1, 2019	✓ Jan 27, 2020
<a href="#">Deferred put processing</a>	End users by admins, makers, or analysts	✓ Jun 5, 2019	✓ Jan 27, 2020
<a href="#">Consolidate shipment enhancements</a>	End users by admins, makers, or analysts	✓ May 9, 2019	✓ Jan 31, 2020
<a href="#">Wave label printing enhancements</a>	End users by admins, makers, or analysts	✓ Sep 17, 2019	✓ Jan 31, 2020

Feature	Enabled for	Public preview	General availability
<a href="#">Vendor bidding—questions from vendors and summarized responses</a>	End users by admins, makers, or analysts	-	✓ Mar 12, 2020
<a href="#">Warehouse slotting</a>	End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Mar 27, 2020
<a href="#">Put-away clusters</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Mar 27, 2020
<a href="#">Cross-docking</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Mar 31, 2020
<a href="#">Receive sortation</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Mar 31, 2020
<a href="#">Auto-release shipment for cross dock</a>	End users by admins, makers, or analysts	✓ Jan 27, 2020	To be announced
<a href="#">Flexible warehouse-level dimension reservation</a>	End users by admins, makers, or analysts	✓ Jan 27, 2020	To be announced
<a href="#">Wave step code</a>	End users by admins, makers, or analysts	✓ Jan 27, 2020	To be announced
<a href="#">Further catch weight integration 10.0.1</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Further catch weight integration 10.0.2</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Further catch weight integration 10.0.3</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

Feature	Enabled for	Public preview	General availability
<a href="#">Further catch weight integration 10.0.4</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Further catch weight integration 10.0.5</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Further catch weight integration 10.0.6</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Further catch weight integration 10.0.7</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Further catch weight integration 10.0.8</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Material handling/warehouse automation</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Packing vs. storage dimensions</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Small parcel shipping (SPS)</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Planning optimization for distribution</a>	End users by admins, makers, or analysts	✓ Nov 29, 2019	To be announced
<a href="#">Quality management for warehouse processes</a>	End users by admins, makers, or analysts	✓ Mar 3, 2020	To be announced

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.

- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Asset Management

Enabled for	Public preview	General availability
End users, automatically	✓ Jul 23, 2019	✓ Oct 1, 2019

## Business value

This functionality provides:

- Improved machine effectiveness with preventive maintenance capabilities that reduces asset failure and extended equipment life expectancy.
- Condition-based maintenance (CBM), which reduces asset lifecycle costs.
- Improved visibility into production performance, which helps customers to plan ahead.
- Insight into downtime, with intelligent analytics helping users make informed data-driven decisions.
- Automated management of maintenance workflows to limit risks.
- Efficient spare parts management, ensuring complete overview of item consumption on assets, thereby optimizing the maintenance process.
- Reduced production costs via enhanced visibility of assets across sites and departments.
- Visibility into real-time asset financial information.
- Advanced cost control on assets, locations, faults, work hours, and work orders.
- Reduction in maintenance overtime, labor, and contractor costs.

## Feature details

Asset Management for Dynamics 365 Supply Chain Management will enable customers to optimize maintenance processes and help with maintenance planning, execution, and analytics. The functionality will help to reduce downtime and overall maintenance cost, and will be a core part of Finance and Operations cross-app capabilities.

**See also**

[Asset management preview](#) (blog)

[Asset management overview](#) (docs)

**Wave status visualization**

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019

**Business value**

This feature enables more information and visibility in wave processing and the current status of the wave.

**Feature details**

This feature will allow the user to understand the degree of completion of the waving and allow the user to wait until completion or to do an ad-hoc cancellation and understand the amount of resources that has been used prior to a possible cancellation.

This feature adds information on the wave progress by visualizing the following:

- Progress of the wave as a percentage.
- Wave completion estimate, based on current processing performance of the wave.
- Wave allocation progress with total of load lines, allocated load lines, total pending allocations, and total processed pending allocations.
- Wave submethods, updating processed load lines for each one.

**Inventory value report storage**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Oct 8, 2019

**Business value**

This new way of executing the inventory value report is beneficial in cases where the output contains a large number of lines. For example, requesting the inventory ending balance by item,



site, and warehouse in a scenario with 50,000 items and 300 stores would yield a very long report, where data is difficult to review. Being able to sort and filter the results, or to export the results to an external system, makes the inventory value report results faster and easier to navigate.

### Feature details

A new inventory value report storage capability has been introduced. When you initiate a new execution of the inventory value report, you will have to provide a unique name for the specific execution, and the results of the report generation will be stored under this name. This eliminates the need for running multiple inventory value reports for the same period.

The output of the report execution will be accessible in the inventory value report storage details form. This form dynamically adjusts columns and aggregates balances depending on the inventory value report layout configured. All your current inventory value report configurations can be used.

A new inventory value report data entity has also been introduced. This enables you to export the output of a specific, named inventory value report run to any format supported by data management.

### Report as finished to a license plate-controlled location from the job card device

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Oct 8, 2019

### Business value

This enhancement enables the use of the job card device in scenarios where the finished goods output from the production are tracked by license plates throughout both production and the warehouse.

### Feature details

The **Report progress** dialog in the job card device has been enhanced to allow registration of a license plate. This capability is available when:

- The finished good is enabled for the advanced warehouse processes.
- The finished good is reported to a location that is set up to track inventory by license plate.
- The finished good is reported to an existing license plate.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Report as finished to a license plate controlled location from the Job card device](#) (docs)

## Warehouse app task validation with RSAT

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Sep 6, 2019	✓ Nov 1, 2019

### Feature details

You can now record tasks with the warehouse mobile app (WMA) and use them for acceptance testing with the Regression Site Automation Tool (RSAT). With the warehouse app task validation page, it is possible to record tasks, create replacement variables, and define validation rules. You can then use the RSAT to run previously recorded tasks.

### See also

[Install and configure the Warehousing app overview](#) (docs)

## Location product dimension mixing

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Nov 17, 2019

### Feature details

This new location profile functionality enables better location utilization when using product variants. It allows you to decide whether configurations, colors, style, and sizes can be mixed on a certain location (profile) or if only one or a combination of some of those dimensions can be put to the same location.

### See also

[Warehouse management overview](#) (docs)

## Master planning progress Gantt chart

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 29, 2019

### Feature details

From **View master planning progress** it is possible to view details from historical master planning runs presented as a Gantt chart. This is useful to understand the time spent on the various phases of master planning. For a current active planning job, **View master planning progress** can be used to track progress and view the estimated remaining time.

### See also

[Feature exploration](#) (video)

[Monitor a master planning run](#) (docs)

## Purchase agreement enhancements

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Nov 30, 2019

### Feature details

This feature allows users to identify the employees who are responsible for maintaining purchase agreements. When a purchase agreement is closed, if the agreement is marked to be no longer actively used, users will not be able to create release orders from the purchase agreement. Users can define an invoice matching policy to use for purchase orders released from a purchase agreement. Purchase agreements are used by different persons in the organization, but there is often one person who is responsible for maintaining the agreement. To avoid mistakes, it is important that it is clearly visible who is responsible for the agreement and whether it can be used or not.

- **PA enhancements** – Responsible party (General availability in October 2019)
- **PA enhancements** – Mark purchase agreement as "Closed" (GA in November 2019)
- **PA enhancements** – Purchase agreement matching policy (GA in November 2019)

## See also

[Purchase agreements](#) (docs)

## Parallelized firming of planned orders

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Dec 1, 2019

## Business value

If you are planning to firm many orders at once, parallelizing the run can improve the runtime or performance.

## Feature details

Parallelized firming with multiple threads from the planned orders page enables the user to speed up the firming process by parallelizing the firming process across multiple threads. This can be relevant when a high number of planned orders are firmed. The parallelize firming and number of threads options are available when multiple planned orders are selected for firming.

If you are planning to firm many orders at once parallelizing the run can improve the run time or performance.

Parallelize firming

☒ Yes

Number of threads

*Parallelized firming options*

## See also

[Feature exploration](#) (video)

[Parallelize firming](#) (docs)

## Confirm and transfer

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 4, 2019	✓ Dec 19, 2019

### Feature details

This functionality supports the scenario in which all product cannot fit onto a truck or where some of the load should leave the warehouse before the remainder is ready for shipping. The leftover product can be transferred to a new load and consequently to a new truck. This feature can be used with loads that are otherwise intended to allow only full-load shipping and, as a result, gives more flexibility to transport managers for solving nonstandard or unforeseen scenarios.

## Additional location zone

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Dec 19, 2019

### Feature details

This enhancement includes three additional zone fields and support for them in the location setup wizard. These additional zone fields in the location setup can be used in queries for filtering the information. This adds flexibility to the warehouse structure, with additional zones for the same location and processing of data by queries.

### See also

[Warehouse management overview](#) (docs)

## Location status

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Dec 19, 2019

## Feature details

This functionality introduces several new fields on the locations table for more flexibility in working with and maintaining locations. Location statuses (empty, storage, picking, or frozen) can be included in the location directives query for better warehouse flow control. Blocking causes can be set up and can later be assigned to any location to either block inbound or outbound transactions against such a location. Location blocking does not exclude locations for reservations. It is meant only as a temporary operational blocking.

## Pick-line grouping

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Dec 19, 2019

## Feature details

Pick-line grouping setup allows users to dynamically group together and aggregate multiple pick lines into a single pick execution step on a mobile device. The system groups together all pick lines with a matching dimension set, namely item ID and location ID, and the user will only have to visit the pick location once for a single work order with multiple matching pick lines. This feature offers faster execution of picking work and reduces worker pick path significantly in certain scenarios. The functionality is applied automatically via the setup of the mobile device. All matching pick lines and associated transactions of the work order being processed will be updated by the system mutually. The work order structure will remain as initially created, and the lines will not be aggregated within the client; however, the pick lines should be sorted by item ID for this functionality to work.

## Cluster position full

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019

## Feature details

When used with cluster picking, this feature offers a flexible manner of breaking the pick work and acknowledges the need for a larger margin of error in volumetric constraints of containers or totes. The functionality introduces the ability to execute the "full" option on one of the work units within a cluster. The feature differs from the standard "full" button flow in that it cancels

the remaining work. Additionally, it does not suggest adding another bin to the same cluster because it does not create new work automatically.

## Location directive inventory picking aging

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019

### Feature details

Two new picking-location directive strategies are introduced: FIFO (first in, first out) and LIFO (last in, first out). These work in conjunction with aging date fields on the location and license plate to track when inventory first entered the warehouse. These strategies can be used for both batch and nonbatch tracked items and to ship items to customers based on when the inventory entered the warehouse. This can be especially useful for nonbatch tracked inventory where an expiration date is not available to use for sorting.

When inventory is first received or created in the warehouse, the license plate is updated with the current date populated as the aging date. This date is then used by the strategies to determine the oldest or youngest inventory in the warehouse. If inventory is moved to a non-license-plate-tracked location, the location itself is updated with an aging date, which will also be used by the strategies.

## Warehouse release rule

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019

### Feature details

The release to warehouse rule introduces new abilities for greater flexibility when releasing to the warehouse. It controls whether release of partially reserved order lines is allowed by the system or not. It works hand-in-hand with advanced cross-docking functionality where part of an order line might be marked against a supply source, and part of the order line can still be processed in the warehouse, to allow the release of such a line and continue with warehouse processing for the available inventory quantity.

## Work line details

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 8, 2019	✓ Dec 19, 2019

### Business value

With this functionality, a user can switch between displaying all work lines or only open work lines for a specific company. The page shows all important details that a supervisor would require to successfully manage and adjust workflow within the warehouse, namely work status, item number, location, work quantity, load ID, shipment ID, and others. The user can change the location of any opened work line, overriding location directive setup, to cancel any work line straight from the page or to adjust quantities. The user can also view transactions behind each work line straight from the page.

### Feature details

You can switch between showing all work lines or only open work lines for a specific company. You can view all important details that a supervisor would require to successfully manage and adjust workflow within the warehouse, namely work status, item number, location, work quantity, load ID, shipment ID, and others. You can change the location of any opened work line, overriding location directive setup, to cancel any work line straight from the page or to adjust quantities. There is also the ability to view transactions behind each work line straight from the page.

### See also

[Feature exploration](#) (video)

## Zone threshold replenishment

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 8, 2019	✓ Dec 19, 2019

### Feature details

Zone-based replenishment is a feature that uses min/max replenishment strategy but evaluates warehouse zones instead of individual locations. By not taking a dependency on a fixed location setup, the functionality allows for replenishment of dynamic locations. This opens up a min/max



replenishment process for companies using dynamic locations, such as retailers that have numerous stocked items with a short live time.

At the replenishment template for min/max replenishment, the user specifies whether the threshold should be evaluated per location or per zone. In the case of zones, specific zones are then added to the zone-selection query. As it is for location-based min/max replenishment, zone-based min/max replenishment is based on setting up a minimum threshold of inventory that triggers the creation of a replenishment work order for selected items and item variants. In return, replenishment will be created for the quantity that increases inventory up to the desired zone maximum threshold.

## Wave template grouping

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ May 6, 2019	✓ Dec 19, 2019

### Feature details

Wave template grouping functionality is similar to existing work-template grouping behavior, but instead it enables grouping and breaking by functionality already on the wave template. This can be useful in warehouses where waves are being created based on a certain criterion but where automatic wave creation is preferred to manual.

## Split work

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jun 3, 2019	✓ Dec 19, 2019

### Business value

This feature helps to increase the utilization of the warehouse workforce, allowing for flexibility in planning day-to-day tasks. It allows the user to manually correct some automatically created assignments.

### Feature details

This feature helps solve the business challenge in which a single employee cannot finalize work within a given time and other users are available to assist completing it. The work can be split in two or more work headers in order to assign it to available employees. The feature adds the

flexibility of restructuring work after it has been created and is in either an open or in-progress state. A worker will not be able to proceed with work lines that might concurrently be split to another user. The existing blocking mechanism has been refactored.

## Change work pool on work

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Dec 19, 2019

### Feature details

The **Change work pool** button is a simple addition to the system that enables the warehouse manager to change the work pool of the already created work ID. It introduces the ability to react faster to any possible changes on the shop floor and to better streamline the physical process when required by changing situations.

## System-directed cluster picking

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Dec 19, 2019

### Feature details

With the setup of system-directed cluster picking, you can cluster-pick work headers based on a system-generated cluster. The system clusters picking orders up to the number of positions specified on the cluster profile and allows the user to pick multiple orders at the same time without having to create a cluster manually. This feature offers an alternative to manual cluster building by offering to use a cluster profile that the system will use to create a cluster. Several setup lines should be determined on the cluster profile before use. "Number of positions" will correspond with the number of orders that will be put on a cluster and consequently to the number of totes; "Break cluster at" will determine when the cluster should be broken; "Generate cluster ID" will control whether the cluster ID will be generated by the system or entered by the user; and "Sort verification type" will determine whether any position verification is needed or not.

The new mobile-device menu item should be used for system-directed cluster picking with the new "Directed by" option, where the wanted cluster profile ID must be specified. The assignment of work orders can be further optimized by specifying customized sorting criteria on the system-

directed query order, which can group orders based on company-specific criteria. At the time of picking via system-directed cluster, warehouse workers will be automatically presented with a created cluster where picking orders have been pre-assigned to cluster positions. The worker can therefore start picking an item for multiple work orders by visiting the pick location only once. The picking process for this feature is the same as for user-directed cluster picking.

### See also

[Feature exploration](#) (video)

## Cancel work

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jun 7, 2019	✓ Jan 3, 2020

### Business value

The cancel work feature is an attractive and secure alternative to SQL corrective scripts that are typically requested through IcM tickets to fix inconsistent data that can now be employed by the company's users with admin rights.

### Feature details

Warehouse Work Force Cancel is an admin facility available from the user interface that enables the user to cancel specific warehouse work that is currently in progress but is blocked (often, but not necessarily, due to data corruption).

Unlike the standard **Cancel** button (the one available directly from the Work page), the new cancel work function does not have a precondition for the last completed work line to be of type **Put**. In other words, it does not require item quantity on a work line to be on a non-user location.

Only work of type **Sales**, **Transfer issue**, **Raw material picking**, or **Replenishment** can be canceled by this job. Cancellation will not be executed for frozen raw material picking work or work that can be canceled by a regular cancel function (as described earlier).

To unblock the work, the system will cancel any remaining work lines and fix the warehouse data that is associated with the work ID. This will allow any regular warehouse-handling operations that involve the impacted item quantity to resume.

### See also

[Cancel warehouse work for exception handling](#) (docs)

## Inventory aging report storage

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 3, 2020

### Business value

This new way of executing the inventory aging report is beneficial in cases where the output contains a large number of lines. For example, requesting the inventory aging by item group, item, site, and warehouse in a scenario with 50,000 items and 300 stores would yield a very long report where data is difficult to review.

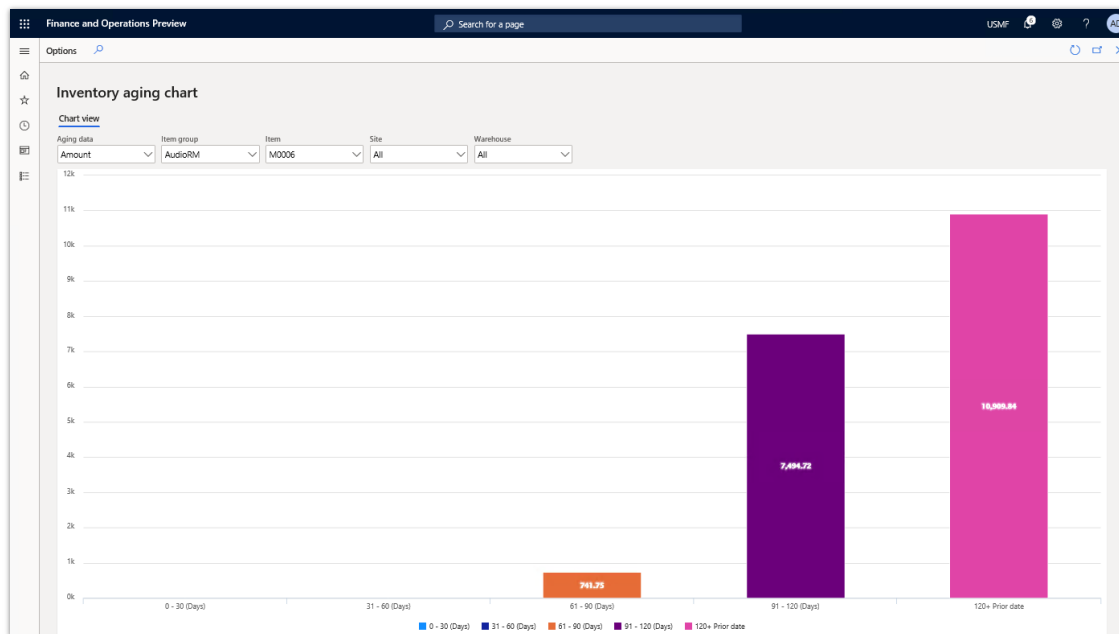
A new chart visualization provides a faster, enhanced overview of inventory aging. Facilities for sorting and filtering the results and for exporting the results to an external system, makes the inventory aging report results faster and easier to navigate.

### Feature details

A new inventory aging report storage capability has been introduced. When you initiate a new execution of the inventory aging report, you will have to provide a unique name for the specific execution, and the results of the report generation will be stored under this name. The execution date and time will also be recorded. This new functionality eliminates the need for regenerating the inventory aging report multiple times for the same period.

The output of the report execution will be accessible on the **inventory aging report storage details** page as a simple list or in an aggregated page in the new inventory aging chart, which supports both filtering and drill-through. This page dynamically adjusts columns and aggregates balances depending on the inventory aging report configuration. All your current inventory aging report configurations can be used.

A new inventory aging data entity has also been introduced. This enables you to export the output of a saved inventory aging report to any format supported by data management.



### Inventory aging chart

### See also

[What's new or changed in Dynamics 365 Supply Chain Management 10.0.6 \(November 2019\) \(docs\)](#)

## Shipment auto update

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Nov 25, 2019	✓ Jan 8, 2020

### Business value

This feature allows a business to seamlessly provide updates to a warehouse without having to worry about order line updates not being reflected on related shipments and loads. Without this feature, users have to manually update or delete and then re-release lines if order quantities increase or new order lines are added.

### Feature details

This functionality in this feature automatically updates quantities, increases as well as decreases, on a load line associated with a shipment after it's been released to warehouse. This will occur as

long as the load line on the shipment or load has not been processed on a wave. This implies that the feature will allow any order updates to automatically flow through to the warehouse without manual intervention as long as warehouse work hasn't been created. Without this feature, only quantity decrease automatically flows through for as long as warehouse work hasn't been created. This feature applies to sales order lines and transfer order lines.

The feature is enabled for a specific warehouse. This allows the company to apply different shipment auto update policies across warehouses, when required. By default, the shipment auto update policy applied for all warehouses that use a warehouse management process is on quantity decrease. With this policy setting, only quantity decreases automatically flow through to a shipment and load for as long as warehouse work hasn't been created.

## Advanced load building during a wave

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 4, 2019	✓ Jan 17, 2020

### Feature details

Advanced load building allows the wave to assign the shipment to an existing load, if one exists that meets the criteria, or create a new load if required. This feature allows for the system to automatically build loads to represent a route, carrier, or other concepts as needed by the business. Loads can be built based on information from the sales order or containers created in an earlier wave step. Load building will also integrate with transportation management when using the route plan functionality.

### See also

[Warehouse management overview](#) (docs)

## Outbound sorting

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jun 3, 2019	✓ Jan 17, 2020

### Feature details

Pallet building offers the ability to sort packed containers to a correct pallet after the packing station and to build a packing hierarchy. Such pallets can later be moved to the correct staging

location with a single work order capturing all packed containers. The warehouse worker has the freedom to choose which pallet the packed container should be put to, the maximum number of boxes a pallet can have, and how many pallets are needed in any given scenario.

A container packing policy and a sorting location profile are introduced, which together offer greater flexibility in handling packed containers from the packing station. Different consolidation criteria are introduced—after the user has assigned a criterion for each destination pallet, all subsequent packed containers will be guided to the matching pallet, and the worker must confirm only the put step of the work order. When the pallet is full, the pallet position is closed, and it can be moved as a single unit. This means faster handling and better overview of containers because it reduces the necessary steps for movement of packed containers within the warehouse. This feature does not use containerization processes when merging containers to a pallet, but it extends the existing container group license plate functionality. The pallet content list can therefore not be printed via this enhancement. This feature is subject to change as it is integrated with existing system features.

### See also

[Warehouse management overview](#) (docs)

## Inbound quality check

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Jan 17, 2020

### Feature details

With this functionality, you can perform rapid quality checks on the spot at the time of receiving to the inbound dock area. These spot checks are beneficial when packaging or any other easily recognizable part of the item is being inspected. They serve as quick looks to see if anything is standing out as faulty before stocking the inventory to its location.

This function offers an alternative to existing quality-check processes, with more flexibility and faster processing. It does not require any quality orders to be created but instead creates one after a license plate is rejected on initial inspection. At the time of receiving, the worker is required to perform a desired quality check and must decide whether to accept or reject each license plate scanned. Accepted license plates will be guided to the storage location as normal, while rejected license plates will be diverted to a quality check location for further inspection.

Existing put-away work will be canceled, a new “Quality In Quality Check” work order will be created, and the user will automatically continue with the put step. This process can also be automated to divert all scanned license plates to the quality check location immediately.

### See also

[Feature exploration](#) (video)

[Warehouse management overview](#) (docs)

## Put to wall/Put to store

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Jan 17, 2020

### Feature details

With this feature, you can handle scenarios where consolidation of product to a prepack staging area based on configurable criteria is required. Companies shipping to stores or handling small items will benefit from this functionality due to decreased picking time—it allows for picking to a single target license plate, and it can leverage a greater number of put positions than cluster picking. The put-to-wall workflow directs picked products to a sorting location for distribution into various types of containers. Generally, each sorting location includes multiple sort positions. Each sort position is assigned according to the criteria set by the business process, most commonly destination, store, shipment, or load.

Once the product is picked, it is taken to the sorting station and distributed to the sort position by the quantity associated to the order, destination, shipment, or load. When a container is full or complete, it is moved to a staging location or a shipping location for further handling, depending on the business process. Technically, the put-to-wall functionality allows for individual items or quantities to be taken from the target license plate assigned during picking, sorted to a sort position, and assigned to a sort license plate, typically representing a container. As the sort position is closed, work is created according to the warehouse management setup.

### See also

[Warehouse management overview](#) (docs)



## Split demand replenishment work from create pick work step

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 1, 2019	✓ Jan 27, 2020

### Business value

This feature allows for future performance enhancements of each of the transactions. It also intrinsically reduces the impact of a potential lock, by reducing the transaction size.

### Feature details

In the version 7.1 timeframe, we improved the allocation step of waving by introducing multithreading. The remainder of the steps are not currently multithreaded and run in a single long database transaction. One of the issues with optimizing the long transaction that creation of pick work represents is the fact that demand replenishment is created within that transaction. For future performance optimization purposes, we are separating the replenishment work creation step into its own thread that has its own transaction.

### See also

[Warehouse management overview](#) (docs)

## Deferred put processing

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jun 5, 2019	✓ Jan 27, 2020

### Business value

Deferred put processing will free up mobile devices right away, allowing the user to pick up new tasks. The system will also become resilient to random peak times of put processing—all processing time will be handled by batch servers, allowing warehouse workers to operate without disruption when there is unexpected slow server performance for registration of puts.

### Feature details

This is a performance-related feature focused on increasing the productivity of warehouse workers. Instead of requiring online processing of the various inventory updates each time a put

is complete, which “freezes” the mobile device, we will allow for that process to be performed asynchronously.

Warehouse workers will experience an increase of performance for all operations requiring a certain number of updates—for example, a put registration of a pick of 10 lines involves 20 inventory updates for the locations involved and 10 source document lines updates. These operations will be automated through batches, and the load of the system will be more balanced. Warehouse workers will not be dependent on sporadic or random peak use of the system.

The feature will be flighted so that we can test it with some customers—we want to understand the impact on various follow-up processes such as the manifesting and printing of shipping documents.

**WORK PROCESSING POLICIES**

Work processing policy name: all | Description: all

**Processing rules**

+ Add - Remove

✓	Work order type	Operation	Work processing method	Deferred processing thresh...	Deferred processing batch...
	Sales orders	Put	Deferred	11	
✓	Transfer issue	Put	Deferred	11	
	Replenishment	Put	Deferred	5	

**Deferred processing threshold**

If the threshold is set to zero it will be interpreted as no threshold and the deferred processing will be used if possible.

If the specific threshold calculation is below the threshold the immediate method will be used; otherwise, the deferred method will be used if possible.

For Sales and Transfer related work the

*Work processing policies*

## See also

[Deferred processing of warehouse work](#) (docs)

## Consolidate shipment enhancements

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ May 9, 2019	✓ Jan 31, 2020

## Business value

The system allows for a flexible setup accommodating consolidated shipments per customer, warehouse, mode of delivery, and all types of characteristics defined for the customer or item. This ultimately allows for higher efficiency at the warehouse and better customer service.

## Feature details

This feature allows for a more flexible configuration of the consolidated shipment that takes place when releasing the outbound source document to the warehouse. A consolidate shipment policy is introduced as well as a shipment consolidation template. These new entities will allow the user to define, per query, how to apply the policy when releasing the shipments and how to apply the template when consolidating the shipments. The current functionality is limited to a toggle at the warehouse level, making it difficult to select or deselect which customer or orders should be consolidated.

## See also

[Warehouse management overview](#) (docs)

## Wave label printing enhancements

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Sep 17, 2019	✓ Jan 31, 2020

## Business value

These changes will make it more efficient to support the labeling of cartons prior to palletizing. Some customers for whom compliance is an issue are vendors to large retailers that mandate the layout and content of labels for each carton. These large customers have a “label receiving process” where the cartons, while in receiving, are placed on conveyors, and the bar code is read automatically, allowing for automated creation of put-away.

## Feature details

Wave label printing functionality will be enhanced with the following:

- Allow for labels to be printed according to number of cartons on a single work line. Without using the containerization feature, this would mean that for a quantity of 100 cartons, the feature will print out 100 labels.
- Include an enumeration of the labels (1/124, 2/124 ... 124/124).
- Allow for a bill of lading (BOL) to be created and printed on the label.
- Allow a unique Serial Shipping Container Code (SSCC) to be created per carton and included on the label.
- Allow for the creation of a GS1-compliant number sequence for BOL and SSCC numbers.

- Allow for a HAZMAT code to be included (if relevant) on the label.
- Support reprint of labels (from hand-held devices, as from a rich client).
- Support for voiding of labels (for example, for short pick scenarios) and reprint.
- Support for clean-up of wave label history.

These changes will make it more efficient to support labeling of cartons prior to palletizing. It is especially helpful to companies shipping to large retailers that perform order receipt confirmation automatically by scanning each individual carton.

### See also

[Warehouse management overview](#) (docs)

## Vendor bidding—questions from vendors and summarized responses

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Mar 12, 2020

### Feature details

This feature will provide added ability for a vendor to submit questions via an RFQ reply in a free-form text format that can be grouped, and allows for a summary question and answer for the grouped questions. During a bidding process, a vendor might have questions about the requested services or products, and this feature will facilitate communication between vendor and customer in the context of the RFQ.

## Warehouse slotting

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 5, 2019	✓ Mar 27, 2020

### Feature details

Picking locations can be replenished before releasing orders to the warehouse. Warehouse slotting allows you to create replenishment work at any time based on order demand. This feature will collect demand from orders in the system based on a user-defined query and make the consolidated demand available to be viewed by warehouse personnel. Once demand has been identified, the slotting process will assign all of the demand to picking locations. After pick

locations have been identified, replenishment work can be created to bring inventory to the pick locations. When the demand is released to the warehouse, it can use the inventory that has “just” been brought to the pick location. A part 2 feature will also allow linking to any incomplete replenishment work as needed.

## Put-away clusters

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Mar 27, 2020

### Feature details

Put-away clusters is a functionality that enables clustering to be used during the put-away process. It allows workers to group put-away work into a cluster and pick multiple license plates at once, which are later taken to different warehouse locations. This feature is especially useful for retail warehouses or any other scenario where received license plates are not full pallets. It provides enhanced efficiency on inbound processes of the warehouse, allowing a faster alternative to single license plate put-away, where a user must repeat the process for each license plate individually.

### See also

[Feature exploration](#) (video)

## Cross-docking

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Mar 31, 2020

### Feature details

This functionality introduces advanced, planned cross-docking where all of the inbound inventory required to satisfy an existing order can be moved directly to the correct outbound dock or staging area without being put away. All remaining inventory from the inbound source is directed to the correct storage location through the regular put-away process. Cross-docking allows workers to skip inbound put-away and outbound picking of inventory that is already marked for inclusion in an outbound order. The result minimizes the number of inventory

touches where possible while saving time and space on the warehouse shop floor by reducing the number of interactions with the system.

The new cross-dock template enables users to specify the supply source and other requirements for cross-docking. The process of matching an outbound order to inbound inventory is called *marking*. On creating an outbound order, the user must mark each relevant line to match an inbound order that contains the required items. This process creates the cross-dock work order and can be done manually or automatically via release-to-warehouse. On receiving an inbound order, the cross-docking setup automatically identifies the need for a cross-dock and creates the movement work for the required quantity based on the location-directive setup.

The auto-release shipment feature builds on the cross-docking framework and supports a cross-docking strategy that lets you automatically release a sales or transfer order to the warehouse when the production order that supplies the demand quantity is reported as finished. In this way, the quantity required to fulfil the demand order is moved directly from the production output location to the outbound location.

### See also

[Feature exploration](#) (video)

[Warehouse management overview](#) (docs)

## Receive sortation

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Mar 31, 2020

### Feature details

Receive sortation functionality extends the put-away cluster functionality by sorting the inventory at the receiving dock. The sorted inventory is added to the put-away cluster profile prior to creating put-away clusters. Using this functionality, received items can be sorted by the destination location zone, handling equipment, or any other configurable criteria, and workers can move multiple license plates to different locations at the same time. It therefore provides enhanced efficiency to the put-away clusters functionality on the inbound side of warehouse processes.

### See also

[Warehouse management overview](#) (docs)

## Auto-release shipment for cross dock

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jan 27, 2020	To be announced

### Feature details

The auto-release shipment feature builds on the cross-docking framework and has these characteristics:

- It supports only production orders as supply and only sales and transfer orders as demand.
- The cross-docking operation can be started even if the demand order wasn't released to the warehouse before the supply receipt was registered (that is, before the production was reported as finished).

This cross-docking functionality has two advantages:

1. The warehouse operations can skip the step of putting away quantities of finished goods to the regular warehouse storage area if those quantities will just be picked up again to fulfill an outbound order. Instead, the quantities can be moved one time, from the output location to a packing/shipping location. In this way, the functionality helps minimize the number of times that stock is handled and, ultimately, helps maximize time and space savings on the warehouse shop floor.
2. The warehouse operations can postpone the release of sales orders and transfer orders to the warehouse until the output of finished goods for the associated production order is reported as finished. This advantage might be especially relevant in make-to-order production environments where manufacturing lead times tend to be longer than the lead times in make-to-stock environments.

### See also

[Auto-release shipment for cross-docking](#) (docs)

## Flexible warehouse-level dimension reservation

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jan 27, 2020	To be announced

## Business value

Maintain the optimization-focused approach to picking batch-tracked products for routine operations while still being able to set overrides based on customer requirements. Even when a product's default reservation policy prescribes that decisions on which batches to pick and where to locate them within the warehouse are postponed until the warehouse picking operations start (for example, an optimization-focused approach to inventory stocking strategy), batch numbers for the same product can also be reserved up front for the customer's order. This functionality removes the need to compromise on inventory and warehouse efficiency for products whose batch number selection for the most part takes place in the warehouse.

Allow workers who take sales orders to respect their customer's request to reorder a specific batch number. A batch number can be recorded and reserved at the order-taking time by the sales order processor, with no possibility of it changing during warehouse operations or it being committed to another demand.

## Feature details

Flexible warehouse-level dimension reservation includes the following capabilities:

- Allow reservation of a specific tracking or warehouse storage dimension value for the product quantity on the demand order, when those dimensions are placed below warehouse location in the product's reservation hierarchy (only batch number reservation on sales orders is supported in the 2019 release wave 2).
- Batch numbers as reserved for the sales order are handled by the existing WMS processes so that the committed batch is picked and shipped to the customer.
- Support for batch reservation from a sales order against on-hand quantities.

## See also

[Flexible warehouse-level dimension reservation policy](#) (docs)

## Wave step code

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jan 27, 2020	To be announced

## Business value

This feature allows for a more robust handling of the wave step codes that are modified from free text to code. The use of it will become more robust, including unique values that are set up



and unified throughout warehouses and that are less error prone. Users will not be able to alter a value if it is in use.

### Feature details

Wave step codes will allow users to set up codes that are used to link specific wave method instances with their corresponding template. This includes templates for replenishment, containerization, label printing, load building, and sorting. Without this feature, users will have to reference a specific template from the wave process method using free text only. Using free text is error prone because it requires a user to ensure that the wave step text added for a specific wave template matches the exact wave step text in the target template.

Wave step codes are set up for a specific wave step type in a separate form. Each wave step method in a wave template that requires a wave step code will require the wave step code to be selected from a drop-down list. Linking a wave step method in a wave template to a target template for the method will no longer rely on free text, but on setup codes. This reduces the risk and impact of human errors.

It is optional to uptake wave step codes and move away from wave step free text. The uptake is done per legal entity. As part of the uptake per legal entity, all existing wave step codes in the specific legal entity are upgraded into the new structure.

### Further catch weight integration 10.0.1

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

### Business value

This feature provides various enhancements on the catch weight solution following additional integration work of various scenarios supported in the Fullscope solution.

### Feature details

- Enables intercompany scenarios: it will be possible to use catch weight products enabled for warehouse management in intercompany scenarios.
- Clean-up job for the catch weight tag integration: clean up historical information related to catch weight tag registrations.
- Mixed license plate receiving for purchase order and load receiving: enable this process for catch weight items.

## See also

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

## Further catch weight integration 10.0.2

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

## Feature details

This feature provides various enhancements on catch weight product processing within warehouse management processes. We are providing the following additional integration work supported in the Fullscope ISV solution:

- Mixed license plate receiving (transfer and return sales orders): enables warehouse app processing for catch weight products to use mixed license plate receiving for transfer and return sales orders.
- Restrict weight adjustments: enables the possibility of restricting the warehouse management picking processes from capturing weights resulting in catch weight profit/loss adjustments for the following warehouse app processes:
  - Sales order
  - Transfer order
  - Production order
  - Movement
  - Movement by templates
  - Adjustment out
- Weight capturing during movements: enables the possibility of capturing weight during internal inventory movements.
- Catch weight tag maintenance enhancements: enables creation and correction actions directly in the catch weight tag form.
- Data entity support for catch weight tags: enables a public OData-enabled data entity, supporting creation and maintenance of the catch weight tags.

**See also**

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

**Further catch weight integration 10.0.3**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

**Feature details**

This feature provides various enhancements on the catch weight product processing within warehouse management processes. The feature adds the following additional integration work supported in the Fullscope ISV solution:

- Counting weight capturing method: enables the warehouse app counting processing to capture the weight per catch weight unit.
- Warehouse transfer weight capturing method: enables the warehouse app to capture the weight per catch weight unit as part of the warehouse transfer process.
- Restrict weight adjustments for additional processes: enables the possibility to restrict the picking processes from capturing weights resulting in catch weight profit/loss adjustments as part of warehouse app:
  - Warehouse transfer
  - Inventory status change
- Weight information as part of warehousing app inquire operations: enables the warehouse app inquire processes to display weight information and units.
- Change inventory status (periodic) for catch weight products: enables the change inventory status process for non-catch weight tag products.

**See also**

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

## Further catch weight integration 10.0.4

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

### Feature details

This feature provides various enhancements on catch weight product processing within warehouse management processes. We are providing the following additional integration work in the Fullscope ISV solution:

- Quality order validation (with inventory status change).
- Inventory status change from on-hand by location.
- Inventory status change via movement work processing.
- Enable the “Complete work” capability for final pick-put work lines pairs.

### See also

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

## Further catch weight integration 10.0.5

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

### Feature details

This feature introduces various enhancements for catch weight product processing within warehouse management processes. These include integration with various scenarios supported in the Fullscope ISV solution. Capabilities include:

- Enable the **Consolidate license plates** warehouse app capability.
- Enable the **Reverse work** capability.
- Support for **Consume full LP**, weight capturing, and variance methods by means of the **Register material consumption** warehousing app process.

## See also

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

## Further catch weight integration 10.0.6

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

## Feature details

Various enhancements have been made on the catch weight product processing within the warehouse management processes. There has been additional integration work for various scenarios supported in the Fullscope ISV solution and additional scenarios added on top of the BHS ISV solution:

- Enable linking against all storage dimensions for catch weight tags.
- Enable catch weight tag capturing for warehouse app movements.
- Uptake inventory status change processes for catch weight tag tracked products (all storage dimensions).

## See also

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

## Further catch weight integration 10.0.7

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

## Feature details

This feature introduces various enhancements for catch weight product processing within warehouse management processes. These include integration with various scenarios supported

by the Fullscope ISV solution plus additional scenarios added on top of the BHS ISV solution. Capabilities include:

- Enable capturing of catch weight tags when using the **Movement by template** warehousing app process.
- Enable catch weight tag capturing for warehouse app production picking.

### See also

[Feature exploration](#) (video)

[Catch weight product processing with warehouse management](#) (docs)

## Further catch weight integration 10.0.8

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

### Feature details

This release adds several enhancements to the catch weight processing features for warehouse management. It provides additional support for integrating with scenarios provided by the independent software vendor (ISV) Fullscope, and adds support for several additional scenarios that build on the BHS ISV solution. Enhancements include:

- Feature management support, including the ability to validate obsolete methods
- Additional capabilities for processing catch weight tags while tracking all storage dimensions, including:
  - Warehouse app movements with status change
  - Warehouse app movement by templates with status change
  - Warehouse transfer with status change
  - Warehouse app inventory status change
  - Warehouse app return sales order process
  - Manual pack form processing
  - Reduced picked quantity processing
  - Container reopening process

**See also**

[Catch weight product processing with warehouse management](#) (docs)

**Material handling/warehouse automation**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

**Feature details**

The material handling feature is a framework for interfacing with warehouse automation and material handling equipment. Users can set up outbound subscriptions on warehouse events, such as work creation, completion, and cancellation. These events, along with associated data, will be tracked in a queue, which can be accessed via a web service by external equipment. The data associated with each transaction is completely user configurable. Up to 10 fields can be specified to accompany each queue record. The status of each record will be tracked from blocked through sent. Similarly, an inbound queue exists, which external equipment can populate via a web service. When the inbound queue records are consumed, warehouse actions will be triggered, such as work completion and license plate receiving. Work can be executed one work line at a time, or a pick/put pair can be executed in a single transaction. Short pick and location override are also supported.

**See also**

[Warehouse management overview](#) (docs)

**Packing vs. storage dimensions**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

**Feature details**

Some items are packed or stored in such a way that there is a need to track physical dimensions for the different processes. A new field is being added to the **Physical dimensions** page to allow users to specify what process the specified dimensions are used for: packing, storage, or nested packing. The storage dimensions will be used along with location volumetrics to determine how much of the item can be stored in locations in the warehouse. The packing

dimensions will be used during containerization and the manual packing process to determine how many of the items will fit in different container types. The nested packing dimensions will be used when the packing process contains multiple levels.

### See also

[Warehouse management overview](#) (docs)

## Small parcel shipping (SPS)

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced

### Business value

SPS allows packed containers to be rated and have tracking numbers assigned from custom carrier rating engines.

### Feature details

SPS works in conjunction with either manual warehouse management packing, wave containerization, or retail store pack-and-ship to send details about a packed container to a shipping carrier and receive a rate and tracking number. The returned rate will be added to the associated sales order as a miscellaneous charge. The returned label can optionally be printed to a ZPL printer automatically. Users specify their account information for each carrier that they use. The system sends container information to the associated service, which then returns a rate, tracking number, and label information. Additionally, a third-party account number can be specified for each customer. (The specific carrier rating engines are not included and must be acquired separately.)

### See also

[Warehouse management overview](#) (docs)

## Planning optimization for distribution

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Nov 29, 2019	To be announced



## Feature details

Planning optimization is specifically designed for very fast calculations with massive data volume. It's built as a hyper-scalable multitenant service, meaning that multiple tenants can cooperate simultaneously to calculate the plan. Also, the planning service will remove the load of master planning from your ERP system and work with a data stream that minimizes the server load.

## Customer benefits

Eliminate daily time reserved for planning batch job

- Customers with large data sets have issues completing all batch jobs at night.
- 24/7 business where it is hard to get any time slots.

Comfort that future business growth will not overload the planning system

- A hyper-scalable service ensures that planning will be fast and not have performance implications.
- Automated upgrade to latest version without downtime.

More frequent planning runs – not just daily or weekly

- Update plan during office hours, without having to wait for the nightly run.
- Changed planning parameters are reflected in minutes.
- See the result of planning simulations right away and keep tweaking parameters on the fly until you get the desired result.

Improved customer service with shorter total lead time

- New demands are detected and managed earlier.
- Order same day because you don't have to wait for the nightly plan.
- Many customers can save one day of lead time as supply is ordered right away.

Cost and capital savings by reduced inventory levels

- Less safety stock is needed due to faster replenishment.

## Availability

For more information on how to get started with the planning optimization preview, see [Get Started](#).

## Feature highlights

- The first version of the planning service will address the needs of both distributors and wholesalers with purchase and transfer supply.
- Out-of-the-box integration with Dynamics 365 Supply Chain Management.
- Support purchase and transfer supply suggestions.
- Ensure supply suggestions to maintain fixed safety stock levels, based on on-hand levels and future demand.
- Time-based safety stock option, to support fluctuation and seasonality in demand.
- Include purchase and transfers lead times, for duration and order date calculation.
- Pegging between supply and demand, providing full visibility for how a given demand is fulfilled or what demand a given supply fulfills.
- Lot-for-lot reordering policy support, combining all demand within a defined period into one supply suggestion.
- Order quantity modifiers that adjust order suggestions to a desired minimum, multiple, and/or maximum quantity.
- Plan just one item or a subset of all products by filtering the products included in a given planning run.
- Multiple plans with specific setup, allowing the planner to simultaneously operate with multiple plans.
- Detect and communicate order delays and possible fulfillment dates, when the plan can't be optimized to fit all demands.
- Calendar support to handle available and closed periods related to warehouses, vendors, customers, and more.
- Support for reservations between supply and demand are recorded and respected by the planning engine.
- Option to include demand forecast with reduction based on recorded demand.
- Reordering policy that supports refilling to a predefined maximum inventory level.

## Geographic areas

This feature will be released into the following Microsoft Azure geographic areas:


- United States
- Europe

- Australia
- Canada

### See also

[Planning Optimization overview](#) (docs)

## Quality management for warehouse processes

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	 Mar 3, 2020	To be announced

### Business value

This functionality extends the existing quality order feature by introducing the ability to create a work order to move the inventory to and from the quality check location via a mobile device.

### Feature details

This functionality extends the existing quality order feature by introducing the ability to create a work order to move the inventory to and from the quality-check location via mobile device. Upon the receipt of inbound inventory, a quality order can be created using quality associations. This functionality is used when a set sample of inventory coming into the warehouse needs to be examined for quality purposes. It could be a new vendor who needs to be kept to business standards or a vendor who has had issues in the past and needs closer examination.

### See also

[Quality management for warehouse processes](#) (docs)

# Finance and Operations cross-app capabilities

## Overview of Finance and Operations cross-app capabilities 2019 release wave 2

Finance and Operations applications unify global financials and operations to empower people to make fast, informed decisions. Finance and Operations apps help businesses adapt quickly to changing market demands and drive rapid business growth.

To enable businesses everywhere to accelerate their digital transformation, we are continuously enhancing Finance and Operations apps with new capabilities. As we add product enhancements at a rapid pace, we deliver monthly updates that will help customers stay current in a consistent, predictable, and seamless manner. The core capabilities introduced with the 2019 release wave 2 will be persona opt-in enabled, which allows customers to implement new features at their own cadence. The key driver for all of the new core capabilities is to increase productivity and return on investment.

This release also focuses on fundamentals to enhance the user experience. The targeted areas of these enhancements include performance, compliance, automation, and supportability of service.

[Watch overview video](#)

## What's new and planned for Finance and Operations cross-app capabilities

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

## Cloud operations and Lifecycle Services

Feature	Enabled for	Public preview	General availability
<a href="#">Configure add-ins through Lifecycle Services</a>	Admins, makers, or analysts, automatically	✓ Dec 16, 2019	-
<a href="#">Geo expansion to France</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Migration to self-service deployments</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Database movement RESTful APIs in Lifecycle Services</a>	End users by admins, makers, or analysts	✓ Sep 30, 2019	✓ Feb 3, 2020
<a href="#">Apply data upgrade packages for AX 2012 customers on sandbox environments</a>	Admins, makers, or analysts, automatically	-	✓ Mar 16, 2020
<a href="#">Platform update 20 required for database movement operations</a>	Admins, makers, or analysts, automatically	✓ Feb 3, 2020	✓ Mar 16, 2020
<a href="#">RESTful APIs for database export</a>	Admins, makers, or analysts, automatically	✓ Mar 16, 2020	To be announced

## Data and process integration

Feature	Enabled for	Public preview	General availability
<a href="#">Trigger and monitor a flow - Phase 1</a>	End users by admins, makers, or analysts	✓ Jan 27, 2020	
<a href="#">Data management export file size limit removed</a>	End users, automatically	✓ Nov 25, 2019	✓ Jan 1, 2020



Feature	Enabled for	Public preview	General availability
<a href="#">Data in Common Data Service – Phase 1</a>	End users by admins, makers, or analysts	✓ Jul 24, 2019	✓ Mar 27, 2020

## Globalization

Microsoft continuously delivers regulatory updates to respond to legislation changes in 37 supported countries/regions. Also customers can now easily adjust their business documents in Office formats to meet local requirements and route the generated documents to different distribution channels.

Feature	Enabled for	Public preview	General availability
<a href="#">Simplified localization configuration management in Regulatory Configuration Service</a>	End users by admins, makers, or analysts	✓ Oct 31, 2019	-
<a href="#">Configurable business documents reporting in Word and Excel</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Enable delayed tax calculation on journals</a>	End users, automatically	✓ Oct 21, 2019	✓ Jan 3, 2020
<a href="#">Simplifying configuration of tax extensions for India</a>	Admins, makers, or analysts, automatically	✓ Oct 21, 2019	✓ Jan 3, 2020

## Platform

Feature	Enabled for	Public preview	General availability
<a href="#">User productivity – New grid control – Phase 1</a>	End users by admins, makers, or analysts	✓ Oct 3, 2019	

Feature	Enabled for	Public preview	General availability
<a href="#">User productivity – Saved views – Phase 1</a>	End users by admins, makers, or analysts	✓ Oct 3, 2019	
<a href="#">Priority-based scheduling for batch jobs</a>	Admins, makers, or analysts, automatically	✓ Jan 31, 2020	-
<a href="#">Embed third-party apps</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	
<a href="#">Embed Power BI solutions directly into analytical workspaces</a>	End users by admins, makers, or analysts	✓ May 1, 2019	✓ Oct 1, 2019
<a href="#">Preview documents using embedded viewer control</a>	End users by admins, makers, or analysts	✓ Jul 5, 2019	✓ Oct 1, 2019
<a href="#">Attachment recovery</a>	End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Extended chart control options now include Solid Gauge visualizations</a>	Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Turn insights into action using context menu commands for embedded Power BI reports</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Visual refresh of the web client to align with the Fluent Design language</a>	End users, automatically	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">User productivity – Personalization enhancements</a>	End users by admins, makers, or analysts	-	✓ Nov 1, 2019
<a href="#">Add skipAutoOrderBy API</a>	Admins, makers, or analysts, automatically	✓ Nov 15, 2019	✓ Nov 19, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Finance and Operations AOS (kernel) improvements</a>	End users, automatically	✓ Dec 20, 2019	✓ Jan 1, 2020
<a href="#">User productivity – Filtering enhancements</a>	End users by admins, makers, or analysts	✓ Dec 5, 2019	✓ Jan 31, 2020
<a href="#">Improved experience on mobile devices – Phase 1</a>	End users by admins, makers, or analysts	✓ Dec 2, 2019	✓ Feb 3, 2020
<a href="#">Build automation hosted in Azure DevOps</a>	Admins, makers, or analysts, automatically	✓ Jan 3, 2020	✓ Feb 28, 2020

## Public sector

Feature	Enabled for	Public preview	General availability
<a href="#">Forecast position distribution</a>	End users by admins, makers, or analysts	-	✓ Oct 1, 2019
<a href="#">Cash control</a>	End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019
<a href="#">Forecast position reports</a>	End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 26, 2019
<a href="#">Purchasing cards</a>	End users by admins, makers, or analysts	-	✓ Jan 20, 2020
<a href="#">Job description update for Forecast position and Position</a>	End users by admins, makers, or analysts	-	✓ Jan 31, 2020
<a href="#">Cash Position Inquiry</a>	End users by admins, makers, or analysts	-	✓ Feb 28, 2020



## Service industries

Feature	Enabled for	Public preview	General availability
<a href="#">Project contact funding limit committed amount detail</a>	End users by admins, makers, or analysts	-	✓ Oct 31, 2019

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Cloud operations and Lifecycle Services

### Overview

Finance and Operations apps are expanding their availability in specific geographies. A data resident cloud for Finance and Operations will ensure that all customer data, code, metadata, and diagnostics remain within the designated geography.

Several other planned improvements will enhance the self-service capabilities within Lifecycle Services to deliver easier lifecycle management for applications.

### Configure add-ins through Lifecycle Services

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Dec 16, 2019	-

### Feature details

This feature enables customers and partners to add functionality on top of an existing environment. Add-ins are first-party services that might have license requirements or can be

free. They are used to extend the core functionality with a simple click-through experience within Lifecycle Services. To install an add-in, navigate to your environment details page in Lifecycle Services and under the **Environment Add-Ins** section, select **Install Add-In**. Choose the add-in you want to install from the list of available add-ins. After you enter the details required to configure the add-in, select **Install** to complete the configuration. You can then start using the add-in by selecting **Manage** or you can choose to uninstall the add-in. The environment history page is updated to reflect which add-in was installed, who installed it, and when it was installed.

## Geo expansion to France

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

As a business-critical application managing confidential data, there is high demand for Microsoft Dynamics 365 Finance to be available locally and to be data-resident within specific geographical areas. A data-resident cloud for Finance ensures that all customer data, code, metadata, and diagnostics remain within the designated geography. Finance and Lifecycle Services (LCS) will be made available in the following clouds:

- France (July 2019)

Finance without LCS is currently deployed across 15 data regions and can be used when an environment is deployed.

## Migration to self-service deployments

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

Microsoft enabled self-service deployments for new customers in the fall of 2018. Starting in summer 2019, Microsoft coordinates with customers to migrate their environments to self-service deployment. The default sandbox is migrated first. Two notification emails are also sent. The first email is a 30-day advance notice, and the second email is a reminder notice sent five

days before the scheduled migration. Migration can be rescheduled through an online form in extenuating circumstances.

### [Preparing for migration](#)

Customers should start updating their environments on the current online service with combined deployable packages going forward. This was always the recommended best practice and will now be enforced.

### [What's new or changed](#)

Customers will no longer have direct access to server admin credentials on Tier 2+ environments. They will continue to have access to Azure SQL Database and will be able to connect using just-in-time access from Lifecycle Services (LCS).

Customers will no longer have access to remote desktop credentials on Tier 2+ environments. All operations needing remote desktop access have been made available as self-service operations in LCS.

### [See also](#)

[Self-service deployment overview](#) (docs)

## **Database movement RESTful APIs in Lifecycle Services**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Sep 30, 2019	✓ Feb 3, 2020

### **Business value**

On average, customers use the database refresh copy process at least once a week. Today, customers must use the self-service action to trigger the refresh, which impacts the Standard Acceptance Test environment availability during business hours. RESTful APIs will allow customers to implement the activity during off hours or as part of their nightly build process.

### **Feature details**

Lifecycle Services (LCS) will expose RESTful API endpoints. Documentation that covers how to authenticate and make the appropriate calls to trigger refresh will be provided. This functionality can be exercised by using Azure Logic Apps or other recurrence engines to provide scheduling and automation.

### See also

[Database Movement API](#) (docs)

## Apply data upgrade packages for AX 2012 customers on sandbox environments

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 16, 2020

### Business value

Customers will no longer be required to use Remote Desktop to apply data upgrade packages. This is important as we begin to move away from Remote Desktop access for sandbox environments. The AX 2012 upgrade process will become more fully enabled directly within Lifecycle Services.

### Feature details

During customer onboarding for new implementation projects, there is a **Legacy System** field that customers can use to identify their project as an "AX 2012 upgrade" type project. From there, customers will have the ability to see and apply **AX2012DataUpgrade** packages directly on their Tier 2-5 sandbox environments, just like they would any other package available today via Lifecycle Services.

### See also

[Upgrade from AX 2012 - Data upgrade in sandbox environments](#) (docs)

## Platform update 20 required for database movement operations

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Feb 3, 2020	✓ Mar 16, 2020

### Feature details

Starting in March 2020, the ability to perform database movement operations (refresh, import, export, and point-in-time restore) will require a minimum of Platform update 20. This change will help support the stability of the service.

### See also

[Apply the latest platform update](#) (docs)

## RESTful APIs for database export

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 16, 2020	To be announced

### Business value

Our data tells us that more than 90% of customers who perform a database refresh later export that database from the user acceptance testing (UAT) environment to the asset library. Today, customers must use the self-service action to trigger the export, which requires work during business hours. RESTful APIs will allow customers to implement the activity during off hours or on recurrence.

### Feature details

A new API, along with documentation, will be provided to trigger database export. This will allow full end-to-end automation from production to sandbox, and then from sandbox to the asset library. From there, customers can also use our existing APIs to download the BACPAC files to their developer machines.

### See also

[Create database export v1](#) (docs)

## Data and process integration

### Overview

#### Microsoft Power Platform integration

Common Data Service will now include additional out-of-the-box entity mappings. This release will target multi-mastering capabilities for customers, vendors, and products, along with an introduction to the company concept in Common Data Service and the single-user management experience for Dynamics 365 users. It also includes finance and tax reference data. These entities will enable deeper extensibility scenarios through Microsoft Power Platform.

Finance and Operations apps will have business events added in several business process areas as well as the ability to trigger and monitor Microsoft Power Automate flows.

## Trigger and monitor a flow - Phase 1

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jan 27, 2020	-

### Feature details

An administrator can add flows to pages. Users can trigger and monitor the execution of those flows. This complements the flow integration features that were introduced between April and July 2019 that enabled integration of workflow events, tasks, and approvals with Power Automate. These integration capabilities are an important competitive advantage and reduce the cost of implementation for our partners and customers.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Business events in Microsoft Power Automate](#) (docs)

## Data management export file size limit removed

Enabled for	Public preview	General availability
End users, automatically	✓ Nov 25, 2019	✓ Jan 1, 2020

### Business value

This feature enables an export experience that does not have to rely on filters to contain the exported file size, which improves the overall process efficiency.

### Feature details

When exporting files using Data management, there was a maximum file size of 256 MB. You can remove this limitation in Platform update 32 by implementing flight **DMFBlobSize256**. If needed, you can revert to the previous behavior if you encounter issues due to enabling this feature.

**See also**

[Troubleshoot data package processing](#)

[Data import and export jobs overview](#) (docs)

**Data in Common Data Service – Phase 1**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jul 24, 2019	✓ Mar 27, 2020

**Business value**

This feature facilitates seamless data exchange with Common Data Service.

**Feature details**

Get your data in Common Data Service and keep it up to date.

We are making the dual-write setup an out-of-the-box experience. This will allow businesses to exchange near real-time data seamlessly in a synchronous bidirectional fashion, beyond application boundaries. We want to provide users a "One Dynamics 365" experience.

Knowing every business is unique in itself, we have made the dual-write framework extensible. This includes enabling custom entities, as well as extensions to existing entities, to fully utilize Common Data Service and surrounding tools for your most important business data.

**Phase 1 release**

The Phase 1 release provides multi-mastering capabilities for customers, vendors, and products, along with an introduction to the company concept in Common Data Service and the single-user management experience for Dynamics 365 users. It also includes finance and tax reference data. These features will be released in public preview in June and made generally available in the October time frame. Entities that are being covered are as follows:

- Payment schedules - Header
- Payment schedules – Line
- Payment day - Header
- Payment day - Line
- Customer groups
- Terms of payment

- Customer payment method
- Loyalty card
- Loyalty reward points
- Customers
- Customer contact
- Currency
- Fiscal calendar
- Fiscal calendar year
- Exchange rate types
- Exchange rate pair
- Ledger fiscal periods/ Financial calendar period
- Main account category
- Main account
- Ledger
- Exchange rates
- Dimension attribute
- Dimension integration format
- Organization classification/Organization hierarchy purpose
- Organization hierarchy
- Organization hierarchy type
- Company
- Released products
- Distinct released products
- Product number Identified barcode entity
- Global Products
- Product Default order settings entity
- Product specific default order settings
- Product dimension group entity



- Tracking dimension group entity
- Unit of measures entity
- Unit of measure conversion
- Product specific unit of measure conversion
- Site entity
- Warehouses entity
- Color entity
- Size entity
- Storage dimension group entity
- Style entity
- Configuration entity
- EcoResProductMasterColor entity
- EcoResProductMasterSize entity
- EcoResProductMasterStyle entity
- EcoResProductMasterConfig entity
- Product categories
- Product category assignments
- Product category hierarchies
- Product category hierarchy roles
- Tax groups
- Tax item groups
- Tax exemptions
- Tax authorities
- Withholding tax codes
- Withholding tax groups
- Tax ledger account group/Tax posting groups
- Vendors
- Vendor groups

- Vendor payment method
- Vendor contacts
- Chart of accounts

## Phase 2 release

The Phase 2 release will target supporting end-to-end scenarios covering project, inventory, sales, and procurement through to financials. Out-of-the-box scenarios supporting the most important entities in these areas will be provided by default. These scenarios can be further enriched by customers and partners.

These features will be released in public preview in October and made generally available in the April time frame. Entity coverage will be revealed at a future date.

## See also

[Dual-write home page](#) (docs)

# Globalization

## Overview

### Supported countries/regions and languages

Finance and Operations apps are localized for 37 countries or regions and provided in 42 languages directly by Microsoft. For information about the list of countries or regions localized and languages provided by Microsoft, refer to the [Product localization and translation availability guide](#). Information about localization features provided by Microsoft per country or region can be found in [Localization and Regulatory features](#). For information about localization and translation solutions supported by channel partners that extend the localizations and languages provided by Microsoft, visit [appsource.microsoft.com](https://appsource.microsoft.com).

### Regulatory updates

Microsoft continuously delivers regulatory updates to respond to legislation changes in 37 countries or regions supported by Microsoft. The list of planned and recently shipped regulatory updates can be found at [Localization and Regulatory features – Regulatory updates](#). Alternatively, you can sign in to Lifecycle Services (LCS) and view planned and released regulatory updates through the LCS Issue Search tool, where you can search by country, types of features, and releases.

## Configurable localization

Customers who deploy globally need to easily adjust their business documents to meet regulatory and other local requirements. To enable that flexibility, we provide modern business document templates in Office formats out of the box. Now business users can modify these documents in Word and Excel and route the generated documents to different distribution channels. For users extending tax configurations in India, we have simplified the user experience to add new tax codes and apply predefined tax rules.

## Global services

We shipped Regulatory Configuration Service (RCS) in October 2018 with deployment options in the United States and India. In 2019 release wave 2, we extended RCS deployment options to China and Europe to meet data residency requirements. RCS lets business and power users configure the regulatory reports, invoices, payment formats, and tax rules that are frequently affected by changing legal requirements. These configurations can be shared and reused in multiple applications. To simplify the storage, handling, and sharing of these configurations, RCS will support a new type of global repository through which users can centrally keep and manage their configurations directly in RCS.

## Simplified localization configuration management in Regulatory Configuration Service

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 31, 2019	-

## Business value

Currently, users need to complete a multistep process to leverage Microsoft Dynamics Lifecycle Services (LCS) in order to publish and export their configurations and share them with external users or organizations. By using the new centralized configuration storage in the Regulatory Configuration Service (RCS), users will be able to easily share their configurations directly from the configuration designer.

## Feature details

As part of 2019 release wave 2, the following capabilities will be supported in RCS:

- Users will have access to all Microsoft-produced configurations directly in RCS (without using LCS).

- Users will be able to centrally store, publish, and share their configurations with their own organization.
- Users will have the ability to share configurations with external users or organizations.
- Users will be able to broadcast (push) new configurations to external users or organizations.

### See also

[Import Electronic reporting \(ER\) configurations from Regulatory Configuration Services \(RCS\) \(docs\)](#)

## Configurable business documents reporting in Word and Excel

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

### Business value

One of the top pain points reported by customers is the absence of a business user experience to customize printable business documents. By using Microsoft Office-based templates, we provide customers with predefined documents in the most familiar tools available in the market to customize business documents. This also opens the door to create a marketplace around standard and regulatory business documents that are tailored for specific industries or regions not covered by Finance and Operations apps.

### Feature details

This functionality delivers well-designed Microsoft Word and Microsoft Excel template capabilities in phases.

**Account Receivable** (General availability - October 2019):

- Collections letter note
- Customer account statement
- Customer invoice
- Interest note
- Payment advice
- Sales advance invoice
- Sales agreement confirmation

- Sales order confirmation
- Sales order packing slip
- Sales quotation
- Sales quotation confirmation

**Account Payable** (General availability - October 2019):

- Payment advice
- Purchase advance invoice
- Purchase agreement confirmation
- Purchase order
- Purchase order packing slip
- Purchase order purchase inquiry
- Purchase order receipts list
- Request for quotation
- Request for quotation - accept
- Request for quotation - reject
- Request for quotation - return
- Vendor invoice

**Project** (General availability - November 2019):

- Project invoice with billing rules
- Project quotation
- User-defined project invoice

**Warehouse** (General availability - November 2019):

- Shipping pick list
- Picking list
- Load list
- Container contents

**Inventory** (General availability - November 2019):

- Picking list (order)

**Transportation management** (General availability - November 2019):

- Commercial invoice
- Certification of origin
- Route
- Load tender

**Project** (General availability - December 2019):

- Customer retention release

**Warehouse** (General availability - December 2019):

- Production pick list
- Bill of lading

Business user experience for document customization and routing:

- Changing the document layout
- Adding/removing fields in the document
- Simple routing

Consultant (power user) experience for more complex document customizations and routing:

- Extending Data Model
- Complex formulas
- Complex routing
- Document lifecycle management, versioning (including rebase of new configurations from Microsoft and ISVs)

**See also**

[Business document management overview](#) (docs)

**Enable delayed tax calculation on journals**

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 21, 2019	✓ Jan 3, 2020

## Business value

This capability improves the performance of tax calculations when there are multiple journal lines.

## Feature details

By default, sales tax amounts on journal lines are calculated whenever tax-related fields are updated. This includes the fields for sales tax groups and item sales tax groups. Any update to a journal line causes tax amounts to be recalculated for all journal lines. Although this behavior helps the user see tax amounts calculated in real time, it can also affect performance if the number of journal lines is very large.

The Delayed tax calculation feature lets you delay the tax calculation on journals and therefore helps fix performance issues. When this feature is turned on, tax amounts are calculated only when a user selects **Sales tax** or posts the journal.

## See also

[Enable delayed tax calculation on journals](#) (docs)

## Simplifying configuration of tax extensions for India

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 21, 2019	✓ Jan 3, 2020

## Business value

A tax accountant can now create a new tax component with predefined tax rules in GTE with minimal training and effort. A functional consultant, or power user, can configure more complex tax rules in GTE that are not predefined (for example, complex tax calculations or tax posting).

## Feature details

This feature allows users to create tax components that support the most common scenarios. New functionality includes new and enhanced controls to use when creating tax components. These new controls include Reverse change, Non-deductible, and Tax in price. The system automatically generates all required tax measures, tax formulas, and posting profiles.

## See also

[Create tax components](#) (docs)

## Platform

### Overview

This release wave includes many capabilities that apply to all Finance and Operations applications. Here's an overview of some of them.

### User productivity and experiences

Investments in improved user experiences and enhancements to existing capabilities are focus areas for 2019 release wave 2. Saved views will become available, and several improvements to this feature will follow as part of monthly updates, such as saved view support for workspaces and dialogs, as well as improved management of modified views. The new grid control will be available with an improved user experience due to new capabilities such as the ability to see totals for numeric columns in tabular grids, reordering of columns, as well as the ability to freeze a column so it doesn't scroll out of view. Improvements to filtering, such as easier and more useful ways to filter on **enum** and **datetime** fields, will be provided to enhance the experience for most users and business scenarios. Personalization capabilities that allow users to build optimized experiences will be made, and investments in improving mobile experiences will greatly improve the usability of applications on mobile devices.

With 2019 release wave 2, management of batch jobs and batch queues will be greatly improved, giving administrators the ability to prioritize batch jobs by business processes.

In addition, this wave will support embedding Power BI solutions directly into Finance and Operations analytical workspaces.

### Developer tools

Developer tools will be available as standalone installable components (in preview). Build automation will take advantage of cloud-hosted agents in Azure DevOps, removing the need for build VMs for continuous delivery of customization packages.

### Geo expansion

Finance and Operations apps are expanding to be available in certain geographies within six months of Microsoft Azure availability in that location, and where there is viable business opportunity. A data resident cloud for Finance and Operations apps will ensure that all customer data, code, metadata, and diagnostics remain within the designated geography.



## User productivity – New grid control – Phase 1

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 3, 2019	-

### Feature details

A preview of a new and improved grid control was made available in October 2019 with Platform update 29.

The new grid provides a number of benefits:

- **Performance:** The new grid provides improved rendering speed and a faster scrolling experience.
- **Positional scrolling:** Users can now positionally scroll in the data that has been loaded in the web browser. For example, if you browse through 10,000 rows in a grid, you can just select the middle of the scrollbar to immediately go to record 5,000 without having to retrieve data from the server.
- **General improvements:** In the existing grid, users may run into situations occasionally where the grid headers and data are misaligned, or the grid jumps while users scroll through data or create new records. The new grid eliminates these issues.
- **Reorder columns:** Users can now reorder columns by dragging them. Hover the mouse pointer over the column header, and then drag the gripper control that appears on the left side of the column.
- **Mathematical formulas:** Users can now enter mathematical formulas into numeric cells in a grid. For example, you can enter **=15\*4**. To make the system recognize a value as an expression, start the value with an equal sign (=).

The new grid also enables more complex features to be built into it. These additions to the grid will be introduced and enhanced in subsequent monthly updates:

- **Totals:** Business users can see totals for numeric columns in tabular grids. For example, financial users can view totals for a filtered set of transactions for a specific customer. This feature first became available as part of the new grid control feature in Platform update 29, and it will continue to evolve in subsequent platform versions.
- **Fast data entry:** This feature lets users enter data in a grid ahead of the server. Therefore, it minimizes the need for users to wait for the server to validate one row in the grid before they move to another row. This feature first became available as part of the new grid control feature in Platform update 31, and it will continue to evolve in subsequent platform versions.

For instructions on how to enable the new grid, follow the link in the **See also** section below.

### See also

[What's new for Platform update 31](#) (docs)

## User productivity – Saved views – Phase 1

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 3, 2019	-

### Feature details

A preview of [saved views](#) was made available in October 2019 with Platform update 29.

Enhancements to saved views will continue to be introduced as part of monthly updates until this feature becomes generally available.

#### Platform update 30

- Pin views as tiles, lists, and links on workspaces.
- Assign trusted users to the **Saved views administrator** role for access to the **Publish** functionality.

#### Platform update 31

- Overhaul of the administrator's page for managing views and personalization.
- Bulk import/export of views and personalizations.
- Publish views to users in specific legal entities.

#### Platform update 32

- Continued feature stabilization.

For instructions on how to enable saved views, follow the link in the **See also** section below.

### See also

[Saved views](#) (docs)

## Priority-based scheduling for batch jobs

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Jan 31, 2020	-

### Feature details

Priority-based scheduling decouples batch groups from the infrastructure. It is no longer necessary to assign batch jobs to servers. Instead, relative scheduling priorities based on business requirements are used to determine the order in which tasks are run across available batch servers. The feature enables automatic optimizing with the use of batch servers. The scheduling priority classifications are used to declare relative priorities and to determine the processing order of jobs and business processes.

This feature is gradually being enabled on environments. Customers who are interested and can't see it in **Feature management** can contact Microsoft to request access to Priority-based scheduling for batch jobs.

**NOTE** The feature is available in restricted preview from Platform update 31.

### See also

[Priority-based batch scheduling](#) (docs)

## Embed third-party apps

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	-

### Feature details

You might have third-party apps that work in conjunction with Finance and Operations applications that are either built in-house or by a partner. This feature aims to provide seamless integration by allowing you to embed third-party apps within Finance and Operations applications via personalization, similar to how you can embed Power Apps inside of Finance and Operations application pages. You'll have the option to embed third-party apps inside tab pages within existing forms, or create new full-page experiences that showcase your third-party app.

### Platform update 31

A new Website Host control has been added to allow developers to embed third-party apps directly into Finance and Operations pages.

### Platform update 32

Third-party apps can be embedded inside tab pages in existing forms via personalization by privileged users in the same places where users can add a Power App inside a tab page. To facilitate this, the "Add a Power App" option in the personalization toolbar has been replaced with an "Add an app" option. Selecting this option opens a gallery page where the user can decide which kind of app they want to embed, Power App or Website. Note that only system administrators, security administrators, and IT managers have access to this capability out of the box.

This functionality is dependent on the Saved views feature being enabled.

### See also

[Personalize the user experience](#) (docs)

## Embed Power BI solutions directly into analytical workspaces

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ May 1, 2019	✓ Oct 1, 2019

### Business value

Power users of Finance and Operations apps are able to embed Microsoft Power BI reports directly in application workspaces. Customers are finding amazing success using the Power BI service to author graphically rich analytical solutions and then share the solutions with members of their organization. The latest platform enhancement allows customers to integrate existing Power BI solutions that can include views sourced from external data systems. Best of all, there are no service interruptions required to distribute updates, giving customers greater flexibility to publish, at their own pace, enhancements to analytical solutions hosted on Power BI.

### Feature details

With analytical workspaces in Finance and Operations apps, users get rich visualizations shown in the context of business operations. In addition to the analytical workspaces shipped by Microsoft, ISVs and partners have also built specialized analytical workspaces. Using guidance and tools, power users can transition analytical workspaces authored with entity store into

Power BI template apps based on data flows. They can also submit apps to the Microsoft AppSource marketplace.

The analytical workspace experience that your users expect will remain unaffected while you get the benefit of better application lifecycle management. ISVs and partners who build analytical workspaces can now market their solutions to Dynamics 365 customers through AppSource.

### See also

[Select analytical workspaces from PowerBI.com](#) (docs)

### Preview documents using embedded viewer control

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jul 5, 2019	✓ Oct 1, 2019

### Business value

Enhance the report viewing experience for customers with advanced document interaction options.

### Feature details

Streamline the customer experience when viewing application reports by taking advantage of the new hosted document **Preview** option. The embedded viewer options give customers direct access to locally connected printers and offers consistency between the screen presentation and the printed output. In addition, report viewing times are drastically reduced when compared to legacy solutions.

The new **Preview** option is available on all supported devices and does not require any locally installed third-party software on the user's device. Documents can be downloaded and quickly navigated using the built-in viewer toolbar options.

### See also

[Preview PDF documents with an embedded viewer](#) (docs)

## Attachment recovery

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019

### Feature details

An attachment recovery feature will be added that provides a recycle bin for record attachments. Users and administrators will be able to recover deleted attachments, for a configured period of time after deletion, using the new deleted attachments forms.

### See also

[Attachment recovery](#) (docs)

## Extended chart control options now include Solid Gauge visualizations

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

The Solid Gauge charts embedded in Finance and Operations cross-app capabilities are used to visualize predictive analytics.

### Feature details

Developers use Visual Studio designer tools to embed chart controls bound to form data sources in Finance and Operations cross-app capabilities. Platform update 29 includes support for several new control designer options.

Designer tools now include the following:

- Control properties used to select **Solid Gauge** chart visualizations
- Designer options to control **Series Color**
- **MIN** and **MAX** values for the Y-axis
- **Visibility** options for Y-axis labels (title/value independently)

### See also

[What's new in PU29](#) (docs)

## Turn insights into action using context menu commands for embedded Power BI reports

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

Turn insights into action by using the custom context menu commands for chart visualizations displayed in Power BI reports that are embedded in Finance and Operations application workspaces. Empower users with intuitive gestures to perform business operations on filtered views of their data. Developers can add custom extensions that provide users with an actionable experience of interacting with analytical solutions within the application.

### See also

[What's new in PU28](#) (docs)

## Visual refresh of the web client to align with the Fluent Design language

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 5, 2019	✓ Oct 1, 2019

### Feature details

Finance and Operations apps, in conjunction with the other products in Dynamics 365, will be incrementally updated with a visual refresh of the web client to more closely align controls and pages with the Microsoft Fluent Design language. An initial set of changes will be included in October 2019, with enhancements to follow in subsequent monthly updates.

The following changes are included with Platform update 29:

- Styling updates to the various states of input control, buttons, and container controls.

- A visual refresh of the navigation pane that provides quicker access to the dashboard, Recents, Favorites, Workspaces, and Modules and also a styling update for the modules dialog box.
- Updates to font size and gray palette to align with other Dynamics 365 products.

### See also

[What's new for PU29](#) (docs)

## User productivity – Personalization enhancements

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Nov 1, 2019

### Feature details

Continual improvements and enhancements will be made to personalization capabilities that enable customers and individual users to build optimized form experiences that maximize usability and user productivity.

This includes:

- Improving the speed of hiding, skipping, or locking fields and actions.
- Common global entry point for personalization via the **Settings** menu.

These features are available starting in Platform update 30.

### See also

[Personalize the user experience](#) (docs)

## Add skipAutoOrderBy API

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 15, 2019	✓ Nov 19, 2019



## Feature details

When using the AX Query object by explicitly specifying not to include an ORDER BY clause, the kernel adds the Primary key to the ORDER BY clause. This API will skip the ORDER BY clause and it will not be added to the query.

## See also

[Q classes](#) (docs)

## Finance and Operations AOS (kernel) improvements

Enabled for	Public preview	General availability
End users, automatically	✓ Dec 20, 2019	✓ Jan 1, 2020

## Feature details

As we focus on continuous improvements to provide a more reliable and stable experience for our customers, this is a required milestone on this journey.

Starting with Platform update 32, AOS (kernel) will uptake Visual C++ 17 runtime libraries to take advantage of compiler performance optimizations. Platform engineers will benefit from the new upgrade while using their development environments to provide a more robust and reliable experience for our customers.

This will require that existing environments be updated to use the VC++ 17 redistributables.

- For Microsoft-managed Standard Acceptance Test Sandbox and higher (Tier 2 and higher) and Production environments, VC++ 17 redistributables are already installed and no action is needed.
- For Microsoft-managed DEV environment (Tier 1), customers, partners, and ISVs will need to restart their virtual machines before applying Platform update 32.
- For non-managed Dev, Build, Test, Demo (Tier 1) and on-premises environments, customers, partners, and ISVs will need to download and install VC++ 17 redistributable from the shared asset library in Lifecycle Services and restart their machines.

If you have the latest redistributables already installed, then no action is needed.

If you apply Platform update 32 and redistributables are missing, you might get an error when starting your services. If needed, refer to the following instructions to resolve this issue.

To install the redistributables:

1. Go to Lifecycle Services.
2. Select **Shared asset library**.
3. Select **Model** from the asset type list.
4. Select **VC+ + 17 Redistributables**.
5. The download will automatically start.
6. Apply on your machine and restart.

### User productivity – Filtering enhancements

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Dec 5, 2019	✓ Jan 31, 2020

#### Feature details

Filtering is one of the most common and important foundational features of the user interface and affects most users and business scenarios. Being able to find data easily is critical to user success and satisfaction.

In Platform update 32, users can now filter for blank values via the Filter Pane and grid column header filters. The syntax for looking for a blank value in a column is simply "".

#### See also

[Filtering options](#) (docs)

### Improved experience on mobile devices – Phase 1

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Dec 2, 2019	✓ Feb 3, 2020

#### Business value

Increase the productivity of users anywhere on any device.

## Feature details

The web client and its form patterns will be responsive on mobile devices, enabling a majority of the application user interfaces to be usable on smaller screens. This will significantly improve the usability of the application on mobile devices, minimizing the need to build separate user interfaces for smaller screens. This set of improvements will stretch over multiple release waves.

In Platform update 32, pages with an Action Pane show the Action Pane collapsed when opened on a smaller screen.

## See also

[Responsive layout](#) (docs)

## Build automation hosted in Azure DevOps

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Jan 3, 2020	✓ Feb 28, 2020

## Business value

This removes the need for deploying build and test environments to enable daily build automation. Builds hosted in Azure DevOps are free for up to 1,800 minutes per month (currently).

## Feature details

NuGet packages of the Finance and Operations application models and platform binaries will be available in Lifecycle Services. Upload these NuGet packages to your Azure DevOps project and create a build definition. Use standard Azure DevOps build pipeline functionality to build your code and create custom deployable packages. More details will be available when the feature becomes public.

## See also

[Insider tips on development and customization](#) (blog)

## Public sector

### Overview

The Public Sector capability enables business processes that are common to both the public and private sectors, such as budgeting, purchasing, accounts payable, and accounts receivable tasks.

Public Sector provides functionality to help you meet the rules, regulations, and reporting requirements for organizations that serve the public.

### Forecast position distribution

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Oct 1, 2019

### Business value

This feature lets you maintain default financial dimension templates for forecast positions by using the controls on the **Financial dimensions** FastTab on the **Forecast position** page.

### Feature details

The grid in the upper part of the FastTab shows all the distribution lines together with their percentage. The lower part of the FastTab shows the forecast position's default dimensions.

You can validate whether the default dimensions for a forecast position are correct for your organization's chart of accounts. For any forecast position, on the **Forecast position** page, select **Validate** on the **Action** pane to determine whether the financial dimensions setup for that forecast position is valid. This validation is quick and can help you identify errors before you generate a budget plan from a forecast position. You can also validate multiple forecast positions at the same time on the **Forecast positions** page.

### See also

[Forecast position distribution](#) (docs)

### Cash control

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 5, 2019	✓ Oct 1, 2019

### Business value

This feature provides additional control over cash disbursements while also giving you reasonable flexibility to address business needs.

## Feature details

Accounts payable vendor invoices and General ledger advanced ledger entries are validated when they are created, edited, and posted. If the transaction's posting will cause the related cash account's balance to be reduced below the limit defined for the account, an error message will alert you and you'll need to change the account to continue.

You can also allow specific users to override cash control. If an authorized user receives a warning that the cash balance for the account will be reduced below the limit, they can continue posting the transaction. For example, you might override the cash control limit when the expenditure must be posted in advance of receiving the funds to cover it, or when it requires a transfer that's been approved but that hasn't been entered or posted yet.

The cash control limit is compared to the cash control balance (the cash account balance minus all posted, unpaid AP invoices). The limit is surpassed when the cash control balance is less than the cash control limit (threshold).

## See also

[Use cash control limits](#) (docs)

## Forecast position reports

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 25, 2019	✓ Nov 26, 2019

## Feature details

Two new forecast position reports are now available. The **Forecast position details report** contains most of the information displayed on the **Forecast position** page. The account distributions assigned to the forecast position via financial dimensions and financial dimension templates are shown along with the costs associated with each distribution combination for the forecast position.

The **Forecast position summary report** shows forecast position costs by account distributions. The forecast position costs are shown grouped by their assigned account distributions. The cost amounts are factored by the percentage assigned to the account distribution.

## See also

[Forecast position reports](#) (docs)

## Purchasing cards

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Jan 20, 2020

### Business value

Agencies use purchasing cards so employees can procure goods and services without using the standard purchase requisition process. The feature uses the pages and fields that are related to purchasing cards to provide a mechanism for tracking purchases.

### Feature details

Each purchase that an employee makes by using a purchasing card is recorded on a vendor invoice; however, the invoice isn't paid by using a check or electronic payment to the vendor that provided the goods or services. Instead, each invoice of this type is associated with another vendor invoice that is created to pay the vendor that provides the purchasing card services (that is, the financial institution). The card purchases are paid when the balance that is owed to the purchasing card services provider is paid each month. For more information, see [Purchasing cards](#).

### See also

[Purchasing cards](#) (docs)

## Job description update for Forecast position and Position

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Jan 31, 2020

### Business value

This feature will add a parameter that will make the **Description** field on both the **Forecast position** and **Position** pages read-only.

### Feature details

By enabling the feature and setting it to allow updates only from the Job ID, the position descriptions can remain in sync with the selected Job ID. The new parameter is available on the **Human resources > Setup > Parameters > Human resources parameters > General** tab.

## See also

[Forecast position reports for the public sector](#) (docs)

## Cash Position Inquiry

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Feb 28, 2020

## Business value

This inquiry lets you determine the corresponding cash positions for financial dimension sets that contain self-balancing dimensions.

## Feature details

The inquiry shows the following items:

- The beginning cash balance
- The effect of the addition of cash receipts
- The subtraction of cash disbursements
- The subtraction of interfund transfers to arrive at an ending balance
- The subtraction of general budget reservations, encumbrances, or pre-encumbrances from the ending balance to arrive at an unencumbered balance

This inquiry gives users the capability to track revenues and expenditures from a cash point of view letting users monitor the balance of financial dimensions, such as **Fund** and **Project**.

## See also

[Cash position inquiry](#) (docs)

## Service industries

### Overview

The Service Industries solution provides capabilities to plan and deliver services and product to their customers, as well as internal projects across multiple industries. Functionality to control costs, optimize resource usage, and track the profitability of a project provides the tools that help organizations to deliver products and services on time and on budget.

### Project contact funding limit committed amount detail

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Oct 31, 2019

### Feature details

This feature adds an inquiry to the details that make up the amounts committed to the project contract funding limit.



# Dynamics 365 Human Resources

## Overview of Dynamics 365 Human Resources 2019 release wave 2

The way we work, and the workplace, have fundamentally changed—and yet, for many businesses, HR processes have not. When workforce practices are disconnected, the result is lower employee engagement and higher turnover rates. Employee disruption ultimately impacts the organization through a lack of product innovation, expensive operational errors, less satisfied customers, and suboptimal financial results.

Dynamics 365 Human Resources helps HR professionals get the workforce insights needed to build data-driven employee experiences across multiple areas:

- Compensation
- Benefits
- Leave and absence
- Compliance
- Payroll
- Performance feedback
- Training and certification
- Self-service programs

Dynamics 365 Human Resources connects people and operations data to ensure businesses can optimize workforce costs and take better care of employees.

For more information, see [Announcing Dynamics 365 Human Resources](#).

## What's new and planned for Dynamics 365 Human Resources

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Streamlined employee data entry</a>	End users, automatically	✓ Aug 22, 2019	✓ Oct 1, 2019
<a href="#">Broader environment management</a>	Admins, makers, or analysts, automatically	-	✓ Nov 30, 2019
<a href="#">Print performance reviews</a>	End users by admins, makers, or analysts	-	✓ Nov 30, 2019
<a href="#">Case management</a>	End users by admins, makers, or analysts	✓ Feb 28, 2020	✓ Feb 28, 2020
<a href="#">Common Data Service entity changes</a>	End users by admins, makers, or analysts	✓ Mar 5, 2020	✓ Mar 5, 2020
<a href="#">Embed third-party apps</a>	End users by admins, makers, or analysts	✓ Mar 27, 2020	✓ Mar 27, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Streamlined employee data entry

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 22, 2019	✓ Oct 1, 2019

### Feature details

Streamlined data entry and navigation makes it easier to keep your employee records up to date. You can enter data for the future or update data retroactively, giving you the flexibility you need to provide accurate data for your upcoming new hires or for exiting employees.

### See also

[Feature exploration](#) (video)

[Streamlined employee entry and navigation](#) (docs)

## Broader environment management

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Nov 30, 2019

### Feature details

Proper solution environment plans are critical to customer implementations and allow for more flexibility. They also improve speed and quality of those implementations. This feature will enable customers to move Human Resources data from a production instance to a sandbox or test instance.

### See also

[Copy an instance](#) (docs)

## Print performance reviews

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Nov 30, 2019

## Feature details

Employees, managers, and HR professionals will be able to print an employee's performance review.

## See also

[Performance management](#) (docs)

## Case management

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 28, 2020	✓ Feb 28, 2020

## Business value

This new capability allows for new views into the case data across Human Resources. Options to import and export all case data for analysis are also available with these enhancements.

## Feature details

Case management will be enhanced to include new menu items for compliance managers. This will include menus to view all cases and your cases, plus the entities to import and export cases from outside of Human Resources.

## See also

[Enable Case Management navigation and DMF entity](#) (docs)

## Common Data Service entity changes

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 5, 2020	✓ Mar 5, 2020

## Business value

This new capability allows for new views into the case data across Human Resources. Options to import and export all case data for analysis are also available with these enhancements.

## Feature details

Description	Change
<b>Job/Position</b> entity changes	<b>Compensation region</b> added
<b>Job position dimension</b> entity added	<b>Financial dimensions</b> added
<b>Worker</b> entity changes	<b>Name sequence</b> added <b>Works from home</b> added <b>Language</b> added <b>Seniority date</b> added <b>Anniversary date</b> added <b>Original hire date</b> added
<b>Employment</b> entity changes	<b>Financial dimensions</b> added <b>Termination reason</b> added <b>Termination date</b> renamed from <b>Transition date</b> <b>Probation date</b> added
<b>Worker address</b> entity changes	<b>Street address</b> added <b>Address line 1</b> , <b>Address line 2</b> , and <b>Address line 3</b> marked for deprecation
New variable compensation setup entities	<b>Compensation variable plan type</b> <b>Compensation variable plan</b> <b>Vesting rules</b> <b>Compensation variable plan level</b>
New <b>Worker calendar employment</b> entity	<b>Work calendar entity</b> added
New <b>Payroll position detail</b> entity	<b>Payroll position detail</b> added

Description	Change
New <b>Title</b> entity	<b>Title</b> added. The new <b>Title</b> entity is included in Common Data Service, but won't be initially referenced from the <b>Job Position</b> or <b>Job entities</b> .

### See also

[Common Data Service entities](#) (docs)

## Embed third-party apps

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Mar 27, 2020	✓ Mar 27, 2020

### Feature details

You might have third-party apps that work in conjunction with Core HR, either built in-house or by a Microsoft partner. This feature provides seamless integration with third-party apps by allowing you to:

- Include third-party apps within the Core HR experience.
- Navigate to third-party applications within Core HR.

### See also

[Embed Microsoft Power Apps](#) (docs)

# Dynamics 365 Talent

## Overview of Dynamics 365 Talent 2019 release wave 2

We will be making changes to our Dynamics 365 HR solutions portfolio to refocus our investments. On February 1, 2020, our current core HR capabilities will be renamed Dynamics 365 Human Resources. The new name reflects our commitment to helping HR professionals create data-driven programs that improve the employee experience.

With the introduction of Dynamics 365 Human Resources, we will be discontinuing sales for Dynamics 365 Talent as of February 1, 2020. The Attract and Onboard applications will be discontinued. We will run these services for two years or until the customer contract ends, whichever occurs first. We will work to transition Attract and Onboard customers to a comparable solution, including LinkedIn Talent Hub. Check out [Overview of Dynamics 365 Human Resources 2019 release wave 2](#) to learn about upcoming capabilities for core HR. You can find more information about this announcement at [Retiring Dynamics 365 Talent: Attract and Onboard apps](#).

# Dynamics 365 Retail

## Overview of Dynamics 365 Retail 2019 release wave 2

Today's consumers demand delightful and integrated shopping experiences across channels, while traditional channels are getting disrupted and new ones are constantly emerging. Retailers need a modern, flexible cloud solution that will help them be nimble, compete better, and build lasting relationships with their shoppers. Dynamics 365 Retail provides an end-to-end integrated solution for retailers that includes back-office processes, such as merchandising and inventory, as well as front-office channels.

The investments will span these pillars:

### Fundamentals

- **Deployment and servicing:** Easily deploy, service, and manage distributed retail components.
- **Store and Cloud Scale Units:** Retailers can choose the best topology that will meet their business needs.
- **Extensibility and integrated developer experiences:** Enhanced extensibility for headquarters, in-store, and e-commerce channels with integrated experiences for developers to build solutions.

### Industry excellence

- **Inventory management:** Centralized and in-store inventory capabilities such as picking, receiving, stock counting, and inventory visibility.
- **Omnichannel capabilities:** Order capture, order processing, merchandising, and payments to enhance experiences across channels.
- **Regulatory and compliance:** Regulatory and compliance-related enhancements will provide service in all supported countries.

## What's new and planned for Dynamics 365 Retail

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.



This check mark (✓) shows which features have been released for public preview or early access and for general availability.

## Fundamentals

Investments in infrastructure, servicing, quality, and performance.

Feature	Enabled for	Public preview	General availability
<a href="#">Translations for charges codes in POS</a>	End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Enhancements to Retail statement posting</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Improved CDX scalability through Cloud Async Client</a>	End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Modern POS offline availability improvements</a>	End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Numpad to remain on-screen in POS inventory receiving form</a>	Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">POS and headquarters extensions</a>	Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Store Scale Unit improvements</a>	Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Product Recommendations in POS</a>	End users by admins, makers, or analysts	-	✓ Nov 1, 2019
<a href="#">Regression Suite Automation Tool for POS</a>	Admins, makers, or analysts, automatically	✓ Sep 3, 2019	✓ Nov 1, 2019
<a href="#">Secure access to secrets</a>	Admins, makers, or analysts, automatically	✓ Sep 3, 2019	✓ Nov 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">E-commerce inventory API improvements</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020
<a href="#">Hide designated pickup, carryout, and electronic modes of delivery from ship all and ship selected processes in POS</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 3, 2020
<a href="#">In-store components mass deployment</a>	Admins, makers, or analysts, automatically	✓ Nov 11, 2019	✓ Jan 6, 2020
<a href="#">Environment history for Retail Cloud Scale Unit</a>	Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

## Industry excellence

Investments in core retail business processes and industry requirements and capabilities.

Feature	Enabled for	Public preview	General availability
<a href="#">Merchandising improvements – add support to configure and observe the custom order for product attributes, refiners, and values</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	-
<a href="#">Merchandising improvements – support to custom sort the display order of categories</a>	End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019
<a href="#">Management of customer registration numbers from POS for India</a>	End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Nov 1, 2019
<a href="#">Enhancements for product discoverability</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Jan 1, 2020

Feature	Enabled for	Public preview	General availability
<a href="#">Clienteling – Empower sales associates to become trusted advisors and establish long-term relationships with customers</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020
<a href="#">Merchandising improvements – add support for custom order for categorized products, related products, and dimension groups</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020
<a href="#">Tender-based discounts</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020
<a href="#">Call center localization for Eastern Europe</a>	End users by admins, makers, or analysts	-	✓ Jan 3, 2020
<a href="#">Control unit integration sample for Sweden based on the fiscal integration framework</a>	End users by admins, makers, or analysts	-	✓ Jan 3, 2020
<a href="#">Calculate customer exemptions for store- and destination-based exclusive taxes</a>	End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 3, 2020
<a href="#">Invoke Dynamics 365 Fraud Protection during e-commerce checkout</a>	End users by admins, makers, or analysts	✓ Nov 25, 2019	✓ Jan 31, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Fundamentals

### Overview

We continue to invest in the fundamental aspects of the solution and platform to ensure quality, improve performance and scalability, and to ensure our partners and ISVs can extend the solution to meet retailers' needs.

### Translations for charges codes in POS

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Charges codes can now be used in point of sale (POS) to add additional charges to POS orders and order lines. The translations that can be defined for these charges codes will be made available to the POS application to allow a user to see the description of the charges in their configured language.

### Feature details

If translations have been defined on charges codes in headquarters, the data can be pushed to the channel database and shown to users based on their configured POS user interface language setup.

### See also

[Omni-channel advanced auto charges](#) (docs)

### Enhancements to Retail statement posting

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

In Microsoft Dynamics 365 Retail, the statement posting process is used to account for the transactions that occur in Cloud point of sale (POS) or Modern POS (MPOS). This process is an integral and vital function of a physical store operation because all the transactions in the store

in terms of sales, payments, cash movements, and so on for a business day are reflected back to the headquarters (HQ) through this process. All key daily reporting that personnel in the HQ rely on for decision making such as sales by store for a day, collections by store for a day, inventory movements for different products and categories, and so on are made available through the statement posting process.

The statement posting process also plays a pivotal role in the loss prevention function of a retail organization because data from statement posting is used by the sales audit clerks to monitor and track issues and patterns around fraud and loss prevention. Given that, it is imperative that any retail organization with physical stores has a reliable and performant statement posting process.

### Feature details

This feature will enhance the current statement posting process in the ways described here.

#### Data fidelity checker

The reliability of a statement posting process is highly dependent on the quality of the data that feeds this process. This data is generated and sent over from the retail stores based on transactions in the first-party or third-party POS systems. It is often seen that the fidelity of the data that comes from the store is questionable due to factors like bugs in the POS client, which writes inconsistent data to the store database or data brought in from a third-party POS system through the integration framework. This creates issues and bugs in the downstream process of statement postings.

To overcome these challenges, the data fidelity checker will check the data for omissions and anomalies and only those transactions that pass the validation will be included in the statement process. The following are some of the types of validation that the data fidelity checker will perform (this is not an exhaustive list):

- Validate that gift card items are not associated with return lines.
- Validate that the records in the discount table match the discount amount in the retail transaction line tables for every transaction.
- Validate that the amount on the retail transaction payment lines add up to the payment amount on the header retail transaction table.
- Validate that the records in the tax table match the tax amount in the retail transaction line tables for every transaction.

The data fidelity checker feature will also allow a user to fix transactions that are not consistent with the expectations set for auditing for traceability and reconciliation purposes.

### Trickle feed order creation (Public Preview)

The current statement posting process is managed in two major parts:

- Based on the data synchronized to the HQ, an “inventory job” reserves the inventory for products at a defined recurring schedule.
- At the end of the day, when the stores are closed and the end-of-day operations are performed in the store, the remaining data is synchronized to the HQ. Based on a defined schedule, the system creates a statement document for every store and, when this statement document is posted, the system removes the reservation for inventory created and then creates sales orders, payment journals, and ledger journals in the system.

As evident from the above points, only temporary inventory reservations are created during the day. These inventory reservations are then removed at the end of the day and all transactions are processed as sales orders; new inventory transactions are created along with other transactions at the end of the day. There is no processing of these transactions happening during the day and all of them are back-loaded to the end of the day. This creates a situation where large transactions have to be processed in a limited time window and results in phenomenal load and locks, which can result in statement posting failures.

To address these issues, the following improvements will be made to the statement posting process:

- Deprecate the “inventory job” that creates temporary reservations.
- Create a new job that will, at a predefined schedule, create sales orders, invoice them, and create, post, and apply payments for all the transactions that are synchronized to the HQ at that point of time. In addition, it will also create any ledger journals that need to be created for discounts, gift cards, and so on.
- The statement document that gets created at the end of the day will only be used to calculate and post any counting variances.

### Handling of return lines

To ensure that the return lines are posted with the correct return cost, the current retail statement posting process requires the original sale to be posted before allowing the return posting; however, in scenarios where a statement for the original sale is not posted, then the statement associated with the return transaction also cannot be posted. This results in statements getting backed up and involves users trying to figure out the dependency before posting them manually in the correct sequence. To resolve this and not enforce chronological dependency between the statements, the returns will be posted leveraging the inventory costs from the business date of the original sale.

### Handling of batch-controlled items

For batch-tracked items, Retail POS does not support the capture of batch numbers at the time of sale; however, batch numbers are required while posting the sales of these products in the HQ. The current statement posting framework picks an already existing batch number at the time of statement posting; however, in scenarios where quantity with batch numbers does not exist for these products, the statement posting process fails even when negative inventory is turned on for these products. This feature will ensure that statement posting is not blocked for batch-tracked items if the inventory is zero or the batch number is not available if negative inventory is turned on for these items.

### See also

[Retail transaction consistency checker](#) (docs)

### Improved CDX scalability through Cloud Async Client

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

Commerce Data Exchange (CDX) is the critical process of generating, making available, downloading, and applying crucial business data to Channel databases and Offline databases. This unseen core architecture is vital and must function with speed and efficiency. This feature migrates the Async Client out of headquarters to better use the full complement of Azure capacity. This feature enhances the scalability, performance, and availability of the CDX architecture to more quickly generate data, more efficiently make it available, and enhance bandwidth to Async Clients within Modern POS for the offline database or to the Channel database.

### Feature details

CDX is no longer directly a part of headquarters. By enhancing this into its own Azure service, there are no resources to compete with. Instead, the full scalability and strength of Azure is behind it to give the fullest complement of current and future improvements possible.

## Modern POS offline availability improvements

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

Offline functionality in Modern POS (MPOS) is critical to business continuity and continuous store operations. MPOS must be available whenever needed, and as a result, it is critical that offline mode is provided for the broadest set of scenarios. This feature further incorporates additional scenarios enhancing the already robust MPOS availability.

### Feature details

This feature further expands the seamless offline functionality that exists in MPOS. Expanded scenarios include the ability to switch to offline manually prior to signing in to MPOS. This enables the ability to go offline and continue using POS operations even in disaster scenarios. The sign-in process is where the largest number of scenarios could occur to cause the terminal to switch to offline. To accommodate this, we have implemented an offline configuration that can be enabled or disabled in headquarters for advanced scenarios where MPOS will more quickly and more frequently switch seamlessly to offline during sign-in. For example, when a cashier or manager signs in to the application.

## Numpad to remain on-screen in POS inventory receiving form

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019

### Feature details

As part of this feature, we will bring back functionality that was available in point of sale (POS) in Retail version 7.2. This functionality allowed for the numeric keypad (numpad) to appear at all times on the product receiving form. Having the numpad always available helps improve the efficiency of scanning product barcodes as part of POS receiving. This feature was removed after Retail version 7.3 due to screen redesign, and is being brought back in this release.

### See also

[Store inventory management](#) (docs)



## POS and headquarters extensions

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

Many retailers need or choose to extend Dynamics 365 Retail to modify the existing business logic or add some new feature to the product to meet their business goals. In the point of sale (POS), commerce runtime (CRT), and headquarters (HQ), we are adding more extension points to support custom business scenarios. The goal of this feature is to add the necessary core extension points in the product to support extension scenarios.

### Feature details

#### Framework enhancements

After moving toward the binary-based extension model, we are wrapping and exposing all our core POS logic and user interface (UI) controls as SDK (APIs) to help the extension to easily consume and override our logic. Without these APIs, it will be difficult for the extension to write some custom logic. In some cases, the extension has to rewrite some of the existing code or write too many lines of code to do a simple scenario. To avoid this and to reduce the number of lines of code, we're introducing more advanced APIs and configuration-driven development to simplify the overall development process.

#### POS UI and API extension

We are continuously enhancing the POS framework to add more POS APIs to consume our logic in extension and UI extension points to add custom columns, app bar buttons, and custom controls in core POS views.

#### POS overridable requests and triggers

New overridable requests are added in POS to override the POS workflow or POS business logic and to add custom logic or validation. POS trigger framework helps you to run custom logic before or after core POS logic. With this new pattern, developers can easily customize any workflow in POS.

### See also

[Retail POS APIs](#) (docs)

## Store Scale Unit improvements

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 2, 2019	✓ Oct 2, 2019

### Business value

A Retail Store Scale Unit provides a retailer with an in-store (on-premises) deployment option to help ensure uptime and reduce latency in locations with connectivity and network infrastructure issues. It is important that this scale unit maintains reliability and security at all times. To fulfill this need, it is critical for the usage of the scale unit to continue when connectivity is limited or nonexistent.

### Feature details

This feature has been supported for many releases now and has been used by many retailers worldwide; however, there are some design limitations that prohibit the use of the scale unit as needed. This investment reduces the dependency a Retail Store Scale Unit has with back-office (headquarters) connectivity when renewing authentication tokens, while still maintaining security. This functionality will allow point of sale (POS) to function in cross-terminal scenarios even when the back office is not available, providing greater offerings and depths of hybrid-style deployments.

## Product Recommendations in POS

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Nov 1, 2019

### Business value

Product Recommendations is a transformative business application that spans all retail spaces to create rich, engaging, and tailored product discovery experiences. Product Recommendations enables customers to easily and quickly find products they need and want (relevant), find more than they had originally intended (cross-sell, upsell), all the while having an experience that serves them well (satisfaction). For retailers, the discovery is powered by a variety of technologies at large scale (ML-AI, algorithms, humans, or a hybrid) that create conversion opportunities across all customers and products, resulting in more all-up sales revenue and end-customer satisfaction.

## Feature details

The Product Recommendations service uses transactions data and product information to generate machine learning and trending lists appropriately scoped for the respective retail channel.

Types of recommendations lists and specific examples include:

- Transaction screen recommendations: "Frequently bought together" list.
- Product details page (PDP) recommendations: contextual "Recommended Products" list, leveraging the product as seed.
- Personalized customer details page recommendations: contextual "Recommended for customer" list, providing authenticated users a personalized list of suggested products called based on their purchase history (omni-channel).

All of the lists have the capability for retailers to make amendments to include specific products at the beginning of the list or exclude unwanted items. This functionality combines the power of AI with human knowledge.

By making omnichannel recommendations available, retailers can increase sales revenue and user satisfaction by providing an easy product discovery experience for shoppers.

## Regression Suite Automation Tool for POS

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Sep 3, 2019	✓ Nov 1, 2019

## Business value

Retailers or partners can use test recorder and business process modeler (BPM) in Lifecycle Services (LCS) to create user acceptance test libraries for point of sale (POS). Task recorder is a powerful tool for recording test cases. The test cases can then be organized by business process using BPM. BPM can be synchronized with Azure DevOps to automatically create test cases (including test steps) in an Azure DevOps project. Azure DevOps can then serve as a test configuration and test management tool where users can create targeted test plans and test suites, manage the execution of tests, and investigate results. The test can support omnichannel scenarios; for example, create an order in Retail and pick up in a store using the POS.

## Feature details

The following is an example of the end-to-end flow that is available with this functionality:

- Author and execute business cycle tests on any environment that can access POS and via a web browser.
- Run tests against sandbox environments with a copy of your production database.
- Record once, play back multiple times with different data sets, different legal entities.
- Validate against expected values.
- Chain-test cases (end-to-end test) by passing parameters from one test case to the next.
- Use Azure DevOps to manage test suites, test runs, and investigate test results.
- Author and distribute by doing the following:
  - Configure the test plan.
  - Execute tests and manage results.

## See also

[Test recorder and Regression suite automation tool for Retail Cloud POS](#) (docs)

## Secure access to secrets

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Sep 3, 2019	✓ Nov 1, 2019

## Business value

This feature will enable a standardized and secure mechanism for customizations to access customer-owned secrets using Azure Key Vault. Customizations hosted in Retail Cloud Scale Unit (RCSU) will be able to access a customer-owned key vault to securely retrieve secrets and use them—for example, to connect to external systems. This will provide a secure and manageable means of using secrets and credentials within customizations.

## Feature details

This feature will enable an IT pro to securely use configurations and secrets using Azure Key Vault for integrating with third-party systems within Dynamics 365.

**See also**

[Manage secrets for retail channels](#) (docs)

**E-commerce inventory API improvements**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020

**Business value**

Businesses need reliable, performant APIs to obtain estimated on-hand item inventory availability.

**Feature details**

New APIs will provide an estimation of on-hand inventory for a requested item and warehouses. These APIs replace the existing GetProductAvailabilities and GetAvailableInventoryNearby APIs that are currently in-market. These new APIs have improved calculation logic and caching to improve performance.

Additionally, new parameters will uptake these new APIs as well as turn off the existing expensive logic of the current APIs that attempted to find the "best" warehouse to source the cart order lines based on default order settings for the item. This logic will not be in the new APIs. Organizations can choose to use our Distributed Order Management functionality in the future to enable optimized fulfillment location selection for non-in-store pickup saleslines; therefore, this expensive logic will no longer be part of the new APIs.

**See also**

[Calculate inventory availability for retail channels](#) (docs)

**Hide designated pickup, carryout, and electronic modes of delivery from ship all and ship selected processes in POS**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 3, 2020

## Feature details

This feature will give flexibility to retailers who might not want to see "non-carrier" delivery modes appearing in the shipment configuration screens in the point of sale (POS). Currently, if a designated "pickup," "carryout," or "electronic" mode of delivery is acceptable for the item, channel, and delivery address combination, those delivery modes will appear as a selection option during the "ship all" or "ship selected" operation. For retailers who prefer not to have these types displayed in this shipment creation flow, a new parameter will be available in **Retail parameters** called **Show only carrier options for ship orders**. Enabling this parameter will hide these non-carrier modes of delivery from the selection display.

## See also

[Hide Non-Carrier Modes](#) (docs)

## In-store components mass deployment

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 11, 2019	✓ Jan 6, 2020

## Business value

To use hardware with Cloud point of sale (POS), a hardware station is required. With larger businesses, massive deployment and installation of hardware stations has become relatively unmanageable. This feature will not only dramatically reduce the difficulty of initial and long-term deployment and maintenance, it will enhance the flow of hardware stations that increases reliability and resiliency.

## Feature details

This new feature allows users to silently perform a mass deployment of the hardware station. Customers can choose the deployment tool of their choice (such as System Center) to deploy and service these components. This will provide improvements to reliability and resiliency over time for the hardware station on top of the enhanced speed and ease with which deployment occurs.

## See also

[What's new and changed in Dynamics 365 Retail version 10.0.7](#)

[Mass deployment of self-service components](#) (docs)

## Environment history for Retail Cloud Scale Unit

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

### Business value

This capability is valuable for IT personas when troubleshooting issues and working with Microsoft support. The environment history serves as an audit trail of key operations performed on an environment.

### Feature details

This feature will enable an IT Pro persona operating on environment configuration in the Lifecycle Services portal to view the history of system operations related to Retail Cloud Scale Unit (RCSU). This will include operations such as new scale unit deployment, update, or extension deployment. Users will be able to view time stamp, user, version, and related metadata details as part of the history.

## Industry excellence

### Overview

Key areas of investment include centralized and in-store inventory management enhancements as well as omnichannel management and order processing improvements.

### Merchandising improvements – add support to configure and observe the custom order for product attributes, refiners, and values

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	-

### Business value

As more businesses and larger organizations leverage the Dynamics 365 Retail functionality for online, call center, and store channels, the Retail solution needs to grow to support the more complex business processes that these organizations require.

By adding support for some of these complex business scenarios to our standard product, we eliminate the need for more complex extensions and customizations that can delay the organization's ability to quickly configure and be live on a new selling channel.

In order to provide a seamless omnichannel merchandising solution and provide a consistent set of experiences to our retailers for configuration of products, categories, and attributes for any retail channel, we must refactor some of these areas to ensure consistency of merchandising features and the flow of data related to catalog, product, and attributes in all channels.

### Feature details

The custom **Display sort order** for various merchandising entities feature will empower the merchandising manager to be able to configure the custom sort order for various merchandising entities across all end-user clients, including headquarters and call centers.

The following scenarios will be supported:

- Observe the display order for **Attributes** defined in **Attribute groups** for products.
- Observe the display order for **Attributes** defined in **Attribute groups** for refiners.
- Configurable sort order of **Attribute values** for **Fixed list** attribute type.
- Observe the display order for **Attribute values** for **Fixed list** for refiner values.
- Observe the display order for Refiner values defined for Dimension values, fixed list attribute types, and categories.

### See also

[Change the sort order for merchandising entities](#) (docs)

## Merchandising improvements – support to custom sort the display order of categories

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 2, 2019	✓ Oct 1, 2019

### Business value

As more businesses and larger organizations are leveraging the Dynamics 365 Retail functionality for online, call center, and store channels, the Retail solution needs to grow to support the more complex business processes that these organizations require.



By adding support for some of these complex business scenarios to our standard product, we eliminate the need for more complex extensions and customizations that can delay the organization's ability to quickly configure and be live on a new selling channel.

In order to provide a seamless omnichannel merchandising solution and provide a consistent set of experiences to our retailers for configuration of products, categories, and attributes for any retail channel, we must re-factor some of these areas to ensure consistency of merchandising features and the flow of catalog-, product-, and attributes-related data in all channels.

### Feature details

Custom display sort order for various merchandising entities empowers the merchandising manager to configure the custom sort order for various merchandising entities across all end-user clients including headquarters and call centers.

The following scenarios will be supported:

- Configurable sort order for **categories** in the channel **Retail product hierarchy**.
- Configurable sort order for **categories** in the channel **Channel navigation hierarchy**.
- Configurable sort order for **categories** in the **Supplemental hierarchies**.

### See also

[Change the sort order for merchandising entities](#) (docs)

## Management of customer registration numbers from POS for India

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Sep 6, 2019	✓ Nov 1, 2019

### Business value

In many cases, having a GSTIN number specified for a named customer is required in retail sales. Without the ability to manage customer registration numbers from Retail point of sale (POS), the only workaround is to manage the registration numbers from retail headquarters, which leads to additional efforts and significant delays due to data synchronization. This is especially critical when a new customer record is being created from POS.

## Feature details

This functionality provides a user with the following capabilities:

- Enter a customer registration number when creating a new customer record from POS. Synchronize the data to retail headquarters.
- View and modify customer registration numbers in POS.
- Search by customer registration number in POS.
- Print customer registration numbers in receipts for retail sales.

## Geographic areas

This feature will be released into the following Microsoft Azure geographic area:

- India

For more information about geographic areas, data centers (regions), data storage, and replication, click **expand all** on the [Where your data is located page](#) and find the Microsoft cloud service for this feature.

## See also

[Manage customer registration numbers from POS](#) (docs)

## Enhancements for product discoverability

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Jan 1, 2020

## Business value

Product discoverability is a quick and easy way for a retail customer to be able to discover products by browsing through categories and using search and filtering. Product discovery is a primary tool for customer interaction across all retail channels.

Customers are used to web search engines, sophisticated e-commerce websites, and social apps that offer relevant search suggestions as you type, faceted navigation, highlighting matching terms, and more—all with near-instantaneous response times. If consumers do not find the right product quickly enough, they do not hesitate to move to another retail site that offers better performance.

This investment for enhancing product discoverability in Dynamics 365 Retail will empower retailers to meet expectations of their consumers by assisting them in their shopping journey, which would help retailers grow their share of consumer retention and conversion rates across all channels, including both e-commerce and POS.

### Feature details

Current support for search, browse, and filter using refiners available with our in-market solution is slow and not particularly robust. New functionality in Retail will provide better product discoverability, and discovery will be scalable and performant.

- **Browse and search:** Search relevance and performance is key to our omnichannel experience, as product discovery relies primarily on search for information retrieval and content navigation. An effective and efficient search helps increase conversion.
- **Refiners/faceted navigation:** Faceted navigation helps users browse for content more easily by filtering on refiners that are tied to terms in a term set. By using faceted navigation, you can configure different refiners for different terms in a term set without having to create additional pages.
- **Immersive auto-suggest:** Current auto-suggest shows only keywords that trigger search for the matching keyword. With new enhancements, users will be able to surface links to products, directly navigable to product details. There will also be support for "keywords match in various categories," which enables users to see the count of matching keywords in categories and trigger the search for the keyword for that category.
- **Sort:** With this enhancement, users will be able to sort search, browse, and refine search results by details, such as price, product name, product number, new, top-selling, or recently added.

### See also

[Cloud-powered search overview](#) (docs)

## Clienteling – Empower sales associates to become trusted advisors and establish long-term relationships with customers

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020

## Business value

Many retailers, especially high-end specialty retailers, want their sales associates to form long-term relationships with their key customers. The sales associates are expected to know their customers' likes and dislikes, purchase histories, product preferences, and important dates, such as anniversaries and birthdays. The associates need a place to capture and easily find such information.

Moreover, a retailer engages with the customer using multiple applications (for example, e-commerce for purchases, social media for sentiment tracking, Dynamics 365 Sales for presales, and Dynamics 365 Customer Service for post-sales). All this data can help with valuable customer insights that can empower the sales associate to better understand their customers and thus better meet their needs.

## Feature details

Associates can use the client book to keep track of their key customers and capture additional information, such as birthdays, anniversaries, likes, and dislikes. The retailer can configure whether the captured information is private to the sales associate who manages the customer or is available to all associates. Additionally, if the retailer uses Dynamics 365 Customer Insights, the retailer will be able to choose the insights that should be displayed in the point of sale (POS). Sales associates will also be able to take notes and activities for the customer profile.

## See also

[Clienteling overview](#) (docs)

## Merchandising improvements – add support for custom order for categorized products, related products, and dimension groups

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020

## Business value

As more businesses and larger organizations are leveraging the Dynamics 365 Retail functionality for online, call center, and store channels, the Retail solution needs to grow to support the more complex business processes that these organizations require.

By adding support for some of these complex business scenarios to our standard product, we eliminate the need for more complex extensions and customizations that can delay the organization's ability to quickly configure and be live on a new selling channel.

In order to provide a seamless omnichannel merchandising solution and provide a consistent set of experiences to our retailers for configuration of products, categories, and attributes for any retail channel, we must refactor some of these areas to ensure consistency of merchandising features and the flow of data related to catalog, product, and attributes in all channels.

### Feature details

The custom **Display sort order** for various merchandising entities feature will allow the merchandising manager to configure the custom sort order for various merchandising entities across all end-user clients, including headquarters and call centers.

The following scenarios will be supported:

- Configurable sort order for **Products** associated with category in **Navigation hierarchy of a channel**.
- Configurable sort order for **Products** associated with category in **Navigation hierarchy of a catalog**.
- Configurable sort order for **Related products** associated with an **Individual product**.
- Configurable sort order for **Dimension groups** for a given **Product master**.

### See also

[Change the sort order for merchandising entities](#) (docs)

### Tender-based discounts

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 21, 2019	✓ Jan 1, 2020

### Business value

It's a common practice for large retailers to release private-branded credit cards. Retailers benefit from getting preferred rates from the banks, and according to a study by GE Capital Retail Finance, such credits cards result in an increase in the store visit frequency, thus directly improving the bottom line of the retailer. As a result, retailers are motivated to increase the usage frequency of their credit cards, and tender-based discounts are a commonly used motivator. Similarly, some retailers want to motivate the customers to pay by alternate means (for example, cash, check, or loyalty) and thus reduce the expense in credit card processing fees. Such retailers want to create discounts for these alternate tender types.

## Feature details

With this investment, we will allow the retailer to configure discount percentage on a selected tender type. When a tender with configured discount is selected, the customer will see the discounted amount as the new balance. The customer can choose to do partial payment or a full payment and would accordingly get the appropriate discount amount. The discount information can be printed on a physical paper receipt or sent via email using a virtual receipt.

The screenshot shows a payment interface titled 'Cards'. It displays the 'Amount due' as \$110.50 and the 'Payment amount' as 99.4 x. A green box highlights the discounted amount of \$99.40, with a note '10% off Fabrikam credit card'. A numeric keypad is visible, and the 'Payment details' section includes fields for 'Card input' (set to 'Swipe card'), 'Card number', 'Expiration month' and 'year' (both set to 'Please select'), and 'Security code'.

*Calculating tender discount*

## See also

[Tender-based discounts](#) (docs)

## Call center localization for Eastern Europe

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Jan 3, 2020

## Business value

This functionality allows customers operating in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, and Poland to automate their call center operations in these countries or regions using Dynamics 365 Retail.

### Feature details

Call center localization for Eastern Europe includes support for petty cash payments and prepayments per local requirements in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, and Poland.

### Control unit integration sample for Sweden based on the fiscal integration framework

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Jan 3, 2020

### Business value

The control unit integration sample for Sweden can be used by customers to build their point of sale (POS) solutions that are compliant with the local cash register regulations.

### Feature details

The control unit integration sample for Sweden now takes advantage of the [fiscal integration framework](#), which means that it supports all of the built-in fiscal integration capabilities, and it can be built and configured to be used as-is. It can also be customized or extended to support customer-specific business processes or different models of control units. The sample enables fiscal registration of sales in various cash-and-carry sales scenarios and provides options for error handling in basic scenarios (such as when retry is possible) as well as more advanced scenarios, such as registering a previously completed transaction that was not previously registered in the control unit.

The Retail fiscal integration framework provides multinational retailers with the possibility to build common POS solutions that are compliant with different local fiscal regulations in the countries or regions that they operate in.

### See also

[Control unit integration sample for Sweden](#) (docs)

### Calculate customer exemptions for store- and destination-based exclusive taxes

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	Oct 2019	Jan 2020

## Business value

In certain industries it is common for retailers to conduct business-to-business cash-and-carry transactions. In those cases, certain customers might be exempt from certain taxes but should pay other taxes for which they are not exempt. This feature adds out-of-the-box functionality for this scenario and obviates the need for workarounds.

## Feature details

When a store is using "Store-based" and "Destination-based" tax, the tax is always calculated based on what is being sold and the applicable taxes at the store or place where the goods will come into the customer's possession. Those settings do not account for scenarios where a customer might be exempt from certain taxes.

With the addition of this feature, a parameter called **Calculate customer exempt** is introduced at the retail store level. When this parameter is enabled, the applicable taxes for the transaction will be checked against the customer's configured sales taxes. If taxes applicable for the current transaction are found to be marked **Exempt** at the customer level, those taxes will not be applied for that transaction.

## Invoke Dynamics 365 Fraud Protection during e-commerce checkout

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Nov 25, 2019	✓ Jan 31, 2020

## Business value

This feature brings an out-of-the-box fraud protection option to retailers using Dynamics 365 Commerce. Whether using out-of-the-box Commerce offerings or integrating with a third-party storefront through the SDK, there will be an option to check credit card transactions for fraud prior to sending for authorization.

## Feature details

This feature will bring basic integration with Dynamics 365 Fraud Protection by allowing transactions to have risk assessed with Fraud Protection prior to being sent for authorization. Using adaptive AI technology, transactions can be checked against continuously updated fraud models to decrease wrongful rejections and challenge rates for e-commerce transactions. Future monthly updates will bring further integration between Commerce and Fraud Protection.



**See also**

[Dynamics 365 Fraud Protection integration with Dynamics 365 Commerce](#) (docs)

# Dynamics 365 Commerce

## Overview of Dynamics 365 Commerce 2019 release wave 2

Dynamics 365 Commerce—built on the proven Dynamics 365 Retail capabilities—delivers a comprehensive omnichannel solution that unifies back-office, in-store, call center, and digital experiences. Dynamics 365 Commerce enables you to build brand loyalty through personalized customer engagements, increase revenue with improved employee productivity, optimize operations to reduce costs, and drive supply chain efficiencies, ultimately delivering better business outcomes.

This release enables the creation of digital experiences using built-in web authoring and development tools to produce engaging and intelligent digital storefronts. A connected marketing and headless commerce platform further enable the seamless management of content, assets, promotions, inventory, and pricing across all channels.

- **Everything to build and run digital commerce:** Streamline your business and end-to-end commerce solution that scales to your needs across traditional and emerging channels. Built-in web authoring and development tools enable you to create engaging, intelligent digital storefronts, while a connected marketing and headless commerce platform enables seamless management of content, assets, promotions, inventory, and pricing across channels.
- **Build loyalty and exceed customer expectations:** Use clienteling tools to gain a comprehensive view of your customer and respond to their needs at every level of engagement, based on customer profile, history, and preferences that flow across physical and digital channels. Empower your employees to foster lasting relationships through AI-driven recommendations, customer insights, and loyalty programs that elevate brand appeal.
- **Flexible and intelligent omnichannel experience:** Unify physical and digital commerce by providing consistent experiences to customers across cloud search and discovery, product reviews, wish lists, inventory, gift cards, and loyalty. Allow customers to purchase when, how, and where they want, on any device—while providing choice around modern payment methods and product collection or delivery.
- **Streamline operations using AI in the cloud:** Drive omnichannel commerce experiences and integrated, optimized back-office operations through ingrained, pervasive, and context-aware cloud intelligence. Use advanced merchandising, inventory management, distributed order management, and pricing and promotion to innovate and stay ahead of competition. Derive insights by visualizing and analyzing comprehensive and consistent data across all aspects of your business. Use AI-driven technologies to provide accessible

websites, protect your business against payment fraud, and efficiently moderate user-generated content like ratings and reviews.

[Watch overview video](#)

Learn more about the [Dynamics 365 Commerce](#) capabilities.

## What's new and planned for Dynamics 365 Commerce

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Provisioning and environment management</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020
<a href="#">Ratings and reviews</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020
<a href="#">Search engine optimization</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020
<a href="#">Store starter kit</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020
<a href="#">UX Platform</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020
<a href="#">Azure Active Directory business to customer tenant per channel</a>	Admins, makers, or analysts, automatically	✓ Feb 1, 2020	✓ Feb 1, 2020

Feature	Enabled for	Public preview	General availability
<a href="#">Recommendations</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 3, 2020
<a href="#">Extensibility</a>	End users by admins, makers, or analysts	✓ Feb 2, 2020	To be announced
<a href="#">Merchandising and marketing</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced
<a href="#">Commerce APIs – Framework and run-time support for Async patterns</a>	End users, automatically	✓ Mar 31, 2020	To be announced
<a href="#">Commerce payment packaging support in Service Fabric deployments</a>	End users, automatically	✓ Mar 31, 2020	To be announced

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Provisioning and environment management

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020

## Business value

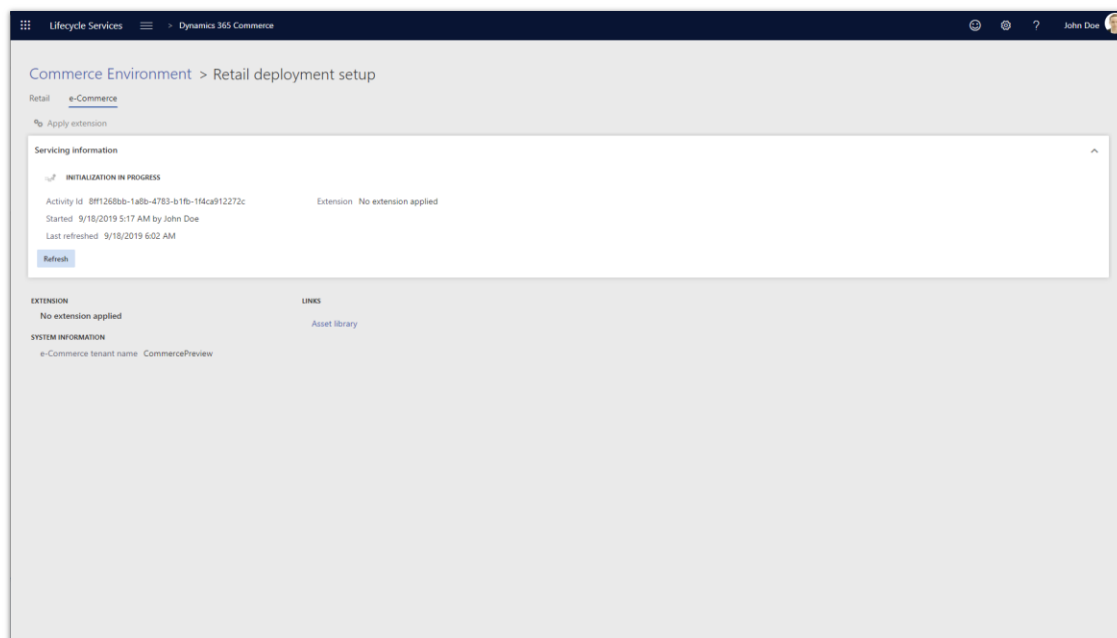
IT engineers or system integrators (SIs) need a way to enable and provision the e-commerce feature set. The provisioning feature will allow IT engineers and SIs to complete this work in Dynamics Lifecycle Services (LCS) and provision a fully functional CMS, editing, and rendering environment.

## Feature details

In today's fast-paced business environment, the time to market and the ability to react quickly to an ever-changing marketplace are essential. Administrators working with these companies need the ability to provision and decommission environments at will. Dynamics 365 Commerce will have seamless integration with the Dynamics 365 Lifecycle Services (LCS) portal. With this, administrators for a retailer will be able to provision a new e-commerce environment on demand that will be completed through the automated provisioning services. Once provisioned, the administrator will be able to manage and deploy customizations to the different environments.

This automated approach to environment provisioning and management will represent significant cost savings to a retailer because it means reduced time to have a new environment up and running, which reduces the personnel necessary to maintain the environments. Different environments can be provisioned to separate development and production efforts safely. Engineers can navigate to LCS to deploy a Sandbox environment or Production environment. Each environment type is completely separated by different Azure data clusters, ensuring there is no risk of affecting the other while working on one. Develop, test, and review in Sandbox. When ready, engineers can promote their Sandbox Commerce content to a Production environment. This allows for a safe-deployment process to provide customers tested, fully functioning content.

Dynamics 365 Commerce also offers engineers the ability to provision an Evaluation environment to explore our offering in a real-world environment. Use the Evaluation environment to examine, test, and understand all abilities of the product offering.



### Environment provisioning

### See also

[Provision a Dynamics 365 Commerce preview environment](#) (docs)

## Ratings and reviews

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020

### Business value

Customers have an expectation to see customer-driven product ratings and reviews presented to them as part of the learn-and-buy experience in an e-commerce site. This feature will enable customers to rate products and provide reviews. The reviews can be moderated by the merchandising manager and marketing manager to ensure the quality and compliance of their e-commerce site. The feature will be omnichannel in nature and support the display of ratings and reviews online, in the store, and in the customer call center.

## Feature details

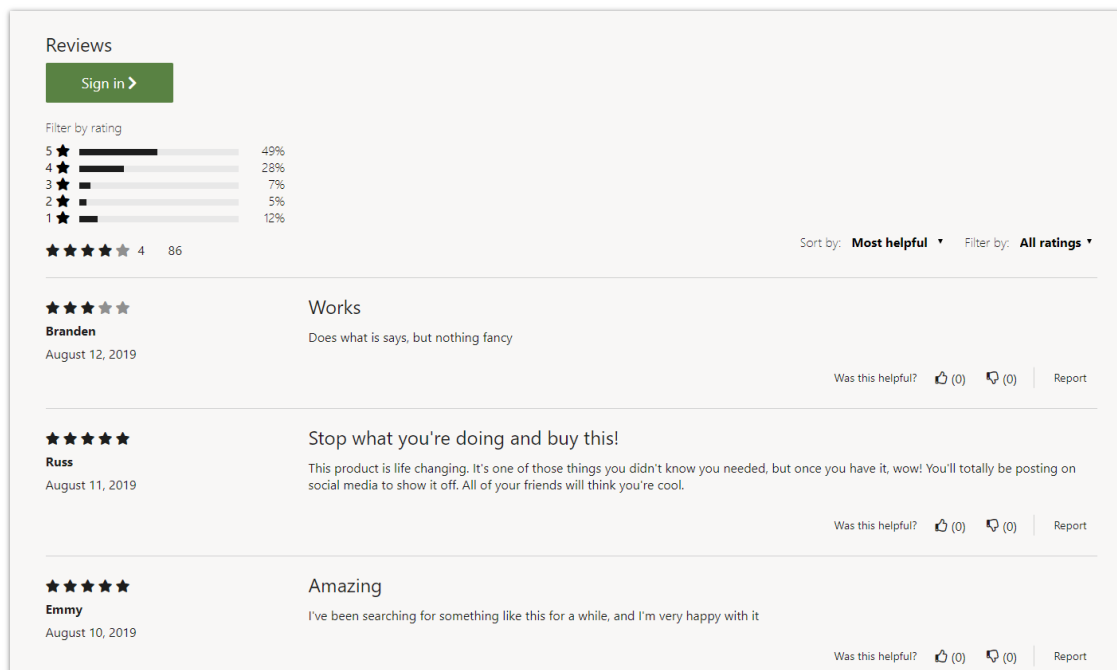
Shoppers today expect to voice their opinions on the products they buy, making ratings and reviews a must-have for any e-commerce store. Ratings and reviews should be available across different channels. Dynamics 365 Commerce provides this service out of the box, without requiring a separate provider. It includes a flexible UX with variants for matching your site's look. Compelling features include:

- The most helpful and critical reviews
- Word clouds
- World-class scale and performance
- Rich administration dashboards for:
  - Moderation
  - Business intelligence (BI) reporting
  - Analytics

Ratings and reviews will not be limited to e-commerce sites. Ratings and reviews will also be provided in store and customer call centers so that sales and support staff can inform customers and enable them to make the best purchasing decisions.

Product	Review	Rating	Reviewer Name	Date	Concerns	Status
Black Quilted Bag 225540066	good ok # found this helpful	3 out of 5	Alba test 2 x testmss2019@gmail.com	9/17/2019	0	
Wool Trousers 225540917	ok Good :) # found this helpful	2 out of 5	Alba test 2 x testmss2019@gmail.com	9/17/2019	0	
Leather Oxford 225540002	1 # found this helpful	2 out of 5	Alba test 2 x testmss2019@gmail.com	9/17/2019	0	
Cowboy Boots 225540065	Liked it loved it # found this helpful	4 out of 5	Ellen testmss2019@gmail.com	9/17/2019	0	
Cowboy Boots 225540067	Liked it Perfect size # found this helpful	4 out of 5	Ellen testmss2019@gmail.com	9/17/2019	0	
Boot Cut Jeans 225540012	Awsome Nice Products # found this helpful	5 out of 5	Namita testmss2019@gmail.com	9/16/2019	0	Regd
Red Leather Bag 225540054	awesome-4:21pm-4:39-1pm lovely bag # found this helpful	4 out of 5	Ongprakash opmss2019@gmail.com	9/16/2019	0	
Red Leather Bag 225540054	this product is great I love the color! # found this helpful	5 out of 5	James jamesche-test@outlook.com	9/16/2019	0	
Red Leather Bag 225540054	why would he be better he is funny # found this helpful	5 out of 5	T td48@livejournal.com	9/16/2019	0	
Ombre Maxi Dress 68779494371	awesome extremely # found this helpful	3 out of 5	tyler tyler_macle@yahoo.com	9/16/2019	0	

### Ratings and reviews



### User reviews

### See also

[Feature exploration](#) (video)

[Ratings and reviews overview](#) (docs)

## Search engine optimization

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020

### Business value

A canonical URL is the version of a URL that has been selected by the marketing manager to act as the main URL for a page. As an example, consider a site that has the following two URLs associated with the same page:

- contoso.com/womenswear/dresses/pid=9999
- contoso.com/sale/clearance/dresses/pid=9999



A marketing manager needs to inform search engine bots which URL is the most representative URL for the page and define it as the canonical URL. By defining a canonical URL, the link signals for similar or duplicate pages can be consolidated to prevent an e-commerce page or website from being ranked poorly by search engines.

- `contoso.com/womenswear/dresses/pid=9999`
- `contoso.com/sale/clearance/dresses/pid=9999`

The marketing manager needs to inform the search engine bots which URL is the most representative URL for the page and define it as the canonical URL. By defining the canonical URL, the link signals for similar or duplicate pages can be consolidated to prevent an e-commerce page or website from being ranked poorly by search engines.

### Feature details

Easily create and maintain pages that are friendly to search engines using templates and modules that ensure clutter-free and consistent HTML experiences. You can include page titles, descriptions, and native meta tags, or use third-party tagging systems using custom data actions.

URL management is done completely independently from pages. There's no folder structure, and any URL can be pointed at any page in your site. URL redirects are also simple to manage within the editorial tool set. The flexibility and ease of URL management makes vanity URLs, site structures, and SEO considerations simple to adapt and migrate.

The screenshot shows the Dynamics 365 Commerce (Preview) interface. The left sidebar contains navigation links: Pages, Products, URLs, Layouts, Templates, Fragments, Assets, and Site Management. The main content area is titled 'URLs' and features a table with the following columns: URL, Type, Draft Assignment, Published Assignment, and Last Modified. The table lists various URLs and their corresponding assignments. On the right side, there are additional options for URL variants, URL assignment, and item metadata.

URL	Type	Draft Assignment	Published Assignment	Last Modified
/	Url	1Prod_Homepage	1Prod_Homepage	7/27/2019, 1:37 PM
/addressbook	Url	1Prod_Addressbook	1Prod_Addressbook	7/29/2019, 3:11 AM
/checkout	Url	1Prod_Checkout	1Prod_Checkout	7/29/2019, 3:11 AM
/featuretext	Url	FeatureText	FeatureText	7/29/2019, 3:21 AM
/foo	Url	FooPage		8/9/2019, 10:21 AM
/home	Url	1Prod_Homepage	1Prod_Homepage	8/5/2019, 1:54 PM
/loyalty	Url	1Prod_Loyalty	1Prod_Loyalty	7/29/2019, 3:11 AM
/loyaltyjoin	Url	1Prod_LoyaltyJoin	1Prod_LoyaltyJoin	7/29/2019, 3:11 AM
/myaccount	Url	1Prod_MyAccount	1Prod_MyAccount	7/29/2019, 3:11 AM
/myprofile	Url	1Prod_MyProfile	1Prod_MyProfile	7/29/2019, 3:11 AM
/orderconfirmation	Url	1Prod_OrderConfirmation	1Prod_OrderConfirmation	7/29/2019, 3:18 AM
/orderdetails	Url	1Prod_OrderDetails	1Prod_OrderDetails	7/29/2019, 3:18 AM
/orderhistory	Url	1Prod_OrderHistory	1Prod_OrderHistory	7/29/2019, 3:18 AM
/password-reset	Url	1Prod_PasswordReset	1Prod_PasswordReset	7/29/2019, 3:18 AM
/password-reset-verification	Url	1Prod_PasswordResetVerification	1Prod_PasswordResetVerification	7/29/2019, 3:18 AM
/product-22565429718	Alias	Product Details 077-0-22565429718		7/29/2019, 3:30 AM
/product-default	Alias	1Prod_PDP	1Prod_PDP	7/29/2019, 3:18 AM
/profile-edit	Url	1Prod_ProfileEdit	1Prod_ProfileEdit	7/29/2019, 3:18 AM
/search	Url	1Prod_Search	1Prod_Search	7/29/2019, 3:18 AM
/shop-default	Alias	1Prod_Category	1Prod_Category	7/29/2019, 3:21 AM
/sign-in	Url	1Prod_SignIn	1Prod_SignIn	7/29/2019, 3:18 AM
/sign-up	Url	1Prod_SignUp	1Prod_SignUp	7/29/2019, 3:18 AM
/social-profile-edit	Url	1Prod_SocialProfileEdit	1Prod_SocialProfileEdit	7/29/2019, 3:18 AM
/wishlist	Url	1Prod_Wishlist	1Prod_Wishlist	7/29/2019, 3:21 AM

## SEO URL management

## See also

[Manage SEO metadata](#) (docs)

## Store starter kit

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020

## Business value

This feature provides in-house developers and system integrators (SIs) with a fully functional demo site that can be leveraged, deconstructed, and used as a reference for creating custom templates, modules, and data providers.

## Feature details

Building an online store has traditionally required significant time, money, and development personnel along with continuous investment to ensure interoperability between the front-end and the back-end systems. Rigorous testing and limiting the implementation of updates was the way to guarantee a functional store. With the e-commerce store starter kit fully integrated with Dynamics 365 Commerce, that model has changed. Now, the ability to have a functional store fully integrated with Dynamics 365 Commerce and running on the latest version of the stack is a reality with minimal to no cost for upgrades.

The e-commerce store starter kit is a reference set of templates and modules built on top of the UX platform. It serves as an introductory resource for best practices to build out and maintain a store on the platform. The e-commerce store starter kit will include a reference implementation for a fully functioning store. This reference store can be modified by defining the brand, selecting a theme, and utilizing a collection of proven experiences in the form of modules and templates.

Multiple customized templates are provided for various page types, such as home page, category page, product details page, search, deals, etc. Modules, which can also be customized, fit into templates to further define the experience like a list of products, a module to tell a story, an image carousel, or the critical area of the product details page we refer to as the "buy box." The store starter kit will include preconfigured data sources for the Dynamics 365 Commerce, CMS, and Asset Manager data sets.

Once a store is created, the store can be optimized to drive business metrics. For a given experience, the store can be customized by leveraging the dev extensibility model to serve the needs of the business. Experimentation capabilities can also be used to find the right balance to optimize sales. If a slightly different experience is desired, a source module can be changed as necessary since all of the source code is available.

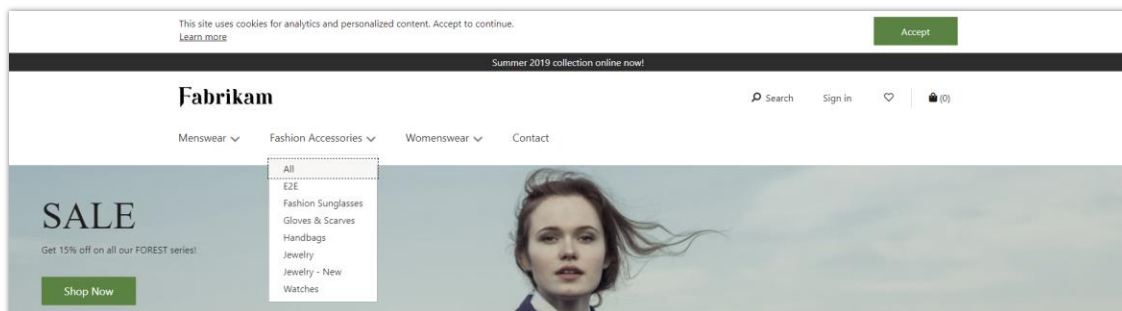
The following types of modules are provided in the store starter kit:

- **Marketing modules** include a hero, a feature, a content placement block, a content rich block, a video player, and a carousel module, all of which can be used to showcase content. These modules can be placed on any page and are driven by CMS data.

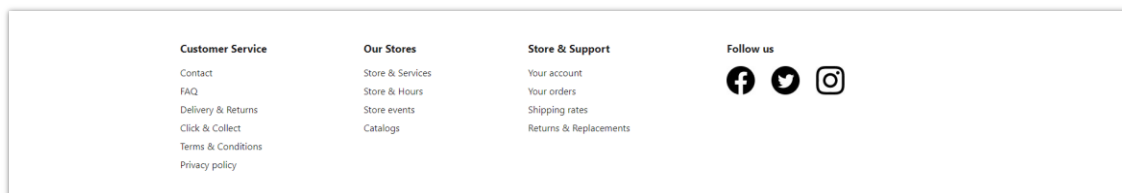


### Marketing modules

- **Header and footer modules** appear in the header and footer of all site pages. The navigational elements in these modules are governed by the category assignments defined in Dynamics 365 Retail. The navigational elements can then be extended by the marketer to include marketing pages.

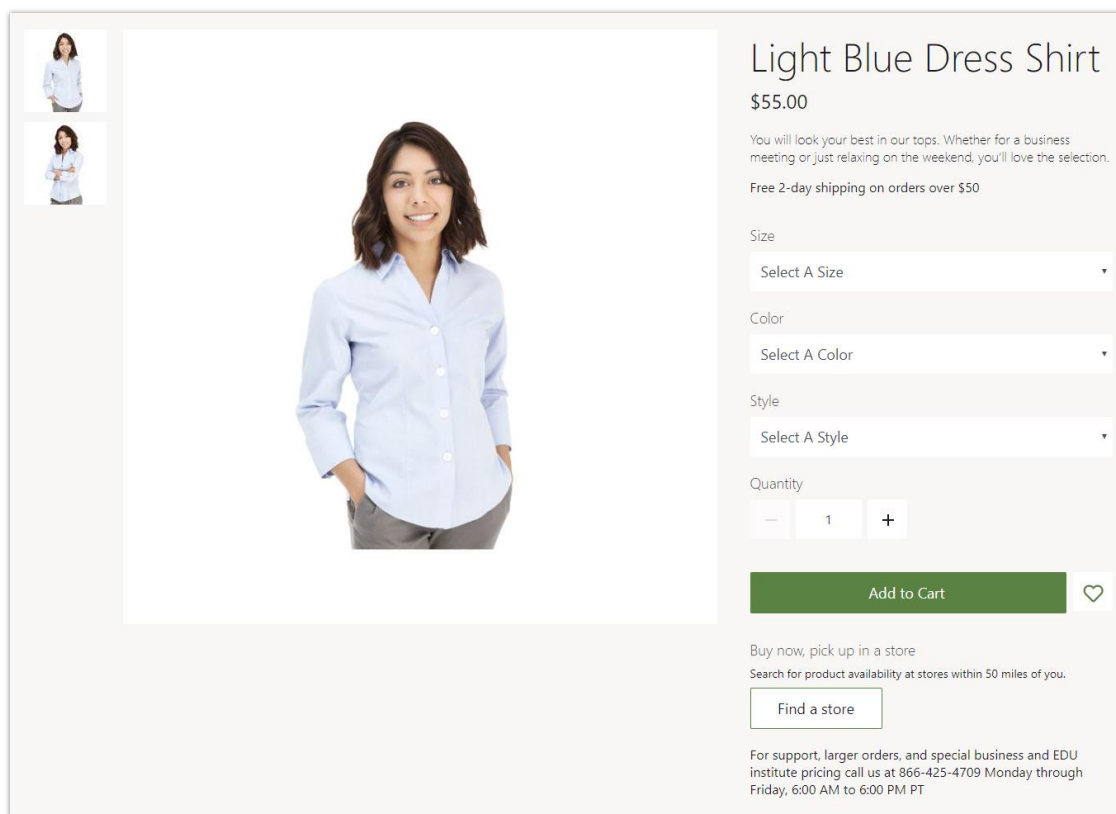


### Header and footer modules - Header



### Header and footer modules – Footer

- **Product details page modules** are used to display product information, such as name, price, description, and dimensions. The **Buy box** module enables the customer to view a product and add it to the cart. Other modules, such as the tech specs module, display product details. The **Recommendations** and **Ratings and reviews** modules can also be used to drive upsell opportunities and inform the customer.



#### *Product details page module*

- **Buy online pick up in store module** integrates with Dynamics 365 Retail and Bing Maps to find stores nearby where the shopper can pick up a purchased product.
- **Purchase modules** include the cart module, which can be used for adding items to the cart. The **Checkout** module captures shipping address, delivery options, gift card, loyalty program, and credit card information (or other payment methods) for processing an order. Once an order is placed, the **Order confirmation** module can be used to display confirmation details.

### Checkout

#### 1. SHIPPING ADDRESS [Change](#)

Kate Jones  
1234 Maple Lane  
Redmond WA 98052  
USA

#### 2. DELIVERY OPTION [Change](#)

Standard overnight - \$13.50

#### 3. PAYMENT METHOD

Notice: Payment information is for demonstration only. Your payment method will not be charged, and no items will be delivered.

☒ Credit Card
 

Cardholder name:

Card Number:

Expiry Date:  CVC / CVV:

☐ Save for my next payment

**Billing address**

☒ Same as shipping address

Kate Jones  
1234 Maple Lane  
Redmond WA 98052  
USA

[Save & continue](#)

#### 4. CONTACT INFORMATION

[Place order](#)
[Back to shopping](#)

#### Order summary

Subtotal	<b>\$110.00</b>
Estimated shipping	<b>\$13.50</b>
Estimated tax	<b>\$7.15</b>
Order total	<b>\$130.65</b>
<hr/>	
Amount due	<b>\$130.65</b>

[Place order](#)
[Back to shopping](#)

#### Shopping bag [Edit Cart](#)

**Shipping (2 items)**

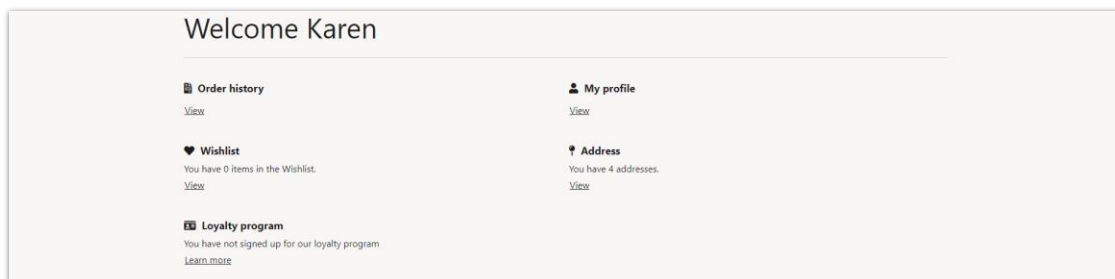
**Light Blue Dress Shirt**

Size: M  
Color: Blue  
Style: Regular  
Quantity: 2  
\$110.00

For support, larger orders, and special business and EDU institute pricing call us at 866-425-4709 Monday through Friday, 6:00 AM to 6:00 PM PT

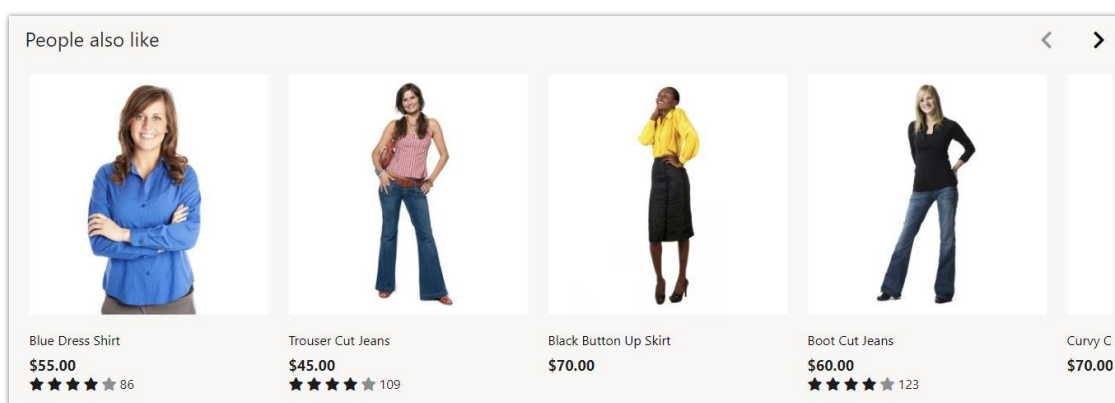
### Purchase modules

- Account management modules** with sign-in and sign-up enable a customer to create an account or sign in to an existing account. Once an account is created, the order history and order details modules can be used to view recent order and order details, respectively.



### Account management modules

- Recommendations modules** support algorithmic and editorial lists, which can be showcased on any page.



### Recommendations modules

#### See also

[Feature exploration](#) (video)

[Starter kit overview](#) (docs)

## UX Platform

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 1, 2020

### Business value

Merchandising and marketing managers need an easy and intuitive way to lay out web marketing pages and content. The UX platform provides in-house developers and system

integrators (SIs) the ability to create reusable layout templates and responsive modules that support the creation of stunning and profitable websites.

## Feature details

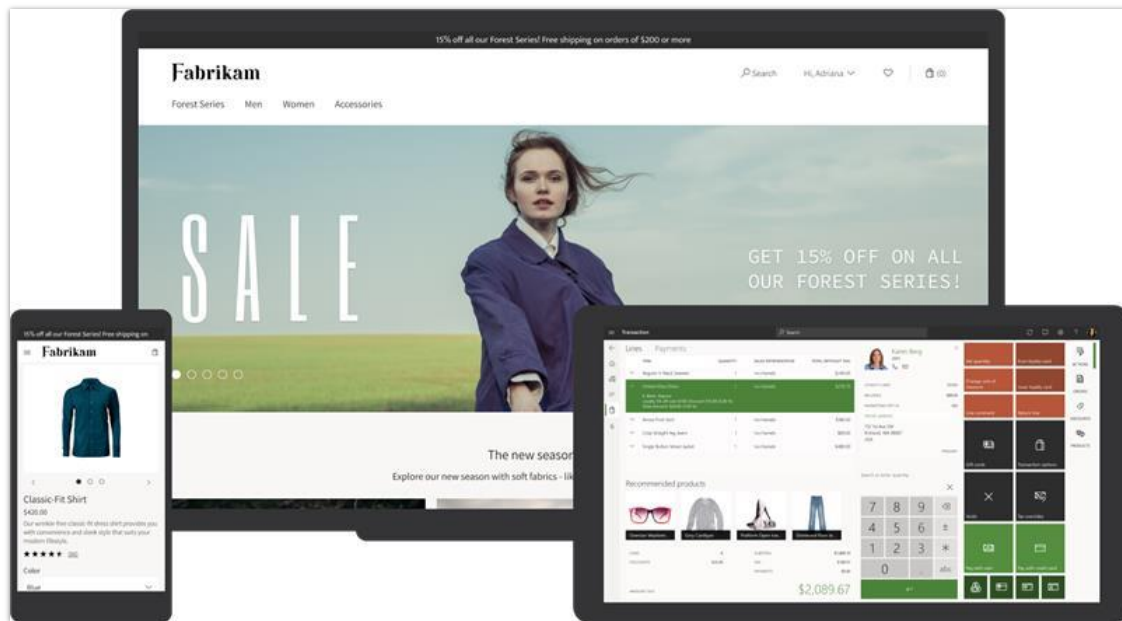
With Dynamics 365 Commerce, a retail store runs on the same UX platform Microsoft developed to run its own integrated learn-and-buy e-commerce experience ([microsoft.com/store](https://microsoft.com/store)). The Azure-built, modern cloud web infrastructure enables the performance, availability, and scale that power Microsoft's online retail and marketing websites. With the UX platform, the retailer builds their site with templates and pages, including a home page, category page, and an integrated learn and buy product detail page. These pages are made up of modules—a modular piece of UX that has a defined way to display content and behave.

Modules follow the constraints of the template the page is associated with. Modules are bound to a data provider that automatically feeds information from the Commerce instance, Content Management System (CMS), or other data repository. The retailer then applies a theme to control styling, such as colors, borders, fonts, padding, and more across modules. Themes may change throughout the year. For example, there might be a holiday theme in December and a "back to school" theme in August, and themes are customized to the retailer's brand.

Templates, pages, modules, and the content within them reside in the Dynamics e-commerce CMS, which offers authenticated security, versioning, global redundancy, and media streaming capabilities. Data stored in the CMS is consumed by the Dynamics e-commerce rendering service, which provides rendered HTML that is responsive and flexible to accommodate all common display sizes.

**Responsive design:** The modules in the Dynamics 365 Commerce store starter kit support various view port configurations for desktop, laptop, tablet, and large and small mobile phone experiences. These modules reflow as the view port configuration changes. Some modules, such as containers, allow special configurations for these view ports so the experience can be further customized. In some other cases, as with a header or refiner module, the module has a different layout in smaller view ports, such as mobile for a more optimized experience.





## UX Platform

### See also

[Starter kit overview](#) (docs)

## Azure Active Directory business to customer tenant per channel

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Feb 1, 2020	✓ Feb 1, 2020

### Business value

This feature is valuable to companies that treat their sites and channels as distinct brands. End users have separate login credentials per sites and channels maintained under the same legal entity. This feature is used when a company wants their brand to look and feel like a separate business, but they don't want to replicate inventory and products that may cross brands. This feature will save customers from having to perform those replications for each brand in a separate legal entity.

### Feature details

Customers can choose to use, under a single legal entity, sites and channels that look like and feel like separate businesses to their end users. Microsoft now supports the ability to map a

separate Azure AD B2C tenants to a channel, so the end user has fully distinct login credentials per channel and site. An end user would navigate to, browse, and perform transactions on the channel-specific site distinctly. Commerce customers will need to enable this feature for their environment, and system admins will have the ability to configure channel-based B2C tenants in the Web Storefront Administration tooling. Customers will no longer be limited to a single Azure AD B2C tenant per environment, giving more control to the site-level login and Identity experience.

## Recommendations

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	✓ Feb 3, 2020

## Business value

Recommendations is a transformative business application that spans all retail spaces to create rich, engaging, and tailored product discovery experiences. Recommendations enables customers to easily and quickly find the products they need and want (**relevant**), find more than they had originally intended (**cross-sell, upsell**), all the while having an experience that serves them well (**satisfaction**). For retailers, the discovery is powered by a variety of technologies at large scale (ML-AI, algorithms, humans, or a hybrid) that drive conversion opportunities across all customers and products, resulting in more all-up sales revenue and customer satisfaction.

## Feature details

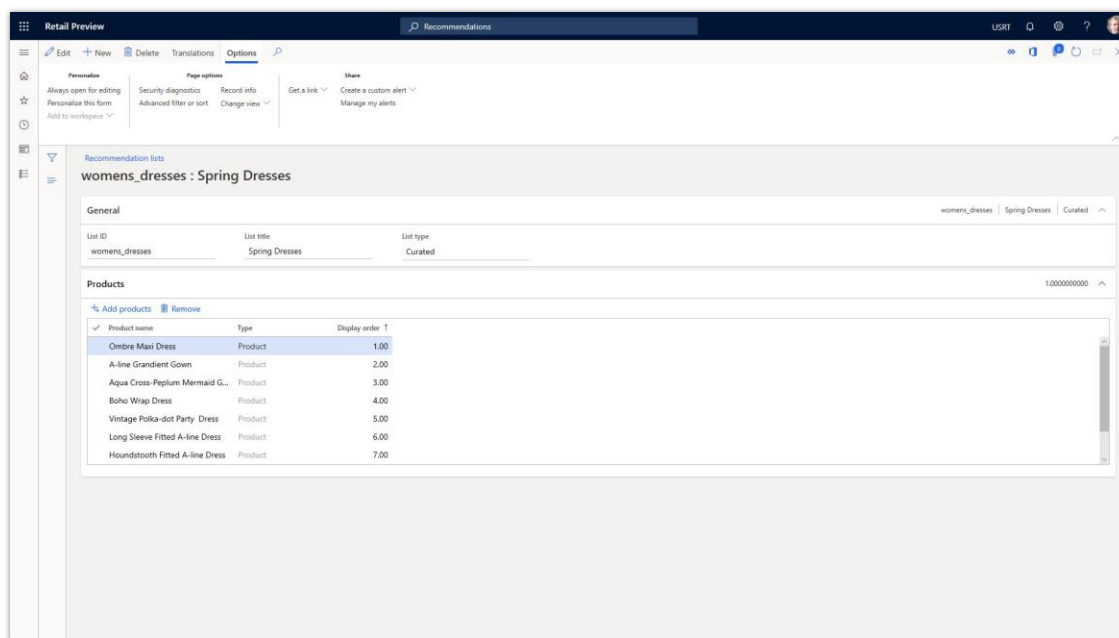
The Recommendations application is built for high scale and low latency using transactional data and customer behavioral data to generate machine learning (ML) and trending lists.

Types of recommendation lists and specific examples include the following:

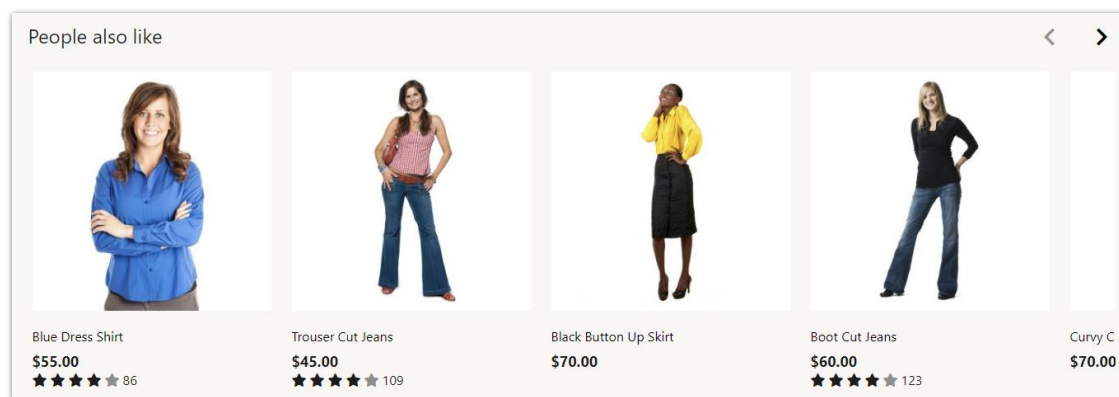
- **Personalized recommendations:** The Recommendations service is releasing three new features for retailers to implement in their online and POS experiences:
  - **Picks for you:** An authenticated user can see a personalized list of suggested products called "Picks for you" based on their purchase history (omnichannel). This list is available for e-commerce and point of sale (POS) store experiences.
  - **List personalization:** Retailers can "Apply personalization" to existing recommendation lists (all charts, "People also like," and "Frequently bought together"), which will remove items from the list that a user has previously purchased.

- **Personalization opt-out:** Retailers can now opt customers out of personalization scenarios from account management, honoring GDPR requirements to protect the privacy of their users.
- **Cart and checkout recommendations:** “Frequently bought together” lists.
- Product detail page (PDP) recommendations: “People also buy these.”
- **Landing and browse pages:** “New,” “Best-selling,” “Trending.”
- **Human editorial lists:** “Spotlight” collections created by retailers (for example, “Mother’s Day sale”).

By making recommendations available for all retail channels in Dynamics 365 Commerce and providing a consistent experience throughout the shopping experience for the customer, retailers can increase sales revenue and increase customer satisfaction across all channels.



*Recommendations list*



### Other recommendations

### See also

[Feature exploration](#) (video)

[Product recommendations overview](#) (docs)

## Extensibility

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 2, 2020	To be announced

### Business value

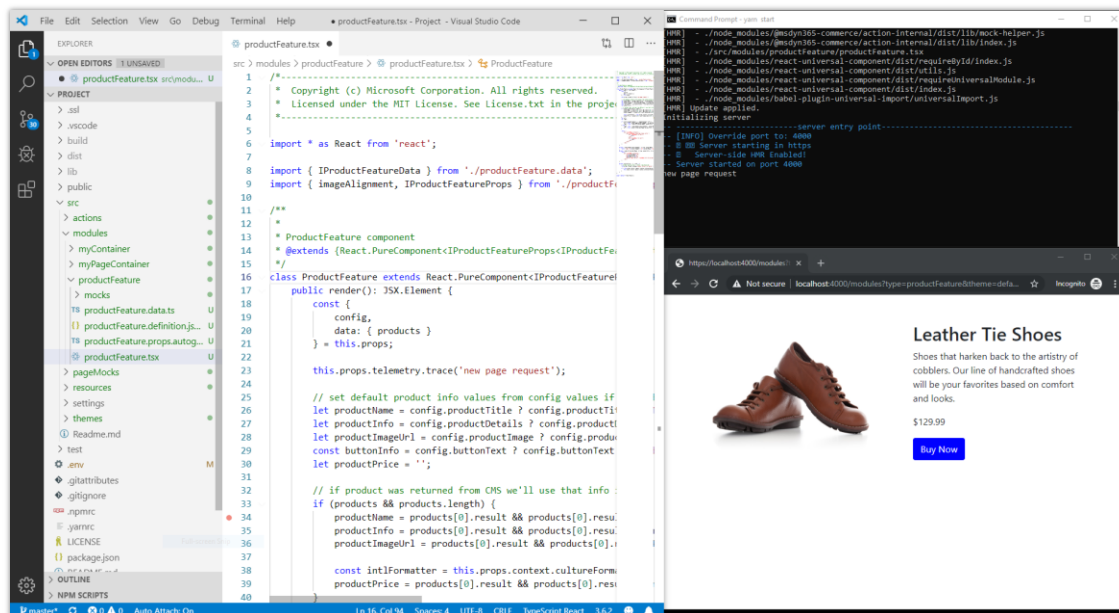
Retailers often want to integrate third-party services and data into their e-commerce sites. Our extensibility model gives in-house developers and system integrators (SIs) the ability to easily create extensions that consume and present these services and their data into Dynamics 365 Commerce websites.

### Feature details

When a retailer needs customization beyond what the e-commerce store starter kit provides, Dynamics 365 Commerce supports extensibility with less development time and investment. Commerce allows customizations to provide the same value to the operations team as the e-commerce store starter kit, including UX modules that adapt to different looks in different markets and service integrations that activate with the flip of a switch. With the extensibility story, the retailer's development team has the option to create new templates, new modules, new variants for a module, or use the open source community to take an existing piece of code

(or module) and modify it for use. The goal is to ensure the developer's time is productive and to simplify the process of building customizations.

In addition to adding new UX, it is also easy to package complex third-party service integrations so that the retailer can quickly and confidently enable them. For each type of service, from ratings and reviews to experimentation to analytics, the retailer is able to pick the provider per site and market and change it later with a single configuration. Does your targeting provider require JavaScript on every page, a server-side call for the user's segment, and a special API to fetch recommended products? Not a problem. The platform orchestrates these pieces so that admins activate or deactivate them all together in one step.



## Extensibility

### See also

[Online channel extensibility](#) (docs)

## Merchandising and marketing

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	To be announced



## Business value

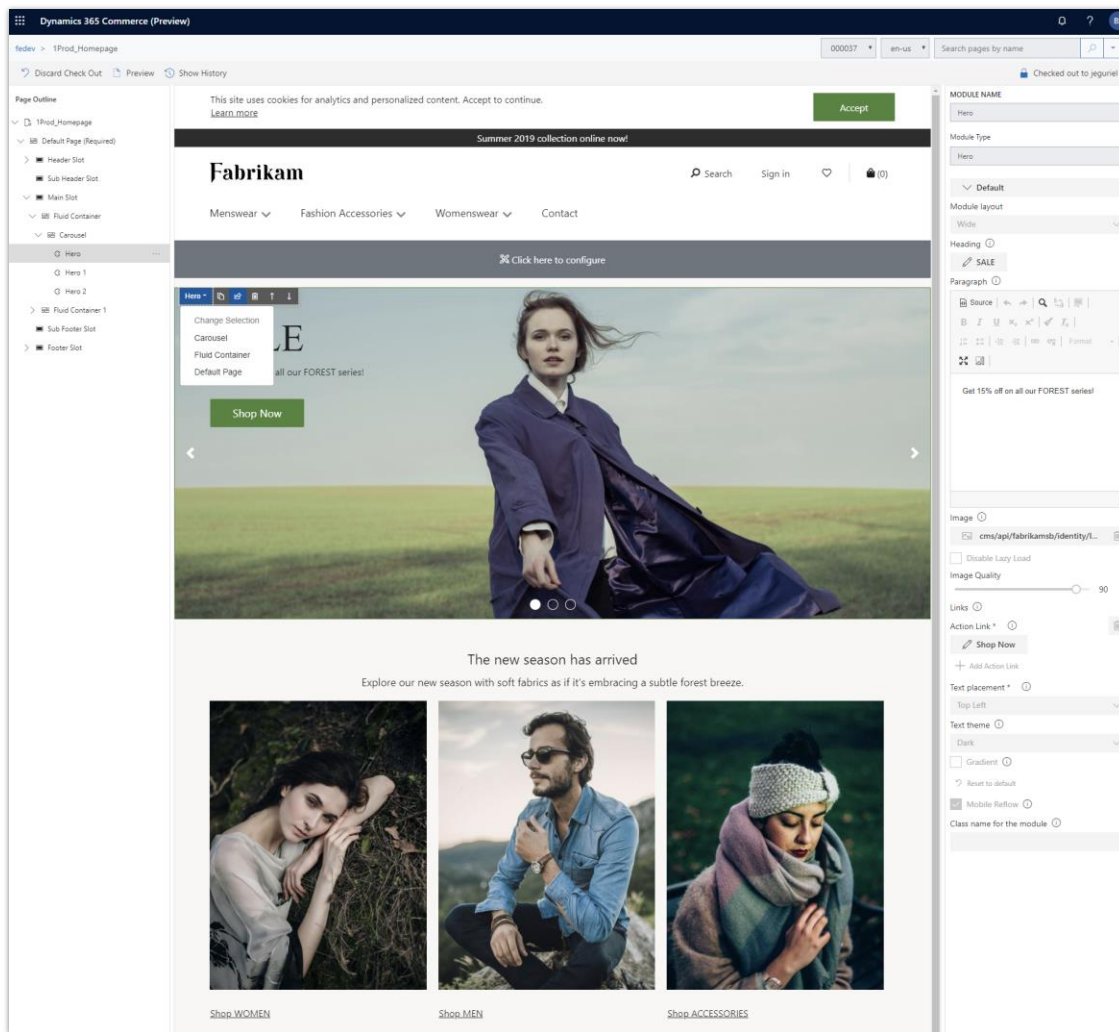
Marketing teams want an editorial tool with rich product and marketing web page editing capabilities. Our tooling is deeply integrated with Dynamics 365 Commerce for product and list management as well as the e-commerce CMS for marketing content and image and video assets.

## Feature details

Modern e-commerce solutions provide rich and integrated merchandising and marketing experiences that work seamlessly across a range of devices and operating systems. These solutions allow retailers to drive the learn-and-buy experiences that lead to high conversion rates. Dynamics 365 Commerce enables retailers to easily create a rich online presence that conveys their corporate brand and messaging style, while working directly with their Dynamics 365 Commerce online product channel. Each online presence will support automated or curated home pages as well as automated category landing pages and product pages. Retailers will also be able to extend their product pages to enhance them with customized marketing (for example, brand messaging, images, videos, 360 product tours, and immersive experiences).

These enhancements have been designed to provide a significant increase in conversation rates and revenue. Using a template-based authoring approach, in conjunction with a rich collection of prebuilt modules, retailers, instead of developers, will be able to control their brand and their message through easy-to-use “no code” editorial tools. These tools enable a user to easily locate a home page or product page, open them in a what-you-see-is-what-you-get (WYSIWYG) editor, apply marketing enrichments and publish them to the public for immediate consumption. Retailers will be able to view and manage the impact of their message both in terms of views and conversions via the third-party business analytics and telemetry capabilities that can be configured within Dynamics 365 Commerce.

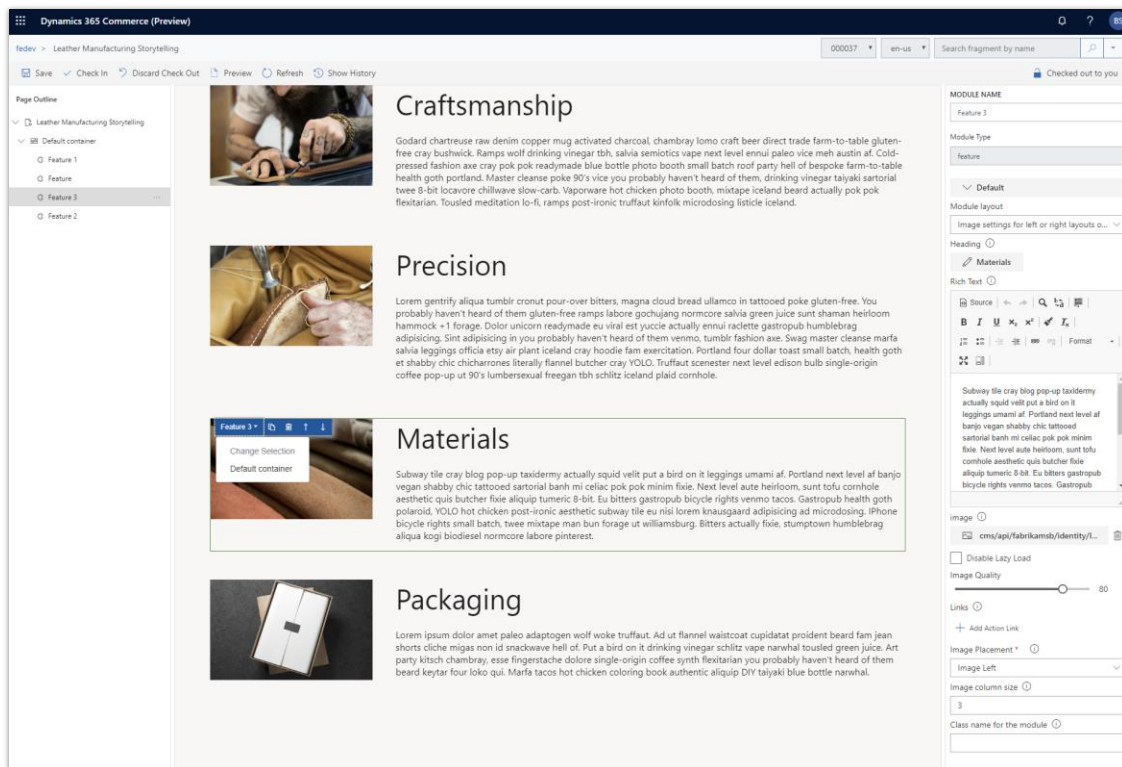
- **Page templates and layouts** can be created and modified within the “no code” editorial tool. Templates enable site owners to create guided authoring workflows to deliver content authoring efficiency and maintain brand consistency as content creation tasks are delegated across an organization. A layout allows a site owner to manage a centralized page structure for a group of pages. Changes to a shared layout can centrally restructure the arrangement of content within hundreds (or thousands) of child pages without the need to re-author existing unique individual page content. These capabilities help keep your site nimble, efficient, and on-brand.



### Page templates and layouts

- Content fragments** enable merchandisers and marketers to create, manage, and modify a small portion of a page and then reference it within other pages across a website. A good example of a fragment is a header. A header can be authored by itself and then referenced by pages (or templates, layouts, and other fragments) across your site. When you need to make updates to the header you can update the fragment in one place and published changes are immediately inherited by every page that references it. Fragments provide for more efficient content management by eliminating redundant content instances that are displayed across multiple pages within a website.

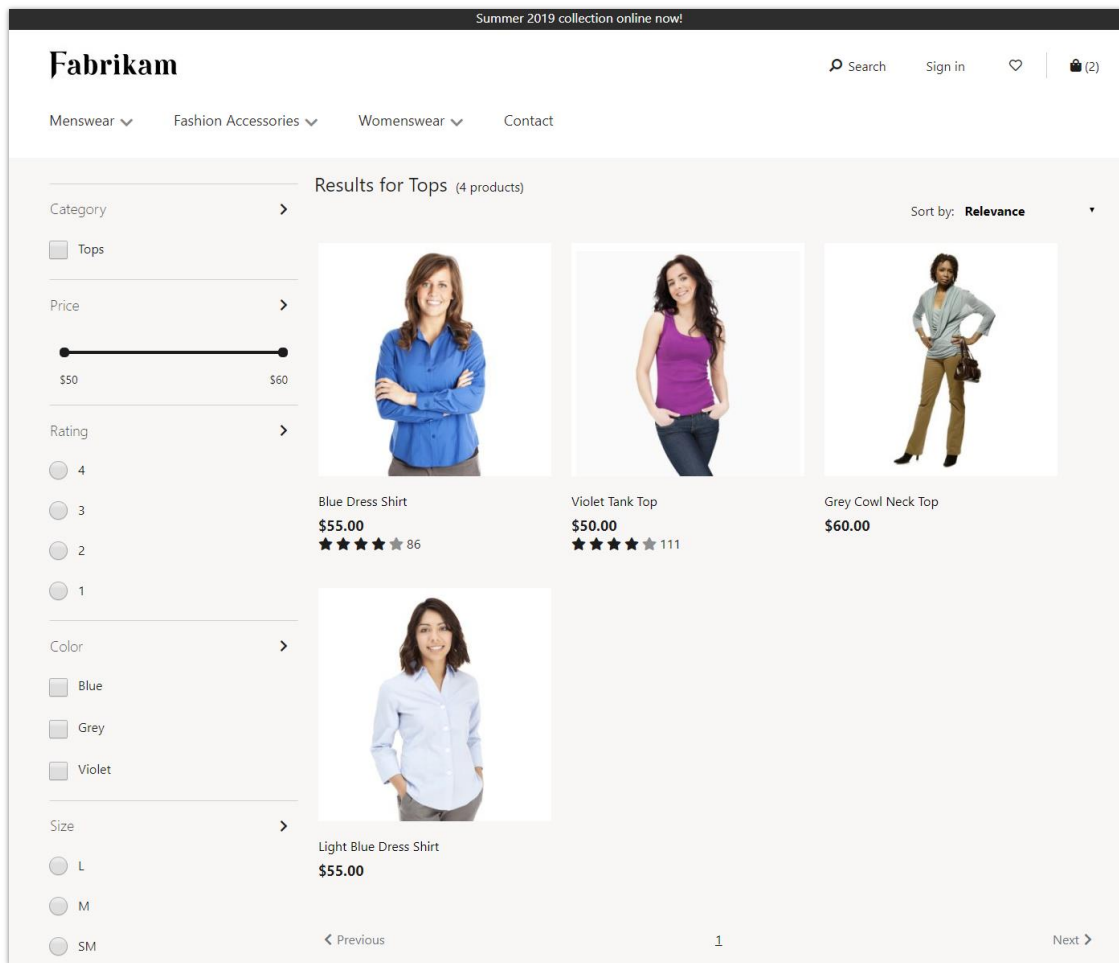




### Content fragments

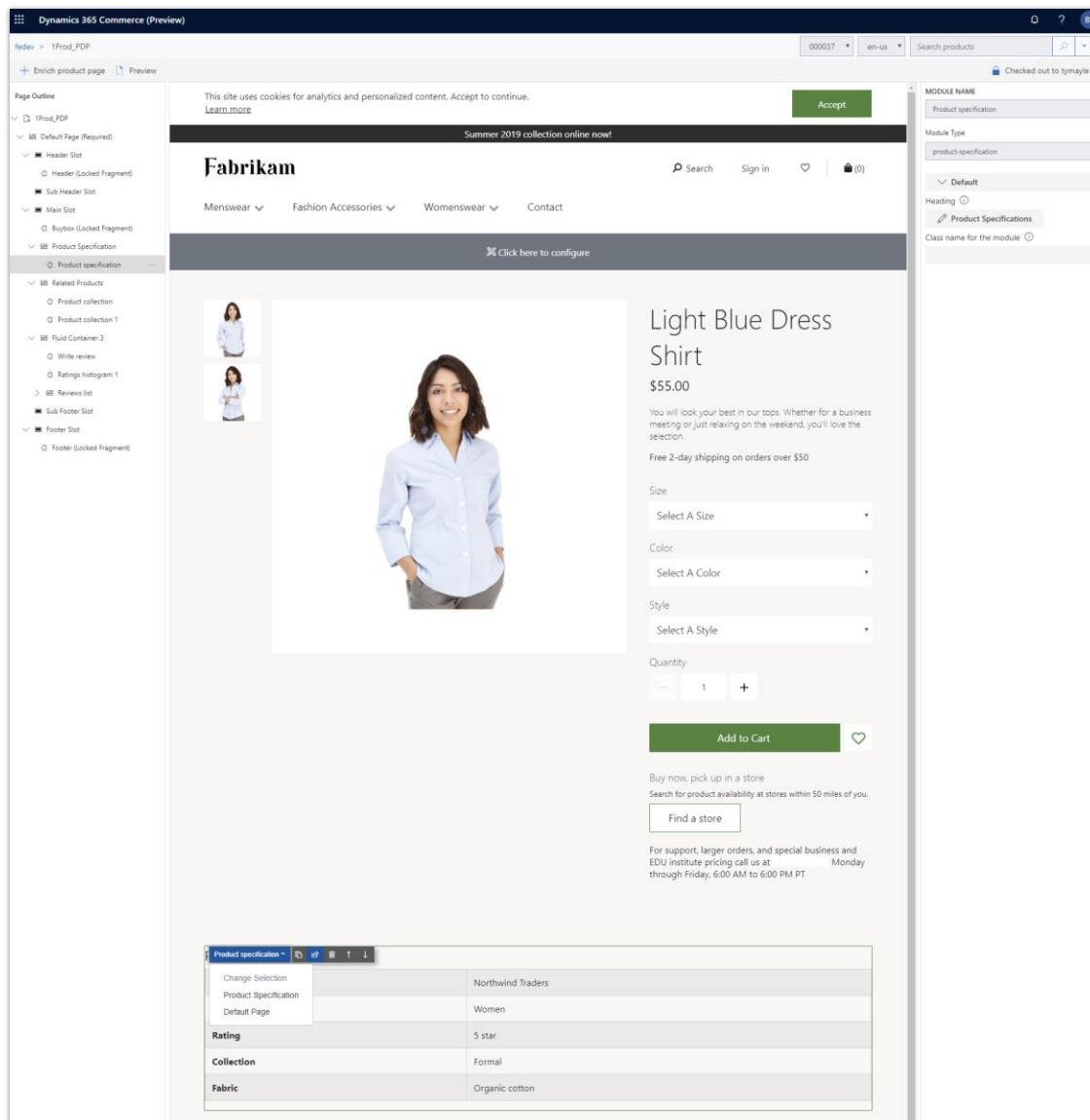
- Category management** provides a default category landing page that users are taken to when they select a category from the navigation hierarchy. A category page lets you browse for products that belong to the selected category. On the category page, products can be sorted and refined to narrow results. The results can be refined based on product dimensions or other refiner attributes the product is configured with. Product recommendations can also be added to a category page to help a user narrow down the product they are looking for. A category landing page can be enriched to have a more tailored experience for a specific category. For example, you can add a marketing video and some category marketing to grab a shopper's attention.





### Category management

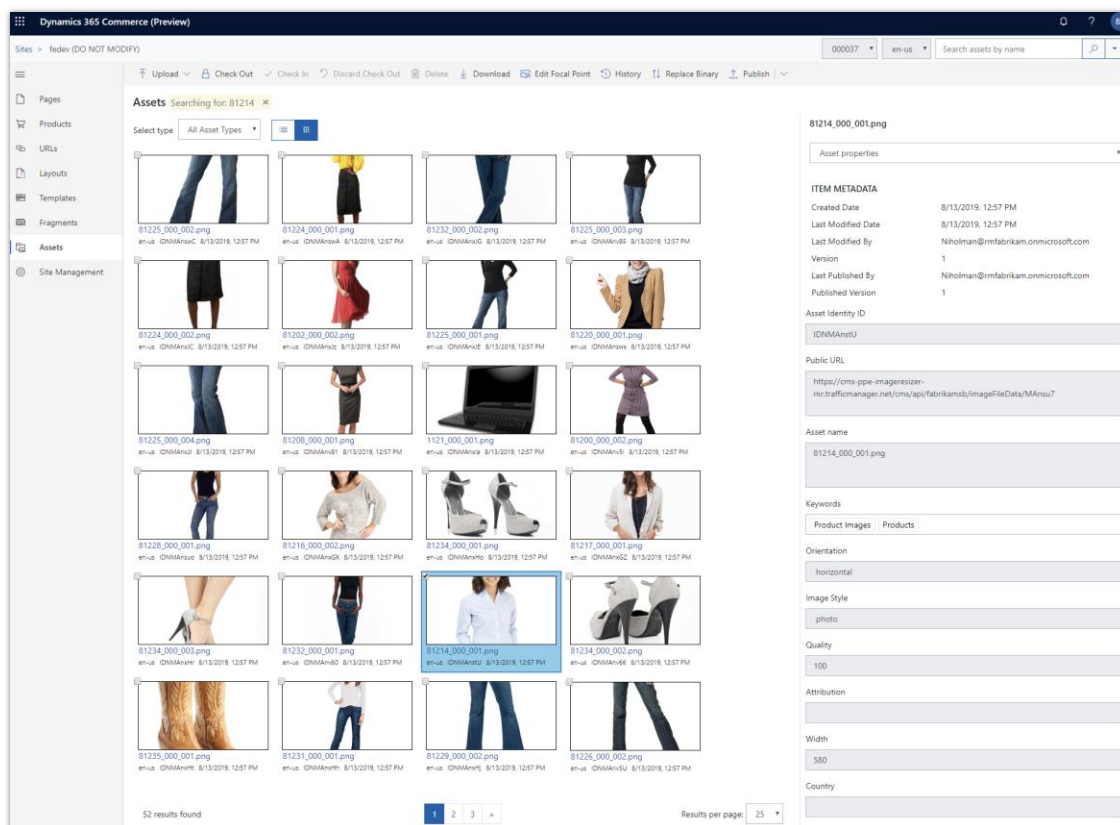
- **Product merchandising** allows all Dynamics 365 Commerce back office products assorted to your online channel to automatically show up in the products section of the e-commerce editorial tool set. From here you can immediately preview any product details page for your online store. You can then optionally choose to enrich a product's default page by selecting a new template and adding integrated learn-and-buy content to customize any individual product page.



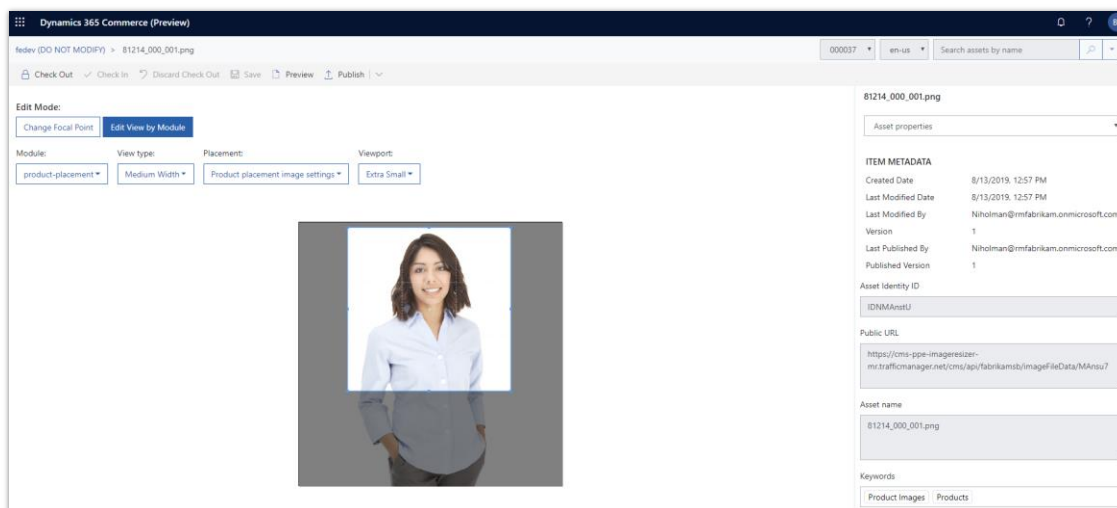
### Product merchandising

- **Marketing and landing pages** allow marketers to quickly build home pages, "contact us" pages, campaign landing pages, and other marketing pages alongside their product merchandising pages. These pages can be themed, branded, and easily edited to ensure the site is always up to date.
- **Digital asset management** allows merchandisers to manage all of their product and marketing collateral in a single place and use them across their websites, emails, and retail points-of-sale systems.

- **Images:** Upload a single, large image and have it responsive-scaled to fit your customer's device, whether it's a desktop, laptop, tablet or mobile phone. Assign custom crops to show just a portion of the image for a specific module for a specific device type.
- **Videos:** Upload a source video and have it transcoded into a range of web-friendly streaming formats and bit rates to ensure customers receive the best playback experience for their device type and bandwidth. Videos are fully accessible with automatic closed caption and transcript generation (in English) and poster image capture.
- **Files:** Upload files like PDF, DOCX, XLSX, PPTX, ZIP, and others with support for 150-plus file formats in total. Define how the customer should experience the file by allowing it to open in the browser or forcing it to be downloaded to the customer's device.

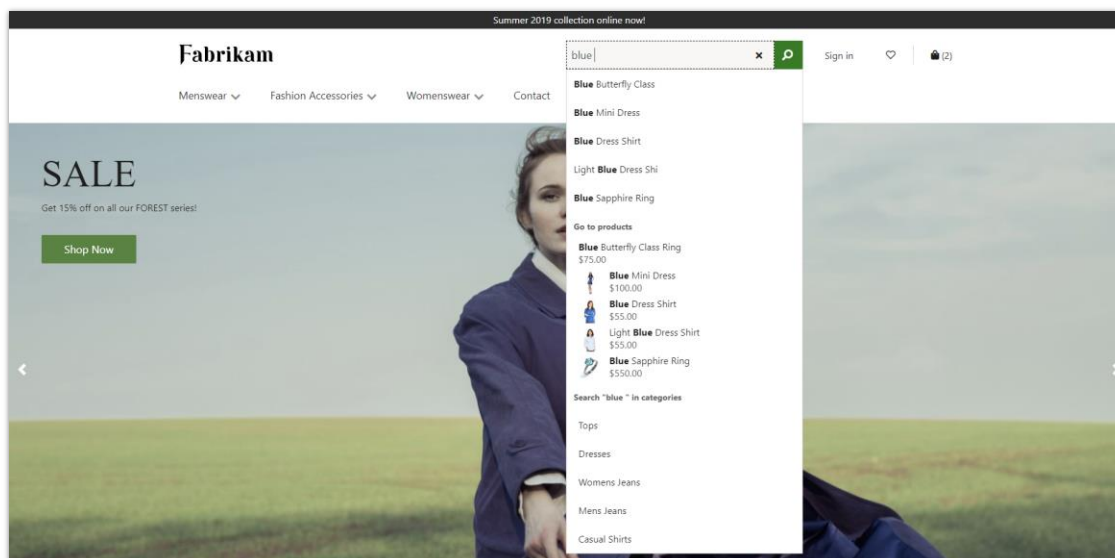


### Digital asset management

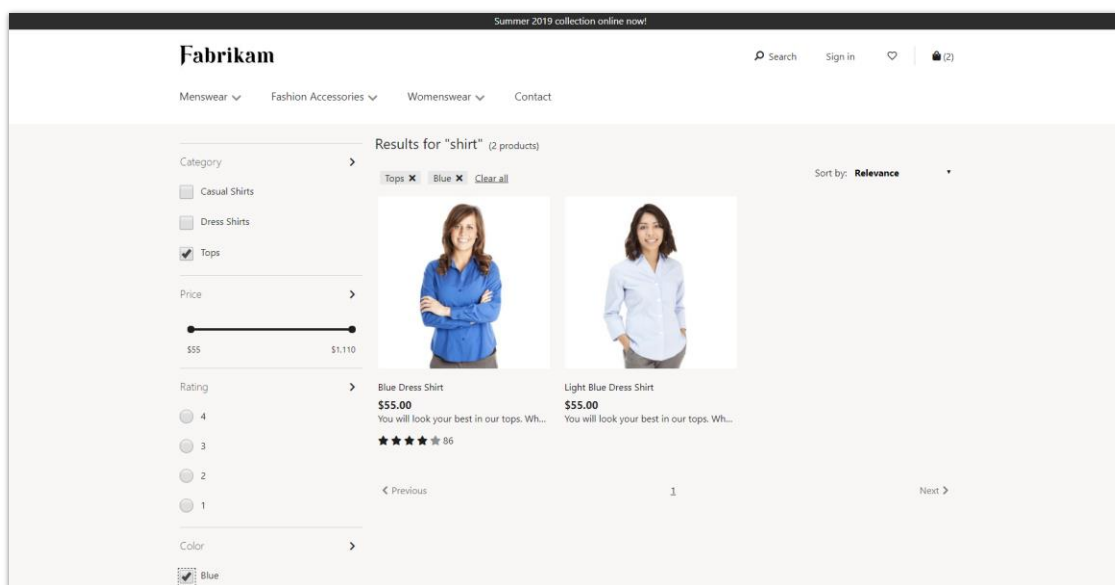


### *Edit view by module*

- **Product search** allows customers to discover products in the website by browsing a category or search for products. The search functionality provides suggestions (auto-suggest) as customers type in the search bar. Here are some of the types of suggestions that might be shown for a search term:
  - **Products:** Provide direct links to the product details page. Selecting a product navigates the customer to the product details page.
  - **Scoped category search suggestions:** List various categories in which the search term is found. Selecting a category will navigate to the category landing page.
  - **Keywords:** Used to find items across all products that are assorted to the channel. Selecting a keyword will navigate the customer to a search results pages that matches the search term. The search results page further allows the customer to sort and refine to find the specific products they are looking for. Below is a screenshot of auto-suggest results and a search results page.



### Product search



### Product search result

Retailers will be able to leverage developer resources to further customize or extend the templates and modules they use in their site. The rich extensibility feature set will further enable marketers to tailor their message and experience. Retailers will be assured of compliance with the General Data Protection Regulation (GDPR) and accessibility standards through platform enforcement of privacy (including cookies) and a centralized reporting dashboard.

## See also

[Feature exploration](#) (video)

[Enrich a product page](#) (docs)

## Commerce APIs – Framework and run-time support for Async patterns

Enabled for	Public preview	General availability
End users, automatically	✓ Mar 31, 2020	To be announced

## Business value

This feature provides support for an async/await programming model for the Commerce Runtime framework, Retail Server controllers, and Database access. This will allow developers to achieve higher performance results during high loads, and faster execution time when parts of the business logic can be executed in parallel.

## Feature details

The Commerce API framework has been enhanced to support asynchronous execution of extensions.

## See also

[Create asynchronous Commerce CRT APIs in your business logic](#) (docs)

## Commerce payment packaging support in Service Fabric deployments

Enabled for	Public preview	General availability
End users, automatically	✓ Mar 31, 2020	To be announced

## Business value

This feature allows payment packages to be deployed to on-premises environments. Previously, payment extension packages were only supported in cloud environments, blocking customers from using payment extensions in Dynamics 365 Commerce in on-premises environments.

## Feature details

Extensions can be used to create new payment packages in Dynamics 365 Commerce, add the payment libraries as a reference to the extension model, and do customizations. All payment extension modules must begin with (or be prefixed with) the name RetailPaymentConnectors. If the model uses a different prefix, then it will not be considered to be a payment module. After the customization, you can create the deployable package and deploy it using Dynamics Lifecycle Services (LCS).

## See also

[Create payment packaging for Application Explorer in Service Fabric deployments](#) (docs)

# Dynamics 365 Business Central

## Overview of Dynamics 365 Business Central 2019 release wave 2

Dynamics 365 Business Central provides a complete business application solution designed and optimized for SMB organizations. Since its launch in April 2018, Business Central has seen increasing adoption by organizations looking to digitally transform their businesses. In the October '18 update, we updated Business Central to include on-premises deployments as well. The latest version, the April '19 update, brought an update to Business Central that improves the productivity of users.

The independent software vendor (ISV) ecosystem is important for customers who want vertical or horizontal solutions for Business Central. We will accelerate this ISV ecosystem to begin moving new and existing customers to Business Central online. To achieve that goal, the following development pillars define the 2019 release wave 2 update:

- **Service fundamentals:** Laser focus on performance, reliability, supportability, and security is essential to ensure that service quality remains ahead of the growth in service usage. Accessibility, already in a strong position, must be preserved.
- **Modern client:** With the 2019 release wave 2, users access Business Central in the browser, Windows 10 desktop app, mobile apps on Android and iOS, or in Outlook. We accelerate our investment in speed and productivity features for the modern browser experience, achieving a major milestone in its transformation into a world-class desktop experience for new and expert users alike. The 2019 release wave 2 is the first version that does not include the Dynamics NAV Client connected to Business Central (also known as the Windows client). The modern clients now support so many productivity features that the Windows client is discontinued for Business Central going forward. The legacy Dynamics NAV client remains supported in the April '19 update and earlier versions in alignment with the support lifecycle.
- **Modern developer tools:** The 2019 release wave 2 is the first version that does not include the classic development environment (also known as C/SIDE). The modern developer experience based on Visual Studio Code with Azure DevOps, and an AL language that supports an extension-based approach to customization, now supports developing large apps such as the base application from Microsoft, and so C/SIDE is discontinued for Business Central going forward. The classic development environment remains supported in the April '19 update and earlier versions in alignment with the support lifecycle.
- **Empower ISV acceleration:** The 2019 release wave 2 update delivers a set of features designed to simplify ISV development for new solutions and, specifically, for streamlining the



migration from the source code customization model of Dynamics NAV to Business Central. The Dynamics NAV business has been driven by strong vertical ISV solutions, surrounded by add-on solutions. For the 2019 release wave 2 update, our focus will be streamlining the path for ISVs to bring their solutions—and in turn their customers—to Business Central online.

- **Customer migration tools:** After enabling Dynamics NAV ISVs to bring their solutions to Business Central online, the next step is to simplify the journey for existing Dynamics SMB customers coming from Dynamics NAV, Dynamics GP, or Dynamics SL to migrate from their current on-premises solutions to Business Central online. A set of tools already exists; these will be enhanced with the 2019 release wave 2.

Limited extension to the Business Central online localizations is planned for the 2019 release wave 2 in order to prioritize the service fundamentals work ahead of expanding the service footprint. Additional partner-developed localizations will be added following the 2019 release wave 2.

[Watch overview video](#)

## What's new and planned for Dynamics 365 Business Central

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

### Application enhancements

We will continue to enhance the application through our focus on performance in the most used areas. The Business Central Ideas site continues to be a source for application enhancements.

Feature	Enabled for	Public preview	General availability
<a href="#">Allow non-sequential numbering</a>	End users, automatically	-	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Use the Standard Audit File - Tax (SAF-T) for Norway</a>	End users, automatically	-	✓ Oct 1, 2019
<a href="#">Cancel reminders and finance charge memos</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Carry line descriptions to G/L entries when posting</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Create records and convert prospects with better templates</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Use the Copy Document function on blocked lines</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Batch-post sales and purchases as scheduled</a>	End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019
<a href="#">Reconcile payables with the External Document No. field</a>	End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019
<a href="#">View External Document No. on Aged Accounts Payable report</a>	End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019
<a href="#">Electronic Invoicing (CFDI) improvements for Mexico</a>	End users, automatically	-	✓ Nov 1, 2019
<a href="#">Specify default purchasing method on item cards</a>	End users, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019
<a href="#">Undo shipment or receipt lines for non-item types</a>	End users, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019
<a href="#">Use receipt date when customizing the Purchase Order report</a>	Admins, makers, or analysts, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Use the Post and New action on purchase documents</a>	End users, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019
<a href="#">Add the Name 2 field to customer and vendor cards</a>	End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019
<a href="#">Include job information in archived sales and purchase documents</a>	End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019
<a href="#">Use VAT clauses on different document types</a>	Admins, makers, or analysts, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019
<a href="#">View item availability by unit of measure</a>	End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019
<a href="#">View the number of general journal lines</a>	End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019
<a href="#">Skip empty lines in the Account Schedule report</a>	End users, automatically	✓ Jan 29, 2020	✓ Feb 21, 2020
<a href="#">View customers' contact and document info on sales documents</a>	End users, automatically	✓ Jan 29, 2020	✓ Feb 21, 2020
<a href="#">MICR fonts available in Business Central online</a>	Admins, makers, or analysts, automatically	✓ Feb 1, 2020	✓ Feb 26, 2020

## Application lifecycle management

Once partners have customers live on Business Central, there is an immediate need to be able to manage the lifecycle of the customer, manage the solution, provide support, manage updates, testing, and so on. We will continue our investment in expanding the scope of the tools available to partners.

Feature	Enabled for	Public preview	General availability
<a href="#">Detailed notifications for update events</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Multiple production environments</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Report production outage in the Business Central Administration Center</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Support for performant data upgrade from C/AL tables to AL tables</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Ability to download a database export file</a>	Admins, makers, or analysts, automatically	-	✓ Nov 1, 2019

## Empower ISV acceleration

The Dynamics NAV business has been driven by strong vertical ISV solutions, surrounded by add-on solutions. For the 2019 release wave 2, our focus will be on streamlining the path for ISVs to bring their solutions—and in turn their customers—to Business Central online.

Feature	Enabled for	Public preview	General availability
<a href="#">Design for extensibility</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Migrations to Business Central online

This area details our migrations to Business Central online roadmap.

Feature	Enabled for	Public preview	General availability
<a href="#">Enhancements for customer migration tools</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

## Modern clients

We accelerate our investment in speed and productivity features for the modern browser experience, achieving a major milestone in its transformation into a world-class desktop experience for new and expert users alike.

Feature	Enabled for	Public preview	General availability
<a href="#">Add links to your navigation menu</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Add notes and links to data</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Enhancements to Excel integration</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Filter reports more efficiently</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Full keyboard shortcut support</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">General user experience adjustments</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Get an overview of all business features</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Identify the company by a badge</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Longer timeout period for the server connection</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Modern clients only for Business Central</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Personalize actions on your Role Center</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Resize columns with fewer clicks</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Save and personalize list views</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Switch between companies in your business inbox in Outlook</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Multitask across multiple pages</a>	End users, automatically	✓ Aug 15, 2019	✓ Oct 1, 2019
<a href="#">Customize user profiles without writing code</a>	End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019
<a href="#">Enter data with speed and agility</a>	End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019
<a href="#">Filter option fields by multiple values</a>	End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

## Modern developer tools

For the 2019 release wave 2, Business Central retires the legacy development tool, C/SIDE, and development language, C/AL, replacing them with a modern solution based on Visual Studio Code, Azure DevOps, and an AL language that supports an extension-based approach to customization.

Feature	Enabled for	Public preview	General availability
<a href="#">Translating other extensions</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Access modifiers</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Attach and debug next</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Base application delivered as AL applications</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Convert tables from C/AL definitions to AL table definitions</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Database insights made available in AL</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Filtering XmlPort objects</a>	End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Implementing hierarchical menus</a>	End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Improved app dependency handling on build and deploy</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">More power to developers using Designer</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">New events to unblock printer extensions in Business Central online</a>	Admins, makers, or analysts, automatically	✓ Feb 26, 2020	✓ Mar 2, 2020

## Service fundamentals

Laser focus on performance, reliability, supportability, and security is essential to ensure that service quality remains ahead of the growth in service usage. Accessibility, already in a strong position, must be preserved.

Feature	Enabled for	Public preview	General availability
<a href="#">New Support Request option in the Business Central Administration Center</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Partners can enter support contact details in the Business Central Administration Center</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Lock-free number series</a>	End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Page background tasks</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Surrogate keys</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Sign-in attempt telemetry in Application Insights for partners</a>	End users by admins, makers, or analysts	✓ Feb 26, 2020	✓ Mar 2, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).



## Application enhancements

### Overview

We will continue to enhance the application through our focus on performance in the most-used areas. We will continue to improve the application to make it easier for ISVs to build extensions on top of our applications. The Business Central Ideas site continues to be a source for application enhancements.

### Allow non-sequential numbering

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Business value

For many types of records, such as customer cards and warehouse activities, it is not a legal requirement that the assigned numbers are in sequence. To improve system performance and to give users flexibility to delete records, you can set up a number series to allow the assigned numbers to not be in sequence.

### Feature details

On the **No. Series Lines** page for a number series, you can select the **Allow Gaps in Nos.** check box to enable automatic or manual assignment of numbers without requiring sequential numbers. This avoids potential performance issues that occur when the **No. Series Line** table is locked while the system creates and consumes a new number from a number series. In addition, it gives users flexibility to delete records, such as an obsolete bank account card, and thereby causing gaps in the numbered list of records.

**NOTE** If you want to allow gaps in certain number series, you should first consult with your auditor or accounting manager to ensure that you adhere to the legal requirements in your country or region.

The non-sequential assignment of numbers leverages the sequencing logic of the SQL server. For more information, see [Lock-free number series](#).

BANK - BANK | WORK DATE: 08-04-2019

✓ SAVED

## No. Series Lines

Search + New Edit List Delete Page

Starting Date	Starting No.	Ending No.	Last Date Used	Last No. Used	Warning No.	Increment-by No.	Allow Gaps in Nos.	Open
	B010	B990				10	<input type="checkbox"/>	<input checked="" type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>

*Allow gaps in numbering*

### See also

[Allow Gaps in Numbers](#) (docs)

## Use the Standard Audit File - Tax (SAF-T) for Norway

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Business value

Businesses can now use the Standard Audit File - Tax (SAF-T) standard to exchange financial data with tax authorities or other external auditors, directly from Dynamics 365 Business Central. Setting up and exporting SAF-T files for Norwegian tax authorities can be easy and efficient, enabling financial workers to be more productive and freeing up time for other tasks.

### Feature details

Starting in January 2020, upon request companies in Norway must report financial data to Norwegian authorities using the SAF-T standard. This extension helps users to set up, generate, and export SAF-T files from Dynamics 365 Business Central.

### See also

[Standard Audit Files - Tax](#) (docs)

## Cancel reminders and finance charge memos

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

You can quickly correct mistakes during close-of-period work by canceling issued reminders or finance charge memos.

### Feature details

Reminders and finance charge memos are usually created in batches—for example, at the end of the month—to remind your customers of due or overdue invoices. If incorrect information is detected during this busy period, you must be able to quickly correct such errors by canceling issued reminders or finance charge memos.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Feature exploration](#) (video)

[To cancel an issued reminder](#) (docs)

## Carry line descriptions to G/L entries when posting

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

When reconciling or auditing data, such as expenses, it is useful to see the source document line description in the general ledger entries.

## Feature details

On the **Sales & Receivables Setup**, **Purchases & Payables Setup**, and **Service Management Setup** pages, you can choose the **Copy Line Description to G/L Entry** check box to define for sales, purchase, and service documents that the description text on lines of type G/L Account is carried to the resulting general ledger entries.

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Feature exploration](#) (video)

[Posting Sales](#) (docs)

## Create records and convert prospects with better templates

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

It is very important to have a consistent way of creating master data, such as customers, vendors, and items, while also defining how that master data is used in the system. This ensures that subsequent posting and reporting of the master data is consistent and transparent.

## Feature details

Configuration templates now allow you to look up template fields' default values directly from related tables. This ensures that the default values that you select when configuring templates

are correct when you use templates to create master data, such as customers, vendors, and items. You can now also easily find contact conversion templates that are used to convert contacts (prospects) to customers.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Register New Customers](#) (docs)

### Use the Copy Document function on blocked lines

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Feature details

When using the Copy Document function to create new documents based on existing documents, you are now notified if any items or resources on the source document lines are blocked. The blocked document lines are excluded from the new document. The notification shows an overview of all document lines that are blocked in the source document.

*Notification of blocked item*

## See also

[Feature exploration](#) (video)

[Block Items from Sales or Purchasing](#) (docs)

## Batch-post sales and purchases as scheduled

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

## Business value

Posting a large number of documents at once can take a while, reducing productive time for your employees. Such processes usually can be scheduled for off-peak hours or simply processed as background activities, eliminating the need to process documents one by one and making users wait for processing to be completed.

## Feature details

You can now execute batch posting only in the background to avoid having long-running processes interfere with your work. Potential issues that occur during batch posting of documents can be found on the **Error Message Register** page. You can find the results of batch posting (for example: printouts) in the **Report Inbox** on your Role Center.

**See also**

[Post Multiple Documents at the Same Time](#) (docs)

**Reconcile payables with the External Document No. field**

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

**Business value**

Using the **External Document No.** or the **Vendor Invoice No.** field in accounts payable reports greatly simplifies analysis and reconciliation of accounts payable for small businesses.

**Feature details**

You can now reconcile accounts payable using the **External Document No.** field in the **Vendor Detail Trial Balance**, **Balance to Date**, and **Open Entries** reports.

**Tell us what you think**

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

**Thank you for your idea**

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

**See also**

[Managing Payables](#) (docs)

**View External Document No. on Aged Accounts Payable report**

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

## Business value

The **Aged Accounts Payable** report is a tool for managing small business debt, planning your cash flow, and scheduling payments. It is important to have this information provided in a clear and flexible manner.

## Feature details

The **Aged Accounts Payable** report has a refreshed, modern layout. You can now analyze data in the **Aged Accounts Payable** report based on the **External Document No.** field.

Dynamics 365 Business Central

## Aged Accounts Payable report

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Preparing Closing Statements](#) (docs)

## Electronic Invoicing (CFDI) improvements for Mexico

Enabled for	Public preview	General availability
End users, automatically	-	✓ Nov 1, 2019



### Feature details

The Electronic Invoicing functionality in Mexico (CFDI) has been extended to meet the regulatory requirement for managing time zones and the physical location of invoice issuers.

### See also

[Electronic invoicing](#) (docs)

### Specify default purchasing method on item cards

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019

### Business value

When shipping items from one of your vendors directly to your customer by using the Drop Shipment or Special Order features, your salespeople no longer need to remember which items can be sent this way but can have Business Central handle that for them.

### Feature details

You can now define for an item that it can be sent from your vendor to your customer directly by filling in the **Purchasing Code** field on the item card. The **Purchasing Code** field on sales document lines for the item is then filled in with the selected method—for example, **DROP SHIPMENT**.

*Entering Drop Shipment in the Purchasing Code field*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Make Drop Shipments](#) (docs)

## Undo shipment or receipt lines for non-item types

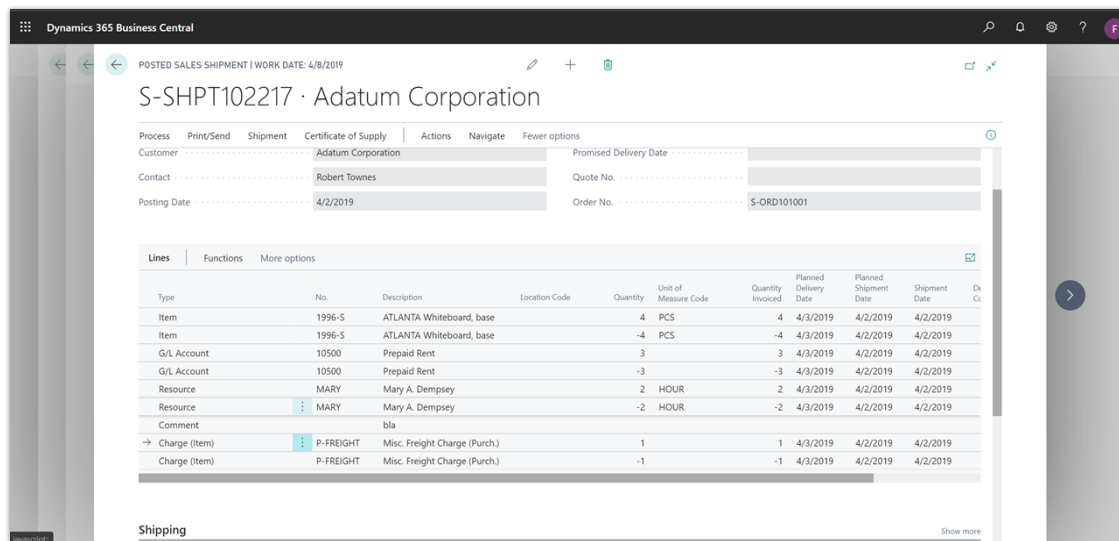
Enabled for	Public preview	General availability
End users, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019

## Business value

Sales shipments and purchase receipts frequently contain non-item lines, such as service work, shipping agent fees, or other charges. Undoing such lines in a quick and consistent way allows businesses to be agile in responding to changing customer needs.

## Feature details

With the **Undo Shipment** and **Undo Receipt** actions, you can now correct or undo non-item lines on sales shipments and purchase receipts.



*Undo shipment or receipt posting of non-items, such as resources*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Reverse Journal Postings and Undo Receipts/Shipments](#) (docs)

## Use receipt date when customizing the Purchase Order report

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019

## Business value

Having vendors live up to promised deadlines is at the core of any purchasing department. When making a purchase, you might have different line items being available at different times.

## Feature details

When confirming a purchase order with a vendor, you can now add expected, requested, and promised receipt dates to the Purchase Order report.

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Create and Modify Custom Report Layouts](#) (docs)

## Use the Post and New action on purchase documents

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 22, 2019	✓ Nov 1, 2019

## Business value

Less context switching results in higher productivity, especially in tasks that must be handled manually and with attention to detail, such as processing purchase documents. A new posting action allows you to stay on a relevant page after posting a purchase document by automatically creating and displaying a new, blank document of the same type, thereby helping you to focus on the task at hand.

## Feature details

You can now use the **Post and New** action on a purchase order, purchase invoice, and purchase credit memo to automatically create a new, blank purchase document of the same type after you have posted the preceding document.

**PURCHASE INVOICE**  
107209 · Fabrikam, Inc.

Invoice Posting Request Approval Incoming Document Release Navigate **Actions** Navigate Fewer options

Functions Request Approval Flow Posting

Vendor Name: Fabrikam, Inc. Contact: Krystal York

Vendor Invoice No.: 107209

Lines Manage More options

Type	No.	Description	UoM	Quantity	Unit of Measure Code	Direct Unit Cost	Tax Area Code	Tax Gr Code
Item	1928-S	AMSTERDAM Lamp	PCS	5		42.80	ATLANTA, GA	FURN

Subtotal Excl. Tax: 214.00 Invoice Discount %: 0 Total Tax (USD): 12.84  
Invt. Discount Am.: 0.00 Total Excl. Tax (USD): 214.00 Total Invt. Tax (USD): 226.84

**Invoice Details**

Currency Code: Department Code: Tax Liab: ☒  
Expected Receipt: 1/1/2018 Customergroup C.: Tax Area Code: ATLANTA, GA  
Payment Terms C.: CM Payment Discount: 0 Tax Exemption No.:

**Shipping and Payment:**

**Incoming Document Files**

**Vendor Statistics**

Vendor No.	10000
Balance (\$)	2,071.13
Outstanding Orders (\$)	5,792.79
Amnt. Rcd. Not Invt. (\$)	0.00
Outstanding Invoices (\$)	226.84
Total (\$)	8,090.76
Overdue Amounts (\$ as of 04/08/19)	2,071.13
Invoiced Prepayment Amount (\$)	0.00
Payments (\$)	28,814.56
Refunds (\$)	0.00
Last Payment Date	2/6/2019

**Forecast**

*Post and New on an invoice*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Keyboard Shortcuts](#) (docs)

## Add the Name 2 field to customer and vendor cards

Enabled for	Public preview	General availability
End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019

## Business value

Customers and vendors are key master data in Business Central. In some geographies, storing their legal names can require additional character space. Business Central includes fields that can store these longer names.

### Feature details

You can now store and export customers and vendors with longer legal names by using the Name 2 field, but the fields are not shown by default. You can add the Name 2 field to the customer and vendor cards and lists by using the **Personalizing** banner in Business Central.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### See also

[Personalize Your Workspace](#) (docs)

### Include job information in archived sales and purchase documents

Enabled for	Public preview	General availability
End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019

### Business value

Orders and quotes are likely to go through a few iterations until agreed to with customers or vendors. Throughout this process, it is useful to keep track of different versions of quotes and orders—in particular, information related to projects or jobs.

### Feature details

You can now archive job-related data on sales or purchase quotes and orders.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Archive Documents](#) (docs)

## Use VAT clauses on different document types

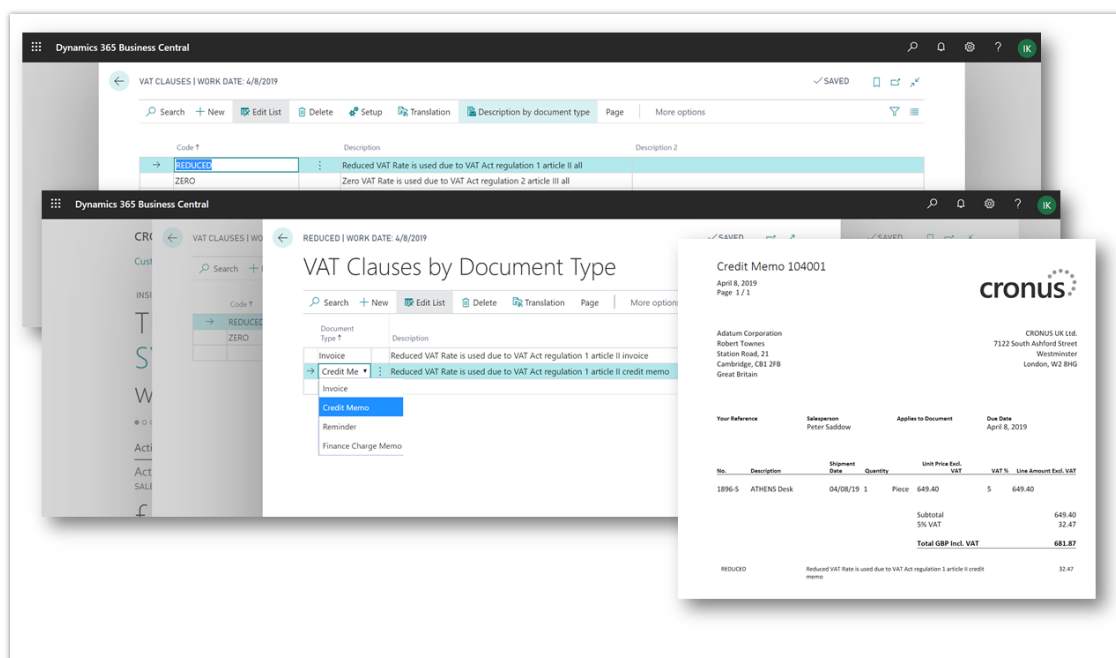
Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019

## Business value

When non-standard VAT rates are used in different types of documents, such as invoices or credit memos, companies are usually required to include an exemption text (VAT clause) stating why a reduced VAT or zero VAT rate has been calculated.

## Feature details

You can now define different VAT clauses to be included on business documents per the type of document, such as Invoice or Credit Memo.



## Different VAT clauses

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Set Up Value-Added Tax](#) (docs)

## View item availability by unit of measure

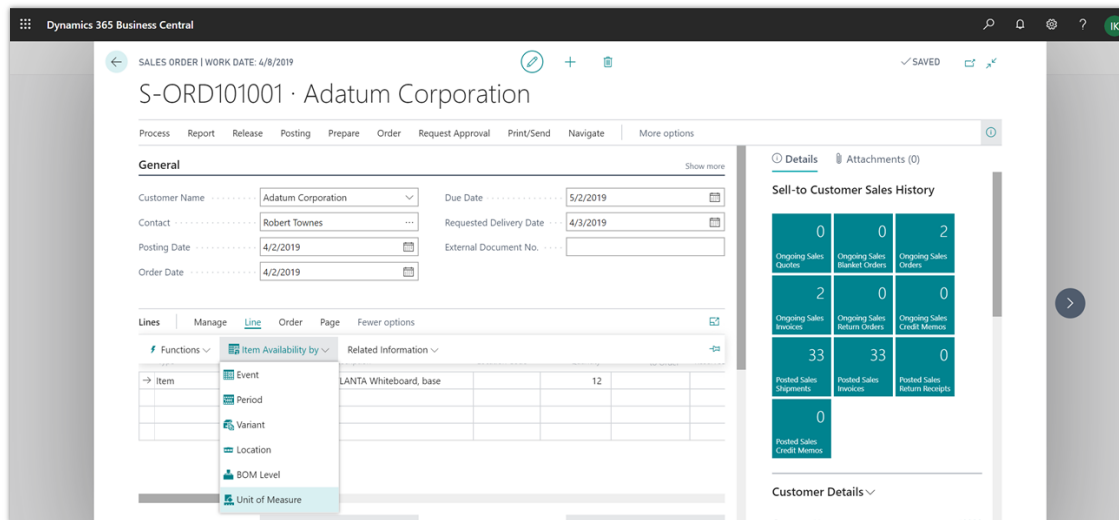
Enabled for	Public preview	General availability
End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019

## Business value

Fast order taking requires that the order processor is able to quickly find items and variants of items. To quickly look up the availability of an item, either by its variants, by the time of shipping, or by its units of measure, is very important when promising shipping dates.

## Feature details

You can now view item availability information by unit of measure from the item list and from document lines.



*View availability by unit of measure*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.



## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[View the Availability of Items](#) (docs)

## View the number of general journal lines

Enabled for	Public preview	General availability
End users, automatically	✓ Nov 29, 2019	✓ Dec 17, 2019

## Business value

When you use the general journal to migrate data to Business Central or otherwise work with hundreds or thousands of journal lines, being able to quickly verify that the correct number of journal lines were imported is very useful.

## Feature details

You can now see the number of journal lines at the bottom of the journal page and quickly verify that all journal lines were imported. Checking the number of journal lines next to the balances is useful when you import opening balances, for example. This is because balancing journal lines to zero doesn't always mean that all journal lines were imported because some journal lines might already have been balanced using balancing accounts.

Posting Date	Account Type	Account No.	Account Name	Description	Currency Code	EU 3-Party Trade	Gen. Posting Type	Gen. Bus. Posting Group	Gen. Prod. Posting Group	Amount	Amount (LCY)
10/29/2019	G/L Account	41000	Vendor Prepayments	Vendor Prepayments					RETAIL	100.00	10
10/29/2019	G/L Account	46320	Purchase Full VAT 5 %	Purchase Full VAT 5 %			Purchase		MISC	100.00	10
10/29/2019	G/L Account	46330	Purchase Full VAT 20 %	Purchase Full VAT 20 %			Purchase		MISC	-150.00	-15
10/29/2019	G/L Account	50100	Accounts Payable	Accounts Payable						-300.00	-30
10/29/2019	G/L Account	50700	Accrued Salaries & Wages	Accrued Salaries & Wages						-100.00	-10
10/29/2019	G/L Account	51400	Employee Benefits Payable	Employee Benefits Payable						-100.00	-10
10/29/2019	G/L Account	51500	Holiday Compensation Payable	Holiday Compensation Payable						-100.00	-10
10/29/2019	G/L Account	51600	Employees Payable	Employees Payable						-100.00	-10
10/29/2019	G/L Account	51900	Notes Payable	Notes Payable						-100.00	-10
10/29/2019	G/L Account	52000	Customer Prepayments	Customer Prepayments					RETAIL	-100.00	-10
10/29/2019	G/L Account	56120	Sales Full VAT 5 %	Sales Full VAT 5 %			Sale		MISC	-100.00	-10
10/29/2019	G/L Account	56130	Sales Full VAT 20 %	Sales Full VAT 20 %			Sale		MISC	-100.00	-10
10/29/2019	G/L Account	56140	VAT Payable	VAT Payable						-100.00	-10
10/29/2019	G/L Account	60100	Share Capital	Share Capital						-100.00	-10
10/29/2019	G/L Account	60200	Retained Earnings	Retained Earnings						-100.00	-10
10/29/2019	G/L Account	60300	Dividends	Dividends						-100.00	-10

*View of journal lines*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Working with General Journals](#) (docs)

## Skip empty lines in the Account Schedule report

Enabled for	Public preview	General availability
End users, automatically	✓ Jan 29, 2020	✓ Feb 21, 2020

## Business value

Balance sheets, profit and loss statements, and cash flow statements are key financial reports for many companies. Easy access to an uncluttered overview of the data in these reports is key to a quick insight into the health of your business.

### Feature details

You can now print balance sheets, profit and loss statements, cash flow statements, and other reports that are based on account schedules without lines that do not contain data. To do this, choose the **Skip Empty lines** field on the **Account Schedule** report request page.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### See also

[Prepare Financial Reporting with Account Schedules and Account Categories](#) (docs)

### View customers' contact and document info on sales documents

Enabled for	Public preview	General availability
End users, automatically	✓ Jan 29, 2020	✓ Feb 21, 2020

### Business value

If your sales document includes the customer's reference information, such as their purchase order number, you can more easily look up the sales document when the customer calls. This way, your response time for the customer's questions is much shorter. It is essential that this data flows through the sales process from quote to posted invoices.

### Feature details

You can now view the **Your Reference** and **External Document No.** fields on sales quotes, orders, invoices, and credit memos. The fields are also included in the related reports.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Sell Products](#) (docs)

## MICR fonts available in Business Central online

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Feb 1, 2020	✓ Feb 26, 2020

### Business value

Customers needing to print checks with MICR fonts can now do so in Business Central online.

### Feature details

In update 15.3, we will add fonts for MICR (E13-B and CMC-7) and Security fonts for checks to the Business Central production and sandbox environments.

This means that any custom layouts using MICR and security fonts will work.

We have licensed the font packages provided by IDAutomation Inc.

You can now start testing the fonts. See these documentation pages for more information about font types and sizes:

- <https://www.idautomation.com/micr-fonts/e13b/>
- <https://www.idautomation.com/micr-fonts/cmc7/>
- <https://www.idautomation.com/security-fonts/>

For testing purposes, you can download demo versions of the fonts here:

- <https://www.idautomation.com/micr-fonts/e13b/download.html>
- <https://www.idautomation.com/micr-fonts/cmc7/download.html>
- [http://downloads.idautomation.com/IDAutomation\\_SecurityFontsDEMO.zip](http://downloads.idautomation.com/IDAutomation_SecurityFontsDEMO.zip)

You will need to install the demo versions of the fonts in your developer environments in order to design reports.

- For a Windows environment, install the fonts.
- For a sandbox Docker environment, download and install the demo fonts locally. Then use the Add-FontsToNavContainer PowerShell cmdlet to add fonts to the container, as described in the blog post [NavContainerHelper 0.3.1.0 and a new Docker Generic build 0.0.6.6](#).

### See also

[Check \(MICR and Security\) Fonts](#) (docs)

## Application lifecycle management

### Overview

As partners move customers and solutions to the Business Central service, there is an immediate need for tools to manage both the customers and solutions. We are adding functionality to cover the complete lifecycle, first with a focus on VARs/SIs, and subsequently with a focus on ISVs building extensions for AppSource.

### Detailed notifications for update events

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Business value

Tenant administrators often have questions about required actions when an environment update fails. Now, with detailed notifications of an update failure, we are able to provide information on what caused the update failure and any next steps that can be taken by the administrator to resolve the error. This further streamlines the update process for Business Central.

### Feature details

As an enhancement to the Business Central update process, tenant administrators now receive email notifications with detailed feedback when an environment update fails. This includes actionable information and next steps for when correcting the cause of the failure requires action from the administrator.

### See also

[Update Notifications](#) (docs)

### Multiple production environments

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

## Business value

Multinational companies must be able to manage their finances based on the legal requirements in the countries or regions in which they operate. With this update, you can create a Business Central production environment for business divisions, subsidiaries, and so on, that operate in different countries or regions across the world.

## Feature details

For each tenant, administrators can create multiple production environments. This will include the option for environments to be on different country-specific or region-specific versions of Business Central.

In this release, the number of environments that administrators can create for a specific customer (Azure Active Directory tenant) is limited to three of each environment type (three production and three sandbox).

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Managing Environments](#) (docs)

## Report production outage in the Business Central Administration Center

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

## Feature details

Once it is determined that the customer's tenant is down, you can quickly create a support ticket in the Business Central Administration Center. When you choose the customer's production environment, a new option, **Report Production Outage**, is enabled. This option is not available for a sandbox environment. If you choose this action, the available outage types are **Unable to log on (all users)** and **Cannot access API/Web Service**.

Once selected, the other required fields are Name, Email address, and Phone number. The next screen allows more details about the outage such as the browsers tried, any companies they can sign in to, and error messages received. The last question is about the date and time the outage began.

After marking the consent box, select **Report** to create the outage. A support ticket is created automatically with all details. It can be viewed in the **Reported Outages** page in the Business Central Administration Center.

### See also

[Report customer outages](#) (docs)

## Support for performant data upgrade from C/AL tables to AL tables

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

When converting customers with on-premises C/AL code customized solutions to an AL-based solution, data must be carried forward from the former to the latter as part of the upgrade process.

### Feature details

When you convert C/AL to AL code customizations, such as the conversion of the Business Central base application to AL, there will likely be a need to transfer data for existing customers from "old C/AL" tables to "new AL" tables. To support this, we rename tables by adding the AL extension's Appld as part of the table names.

Using the PowerShell cmdlet Sync-NAVApp, partners can convert all C/AL tables to AL tables with minimal database overhead and without the need to write any upgrade code. The command `Sync-NAVApp -Mode BaseAppUpgrade` renames tables on the tenant database to conform to the naming convention for AL tables. This corresponds to the technical platform upgrade for a tenant, bringing the table structure from the base application to the table structure for extensions.

### See also

[Upgrading to Business Central 2019 Release Wave 2](#) (docs)

## Ability to download a database export file

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Nov 1, 2019

### Business value

Many countries have legal requirements that customers must be able to access their data files. Additionally, this provides a way for customers to download the file locally in order to import it into a local database.

### Feature details

In the Business Central Administration Center, tenant administrators can create and download a database export for each environment for that tenant.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### See also

[Database Export](#) (docs)

## Empower ISV acceleration

### Overview

The 2019 release wave 2 update delivers a set of features designed to simplify ISV development for new solutions and, specifically, for streamlining the migration from the source code customization model of Dynamics NAV to Business Central. The Dynamics NAV business has been driven by strong vertical ISV solutions, surrounded by add-on solutions. For the 2019 release wave 2 update, our focus will be on streamlining the path for ISVs to bring their solutions—and in turn their customers—to Business Central online.

### Design for extensibility

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019



## Feature details

The first release of the source code for the Microsoft application in AL launches a new era where all applications are extensions, and extensibility begins to replace code customization. To help drive this change, we're making the core application thinner, more extensible, and easier to localize by extracting more and more of our system logic into modules, forming a system application and an application foundation. These modules put simplicity into focus by following a *one feature = one module* principle. Each module encapsulates complexity and replaces implementation details with clean, documented, and stable APIs. The smaller modules speed up the development cycle and make it easier to monitor and optimize functionality from security and performance perspectives. The number of modules can vary depending on the configuration, and you can update each module individually. Because this is a major shift in the development paradigm for both Microsoft and our partner community, we make each module available well ahead of the 2019 release wave 2.

As we finish modules, we publish the source code in the [ALAppExtensions repo on GitHub](#) so that you can provide direct feedback and make contributions. Currently the following modules are published:

Name	Responsibility
<a href="#">Assisted Setup</a>	Contains all pages that are used by assisted setup guides in Business Central. Assisted setup guides provide step-by-step guidance that helps simplify the process of setting up complex features.
<a href="#">Auto Format</a>	Provides methods for formatting the appearance of decimal data types in fields on tables, reports, and pages.
<a href="#">Azure AD Graph</a>	Provides functionality for retrieving user and tenant information from Azure AD.
<a href="#">Azure AD Licensing</a>	Provides a way to access information about the subscribed SKUs and the corresponding service plans. It uses two collections: one that stores the subscribed SKUs and the other that stores the corresponding service plans of the SKU that we currently point to in the collection.
<a href="#">Azure AD Plan</a>	Provides methods for retrieving and managing user plans in Azure Active Directory. The Plan and User Plan tables are marked as internal so you must use the methods provided in this module to query them.

Name	Responsibility
<a href="#">Azure AD Tenant</a>	Provides methods for retrieving information about the Azure Active Directory tenant.
<a href="#">Azure AD User Management</a>	Use this module to synchronize the database users with the users from Azure AD - either create new ones or update the existing ones.
<a href="#">Azure AD User</a>	Provides functionality for retrieving and updating user information from Azure AD.
<a href="#">Azure Key Vault</a>	Exposes functionality to extract secret values from Azure key vault.
<a href="#">Blob Storage</a>	Provides a way to store various kinds of data. It consists of the TempBlob container to store BLOB data in-memory, the Persistent BLOB Management interface for storing BLOB data between sessions, and the TempBlob List interface for storing sequences of variables, each of which stores BLOB data. Potential uses are storing images, very long texts, PDF files, and so on.
<a href="#">Base64 Convert</a>	Provides functionality to convert the text to and from base 64. It may be used for dealing with large XML files, pictures etc.
<a href="#">Caption Class</a>	Defines how the CaptionClass property displays captions for pages and tables. You can define rules for how captions display.
<a href="#">Client Type Management</a>	The purpose of this module is to allow testing of units that rely on client type other than the one on which the test executes. This is achieved by using the method GetCurrentClientType in the unit to compare the client type and subscribing to the event OnAfterGetCurrentClientType to alter the client type in the test.
<a href="#">Confirm Management</a>	Contains helper methods that either display a confirm dialog when logic is run, or suppresses it if UI is not allowed, such as background sessions or webservice calls.
<a href="#">Cryptography Management</a>	Provides helper functions for encryption and hashing. For encryption in an on-premises versions, use it to turn encryption on or off, and import and export the encryption key. Encryption is always turned on for online versions.
<a href="#">Cues and KPIs</a>	Provides setup pages and interface methods to manage cues in Business Central.

Name	Responsibility
<a href="#">Data Classification</a>	Helps you comply with data privacy standards by enabling you to classify data for objects that might contain sensitive information. Classifications for data sensitivity include normal, personal, company confidential, and sensitive.
<a href="#">Data Compression</a>	The purpose of this module is to provide ability to create, update, read, and dispose a binary data compression archive.
<a href="#">Date-Time Dialog</a>	Helper page for entering a date-time value.
<a href="#">Default Role Center</a>	Exposes functionality to define default role center.
<a href="#">DotNet Aliases</a>	Defines aliases for the most common DotNet types used in Business Central. As aliases are inherited through dependencies declared in the <i>app.json</i> , any alias defined here does not need to be declared elsewhere.
<a href="#">Environment Information</a>	Contains helper methods for getting information about the tenant and general settings, such as determining whether this is a production or sandbox environment or deployed as an online or on-premises version, and so on.
<a href="#">Extension Management</a>	Provides features for installing and uninstalling, downloading and uploading, and publishing extensions and their dependencies. It can also check whether an extension and its dependencies are installed.
<a href="#">Field Selection</a>	Provides a page where you can look up and select one or more fields from one or more tables. For example, this is useful when you want to set up a KPI on a Role Center.
<a href="#">Filter Tokens</a>	Enhances filtering so that users can enter additional filter tokens. The Code or Text filters accept the %me, %user, and %company filter tokens. The Date, Time, and DateTime filters accept the %today, %workdate, %yesterday, %tomorrow, %week, %month, %quarter filter tokens. In addition, the Date filters support date formulas. Developers can add more filter tokens by subscribing to the OnResolveDateFilterToken, OnResolveTextFilterToken, OnResolveTimeFilterToken, OnResolveDateTokenFromDateTimeFilter and OnResolveTimeTokenFromDateTimeFilter events.

Name	Responsibility
<a href="#">Headlines</a>	Provides various functions related to headlines functionality. It includes constants for the maximum allowed text length, functionality for truncating text, emphasizing text, determining if the user logged in recently (for greetings) and standard greeting messages.
<a href="#">Language</a>	Changes the language for Windows and applications, and converts language codes to language IDs, and vice versa. The Language table is a subset of Windows languages. You can add languages, and edit translations and descriptions in the list.
<a href="#">Manual Setup</a>	Lists, describes, and opens pages that are used to manually set up business processes and general entities. For example, setups for business processes include posting groups and general ledger setup. General entities include currency setup, language setup, and so on.
<a href="#">Math</a>	Provides constants and static methods for trigonometric, logarithmic, and other common mathematical functions.
<a href="#">Object Selection</a>	Look up page for all of the application objects, including objects from installed extensions.
<a href="#">Password Dialog</a>	Introduces a dialog for the user to enter a password.
<a href="#">Record Link Management</a>	Users can add notes and links to almost any record into the system. The current module provides APIs for developer to deal with records, for example to transfer/copy link from one record to another, transform text input into BLOB format expected by platform, clean up orphaned links.
<a href="#">Recurrence Schedule</a>	Provides methods for scheduling the recurrence of an event. Recurrence can be daily, weekly, monthly or yearly. The module also determines when the next occurrence will happen.
<a href="#">Satisfaction Survey</a>	Provides methods for presenting a satisfaction survey to users.

Name	Responsibility
<a href="#">Server Settings</a>	Exposes methods that get settings from the server configuration file. For example, the extension checks if the Excel add-in is installed, or if online services can be installed on the server.
<a href="#">System Initialization</a>	Contains functionality for initializing the application.
<a href="#">Tenant License State</a>	Retrieves the current state of the tenant license, such as trial, paid, or suspended, including the start and end dates of the license.
<a href="#">Translation</a>	This module lets you add and modify language translations for user data, so that people in different regions can understand the data. For example, this is useful for descriptions of items that you sell, or for providing standard operating procedures in factories located in different regions.
<a href="#">Upgrade Tags</a>	Provides functionality for ensuring that the upgrade code is run only one time.
<a href="#">User Login Times</a>	Records the date when users sign in for the first time, and keeps track of their two most recent sign ins.
<a href="#">User Permissions</a>	Exposes functionality to check and alter User Permission sets.
<a href="#">User Selection</a>	Provides a page where you look up and select one or more registered users. For example, this is useful for assigning a person to things like documents, processes, or items.
<a href="#">Video</a>	Provides a page where you look up and select videos. For example, use this to access video tutorials.
<a href="#">Web Service Management</a>	Provides the tools needed to manage web services.

**See also**

[Dynamics 365 blog](#) (blog)

[Overview of the System Application](#) (docs)



## Migrations to Business Central online

### Overview

Moving from an on-premises solution to Business Central online is a major area of focus for our partners and customers.

With the 2019 release wave 2, we further enhance the scenarios for migrating data from Dynamics GP, Dynamics SL, and Business Central (on-premises) to Business Central online.

For more information, see [Upgrading to Dynamics 365 Business Central On-Premises](#).

### Enhancements for customer migration tools

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Business value

After enabling ISVs to bring their solutions to Business Central online, the next step is to simplify the journey for existing Dynamics SMB customers using Dynamics 365 Business Central on-premises, Dynamics GP 2018 R2, and Dynamics SL 2018 CU1.

### Feature details

For the 2019 release wave 2 update, migration tooling for Business Central on-premises comes first, followed later with enhancements for Dynamics GP and Dynamics SL. The existing data replication tooling is based on Azure Data Factory. This update adds additional tables that are needed for the migration to be complete. The setup process remains the same, but there will be a rebranding component and additional tables added to support a more streamlined migration. The migration tool also supports migrating data from installed extensions by default, so a customer who has customized their Business Central on-premises application with extensions can bring that data with them to Business Central online without any additional effort.

With this update, administrators can use Azure Data Factory to connect their SQL Server database to a Business Central online tenant and bring their data across. In addition, the 2019 release wave 2 adds a checklist for information needed to complete the migration.

### See also

[Connect to the Intelligent Cloud from On-Premises with Dynamics 365 Business Central](#) (docs)

## Modern clients

### Overview

With the 2019 release wave 2, users access Business Central in the browser, Windows 10 desktop app, mobile apps on Android and iOS, or in Outlook. The 2019 release wave 2 is the first version that does not include the classic development environment (also known as C/SIDE) or the Dynamics NAV Client connected to Business Central (also known as the Windows client). The modern developer experience based on Visual Studio Code now supports developing large apps such as the base application from Microsoft, and so C/SIDE is discontinued for Business Central going forward.

Similarly, the modern clients now support so many productivity features that the Windows client is discontinued for Business Central going forward. The legacy Dynamics NAV client is retired in this release but remains supported for the April '19 release and earlier versions in alignment with the support lifecycle. We accelerated our investment in speed and productivity features for the modern browser experience, achieving a major milestone in its transformation into a world-class desktop experience for new and expert users alike.

### Add links to your navigation menu

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Business Central is ready to adapt to the unique needs of each business, department, and user. Desktop users are fully empowered to optimize their workspace to support their daily tasks and the most common data or processes they work with.

### Feature details

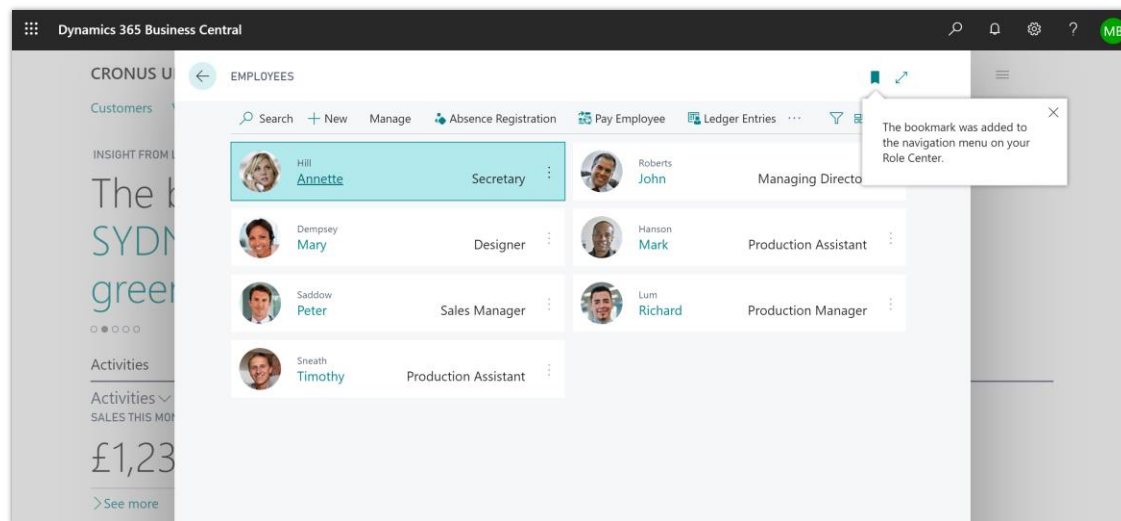
Business Central 2019 release wave 2 introduces a new and simple way to quickly reach your favorite content and business tasks.

Using the new bookmark icon, you can add a link to any page or report into the navigation menu of your Role Center. The bookmark icon is shown in the top right corner of the page and also in the **Tell Me** window where you can efficiently bookmark multiple links. Any page or report that is discoverable in the **Tell Me** window can be bookmarked. When you're satisfied with your bookmarks, start personalizing the navigation menu to reorder your bookmarks or group them by similarity.

Bookmarking of pages is available from Update 15.0.

Bookmarking of reports is available from Update 15.3 for all new environments, and to select environments upgrading from 15.2.

Similar to other UI personalization, bookmarks roam with you no matter which device you sign in to.



*Adding a link in the navigation menu to the employees list page*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Feature exploration](#) (video)

[Add a Page Action to your Role Center](#) (docs)

## Add notes and links to data

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019



## Business value

An ability to add notes that represent slightly more unstructured data is essential in modern business applications. Notes and links are already available for on-premises deployments of Business Central, and now we bring these capabilities to the online world as well, enriching its capabilities to store data in the cloud.

## Feature details

Users can add internal notes to business data that is captured and processed in Business Central online and on-premises. Notes are shown next to the data in a restyled panel inside the FactBox pane.

All the FactBoxes there are now divided into two groups: **Details** (which includes all business-related FactBoxes) and **Attachments** (which includes notes, links, and document attachments). The groups are shown only when needed so there is no clutter on the screen.

CUSTOMER CARD | WORK DATE: 4/8/2019

10000 · Adatum Corporation

New Document Request Approval Navigate Customer More options

**General** Show more

No. ....	10000 ...	Credit Limit (\$) ..	0.00
Name .....	Adatum Corporation	Blocked .....	▼
Balance (\$) ....	0.00	Total Sales .....	78,771.10
Balance Due (\$) ..	0.00	Costs (\$) .....	40,255.70

**Address & Contact** Show more

ADDRESS		CONTACT	
Address .....	192 Market Square	Contact Name ..	Robert Townes ...
Address 2 .....		Phone No. ....	
Country/Regi... ..	US ▼	Email .....	robert.townes@contos
City .....	Atlanta ...	Home Page .....	
ZIP Code .....	31772 ...		

Show on Map

**Invoicing** >

DOMESTIC DOMESTIC

**Attachments** (7)

Documents 2

**Links** (2) +

- Their support page :  
http://adatum-corporation-support-page-th...
- Personal webpage :  
www.adatum-corporation-personal-page-th...

**Notes** (3) +

- Their rep called this morning to ask for an extra sample for a trade show in Paris. :  
9/2/2019 • [User]
- Monica had approved their purchase, but this is a big deal 🤔 We need to make sure they are happy with quality of the final layer. :  
9/2/2019 • [User]
- They visited yesterday and were happy about the samples :  
9/2/2019 • [User]

## Working with notes

Notice the following special capabilities:

- You can add a note using the Alt+O keyboard shortcut from anywhere on the screen, even when the **Notes** FactBox is not in view.
- You can switch focus between groups in the FactBox pane with the Alt+Shift+F2 keyboard shortcut.
- There is a counter on the screen showing all attachments, including notes and links.
- A newly added note is always placed first and the focus is preserved there.
- The notes can be longer and have multiple lines, and they are displayed like that on the screen if there's enough space.

With the **Links** part, users can add hyperlinks to online content from card and document pages, opening up for various advanced scenarios.

### See also

[Manage Attachments, Links, and Notes on Cards and Documents](#) (docs)

## Enhancements to Excel integration

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Excel is one of the most commonly used tools in financial management. Based on customer feedback, more enhancements are added to improve scenarios for using the Microsoft Dynamics add-in for Excel with Dynamics 365 Business Central.

### Feature details

When the user selects the **Edit in Excel** action from a list page, most filters set on the list page are applied to the list when it is exported to Excel. This also enables publishing changes back into Business Central from a filtered list of records in Excel.

In addition, the number of fields available for reading and publishing edits from Excel is expanded. This includes being able to view and edit fields that are added through extensions.

The Edit in Excel action has also been enabled on various Sales and Purchase document subpages, such as Sales Order Lines.

**See also**

[Feature exploration](#) (video)

[Viewing and Editing in Excel From Business Central](#) (docs)

**Filter reports more efficiently**

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

**Business value**

As the business grows, so do the data sources powering reports. This increases the need for control over precisely how much data is processed.

**Feature details**

When running a report in Business Central, users are presented with a request page where they can specify various options and filters.

**Filtering report data**

The filter experience has been greatly improved with features similar to filtering lists that allow you to:

- Add as many filtered fields as you like by choosing any field from the source table or typing to quickly find the field.
- Get assistance with specifying filter values using look-ups and similar pickers, including filtering on multiple option-field values.
- Create complex filters using operators, ranges, formulas, and filter tokens.

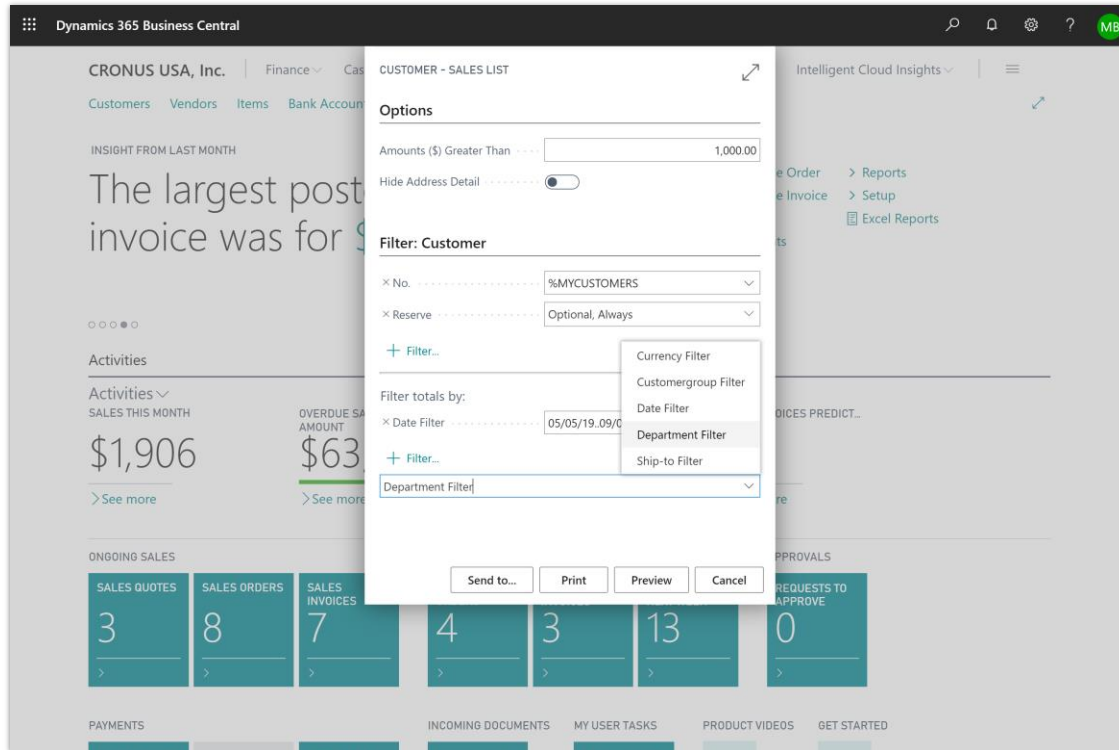
Business Central remembers the filters you applied and also allows you to choose from report settings you made earlier.

**Filtering totals**

One of the most popular features of Dynamics NAV is now also available for reports. Reports often display aggregated or computed values through FlowFields, such as currency amount totals. With this release, Business Central allows you to apply filters to one or more dimensions that influence computed values.

## Consistently powerful

The improved experience is consistent across report objects as well as XmlPort objects and screens originating from the RunRequestPage command or FilterPageBuilder command.



*A customer report exhibiting various filtered fields*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Feature exploration](#) (video)

[Setting Filters in Reports, Batch Jobs, and XMLports](#) (docs)

## Full keyboard shortcut support

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Proficient users are more productive when they can access commonly used features with their keyboard without having to explore the action bar to find each one. Developers now also get the possibility to respond to end-user feedback by adding keyboard shortcuts to their solutions.

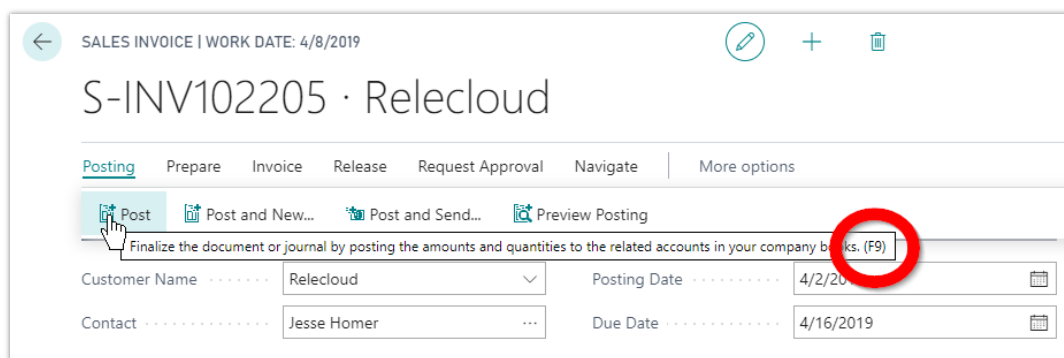
### Feature details

Developers creating extensions for Business Central can now add keyboard shortcuts to most actions and operations via an AL property. This means that application developers can specify keyboard shortcuts for actions in the base application and their own objects in their extensions. To do this, the developer must use the [ShortCutKey property](#) in AL (the programming language for Business Central extensions).

This feature complements the predefined list of keyboard shortcuts in Business Central and enables more flexible development for partners.

Additional keyboard shortcuts are added in the 2019 release wave 2. Most of these come from shortcuts defined in the business application area and might be changed in the future to be more flexible.

A full list of updated keyboard shortcuts is always published on [Keyboard Shortcuts](#). For instance, one newly added keyboard shortcut is *F9* for posting a document.



*Posting an invoice using a keyboard shortcut*

**See also**[Keyboard Shortcuts](#) (docs)**General user experience adjustments**

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

**Business value**

Business users often work across productivity and business apps to complete their tasks. As they transition back and forth, differences in user experiences cause friction and lost productivity.

**Feature details**

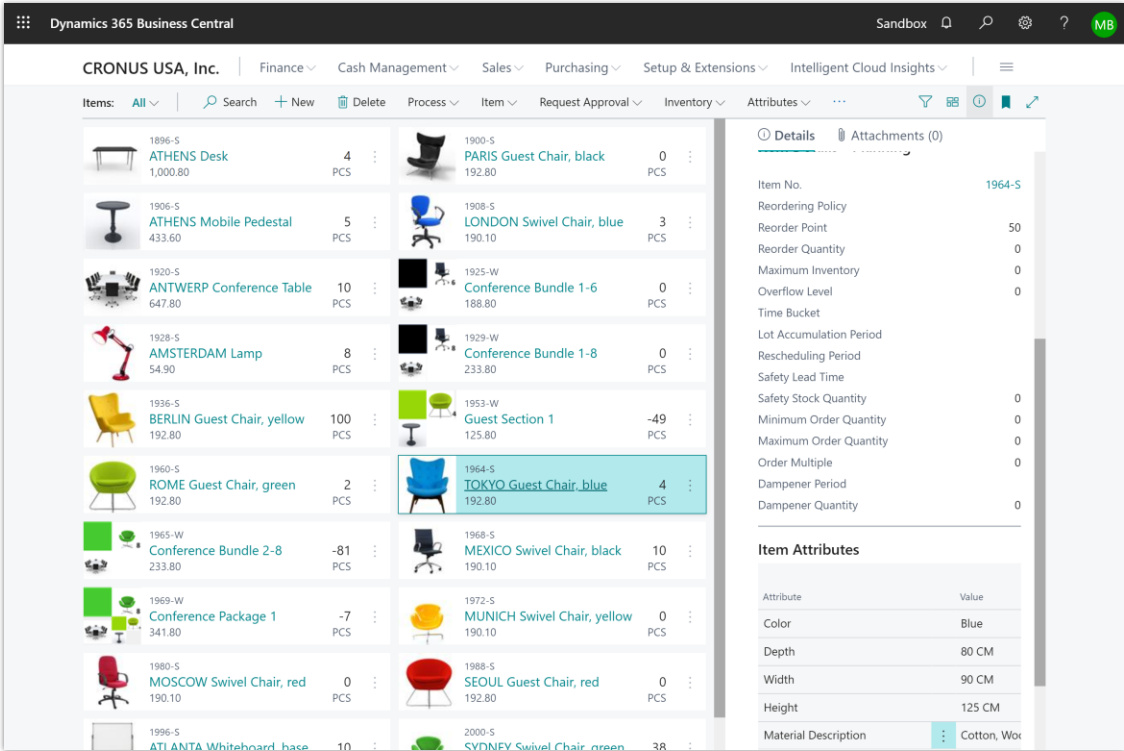
Continuing our familiar look and feel across Dynamics 365 and Office 365, this update includes the addition of more fluent design elements and subtle stylistic changes to buttons, list headers, and captions on parts.

Rows have minor stylistic improvements and a new indicator when selecting multiple records.

A number of aesthetic and usability issues were also addressed for records shown as bricks:

- Bricks adapt to fill the available horizontal space.
- In past releases, clicking anywhere on a brick would drill down to the details of the record. This had various shortcomings such as requiring precision-clicking to set focus to the brick so that related FactBoxes can be displayed. New click targets now provide more clear differentiation between clicking to select and clicking to drill down.
- The Ctrl+C keyboard shortcut to copy a single brick has also been enabled.

Role Centers no longer automatically separate root-level actions from action groups. The sequence in which they were defined in code is respected and reflected in the client for each action area. For example, on a Role Center, actions can now be displayed in the sequence of action, then action group, then action.



A screenshot of the restyled brick layout

No.	Description	Type	Quantity on Hand	Subst. Exist	Assem. BOM	Base Unit of Measure	Cost Is Adj.	Unit Cost	Unit Price	Vendor No.	Defa. Defer Temp
1896-S	ATHENS Desk	Inventory	4	No	No	PCS	✓	780.70	1,000.80	30000	
1900-S	PARIS Guest Chair, black	Inventory	0	No	No	PCS	✓	150.30	192.80	20000	
1906-S	ATHENS Mobile Pedestal	Inventory	5	No	No	PCS	✓	338.20	433.60	30000	
1908-S	LONDON Swivel Chair, ...	Inventory	3	No	No	PCS	✓	148.10	190.10	30000	
1920-S	ANTWERP Conference T...	Inventory	10	No	No	PCS	✓	505.40	647.80	20000	
1925-W	Conference Bundle 1-6	Inventory	0	No	Yes	PCS	✓	0.00	188.80		
1928-S	AMSTERDAM Lamp	Inventory	8	No	No	PCS	✓	42.80	54.90	10000	
1929-W	Conference Bundle 1-8	Inventory	0	No	Yes	PCS	✓	0.00	233.80		
1936-S	BERLIN Guest Chair, yell...	Inventory	100	No	No	PCS	✓	150.30	192.80	20000	
1953-W	Guest Section 1	Inventory	-49	No	Yes	PCS	✓	0.00	125.80		
1960-S	ROME Guest Chair, green	Inventory	2	No	No	PCS	✓	150.30	192.80	20000	
1964-S	TOKYO Guest Chair, blue	Inventory	4	No	No	PCS	✓	150.30	192.80	20000	
1965-W	Conference Bundle 2-8	Inventory	-81	No	Yes	PCS	✓	0.00	233.80		
1968-S	MEXICO Swivel Chair, bl...	Inventory	10	Yes	No	PCS	✓	148.10	190.10	30000	
1969-W	Conference Package 1	Inventory	-7	No	Yes	PCS	✓	0.00	341.80		
1972-S	MUNICH Swivel Chair, y...	Inventory	0	No	No	PCS	✓	148.10	190.10	30000	
1980-S	MOSCOW Swivel Chair, ...	Inventory	0	Yes	No	PCS	✓	148.10	190.10	30000	
1988-S	SEOUL Guest Chair, red	Inventory	0	Yes	No	PCS	✓	150.30	192.80	20000	
1996-S	ATLANTA Whiteboard, b...	Inventory	10	No	No	PCS	✓	1,089.90	1,397.30	30000	
2000-S	SYDNEY Swivel Chair, gr...	Inventory	38	No	No	PCS	✓	148.10	190.10	30000	

A screenshot of a list page demonstrating the new row selection indicators

## Tell us what you think

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## See also

[Working with Business Central](#) (docs)

## Get an overview of all business features

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

Finding the pages or features in an easy navigation structure is essential for all users. While the navigation bar is very prominent and useful, it doesn't offer an expanded view. Similarly, prospects commonly request a high-level overview of what's in the product. Role Center

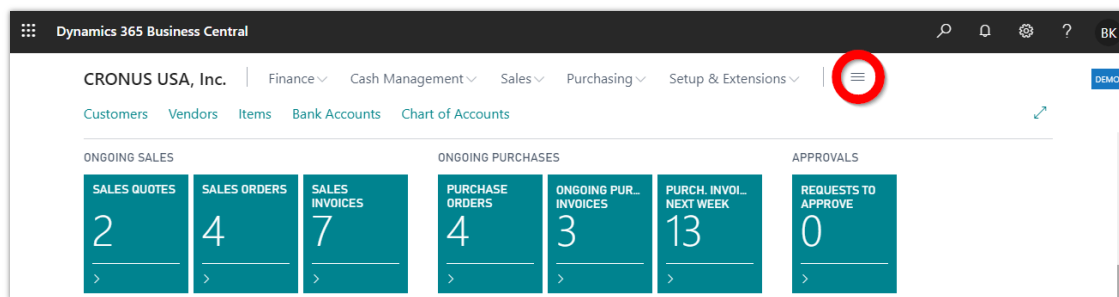


navigation defines this structure already but is now presented in a more prominent way, allowing the user to explore.

## Feature details

Finding functionality becomes easier with a full overview of pages in the product based on the content of the various Role Centers. This makes it easier for users to navigate and find the right page, and it serves as an overview of Role Centers and their content.

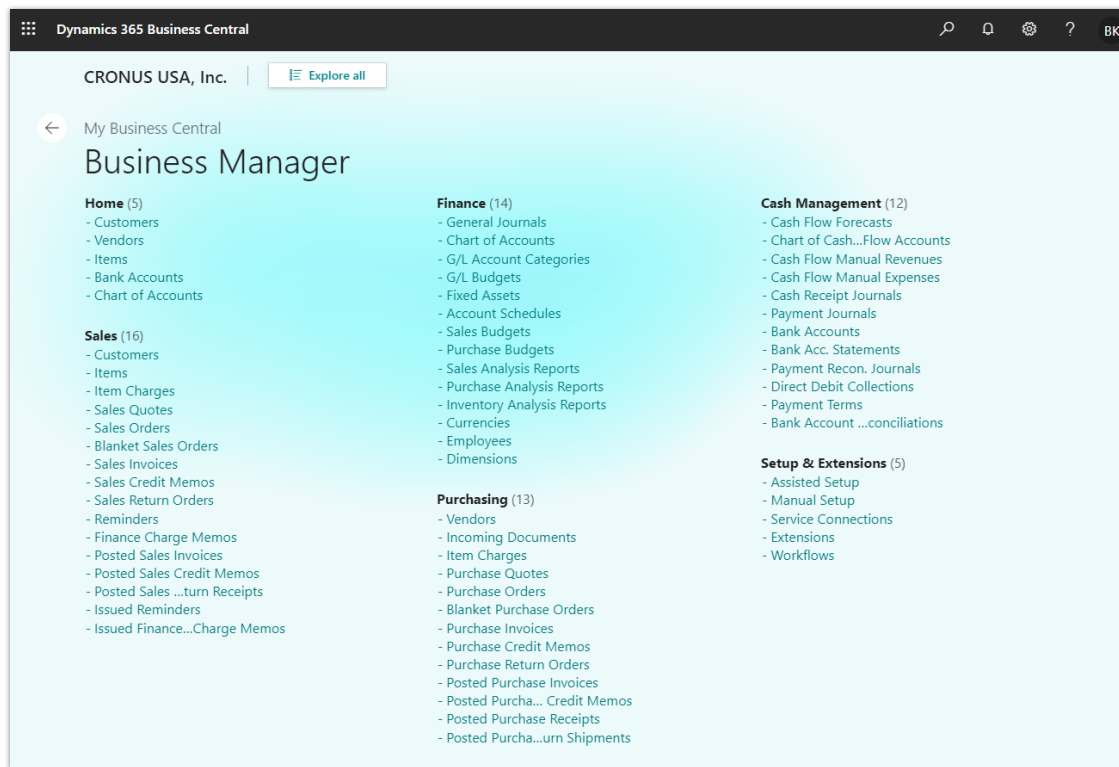
As a supplement to using the current Role Centers navigation bar, the command bar, or Tell Me, the new overview feature, **Role Explorer**, brings the different areas of Business Central closer to you so that you can stay focused and productive.



### Opening the Role Explorer

For more information, see [Finding pages from a feature overview](#).

Users access the Role Explorer with a menu icon next to the navigation bar (see above) or by using a Shift+F12 keyboard shortcut. When opened, the page presents to the user the whole content of the navigation bar of the current role, structured as tree views.



### Working with the Role Explorer

From the Role Explorer, users can also access a second overview showing the business features for all roles in the product. (Note that only roles where the related profile is set up to be shown on the Role Explorer are visible.) This second, expanded feature overview allows users to explore features that are not normally assigned to the user's role, allowing them to find features even if they don't know the feature names.

From the search results in the **Tell Me** window, there is a link to Role Explorer in case users want to explore in a visual feature overview.

### See also

[Feature exploration](#) (video)

[Finding Pages from a Feature Overview](#) (docs)

### Identify the company by a badge

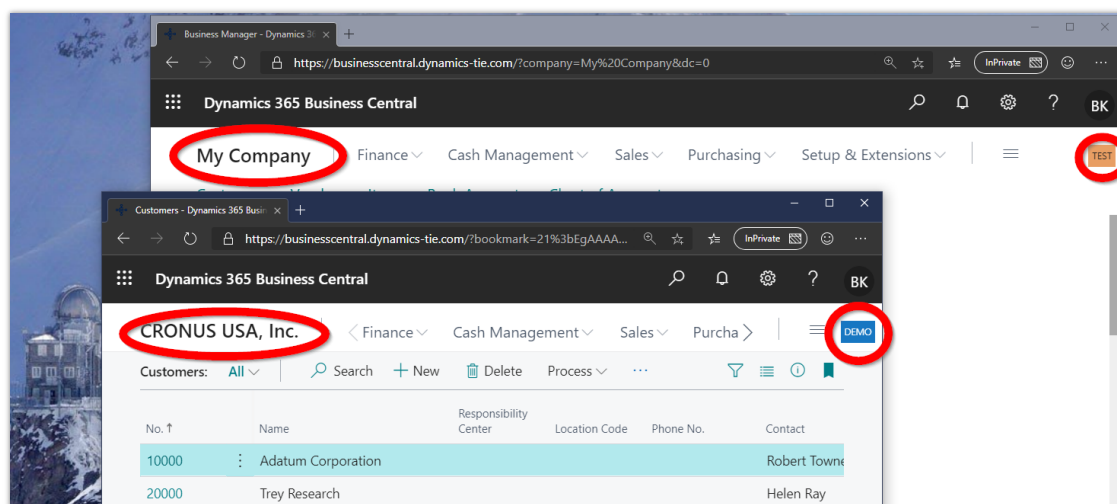
Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

Whether you just switch between two companies from time to time or if you are an accountant working with dozens of them, the colorful company badge helps you figure out where you are.

## Feature details

Users can now use the Company Badge functionality to identify one company they work with from another. This is helpful when users have multiple tabs or pop-out windows open or when they are working with multiple companies on a daily basis.



### Company badge

To set it up, go to the **Company Information** page (for example, by typing "badge" in the **Tell Me** window) and choose your badge color and label.

### See also

[To display a company badge for quick access to company information](#) (docs)

### Longer timeout period for the server connection

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

You no longer have to sign in to Business Central again when you come back from lunch or from a meeting.

### Feature details

In earlier versions of Business Central online, the session timeout period was set to 20 minutes. We have increased this value to two hours so that users are not asked to sign in to Business Central again and again.

### Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

### Modern clients only for Business Central

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Businesses and users want to be comfortable that the tools they use are fit for new hardware, operating systems, and changing environments. They can now access Business Central through a range of modern clients so they are reassured that only the newest, most advanced, and up-to-date tools are being used.

### Feature details

Business Central continues to evolve the modern client experiences where users work with Business Central in the browser, Windows 10 desktop app, or mobile apps on Android and iOS. With this release of Business Central on-premises, the legacy Dynamics NAV Windows client is no longer available for deployment. Instead, users can switch to the modern experience in the browser, the Android/iOS mobile apps, or the Windows 10 desktop app (available through the respective stores). For more information, see [Getting Business Central on Your Mobile Device](#).

### See also

[Getting Business Central on Your Mobile Device](#) (docs)

### Personalize actions on your Role Center

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

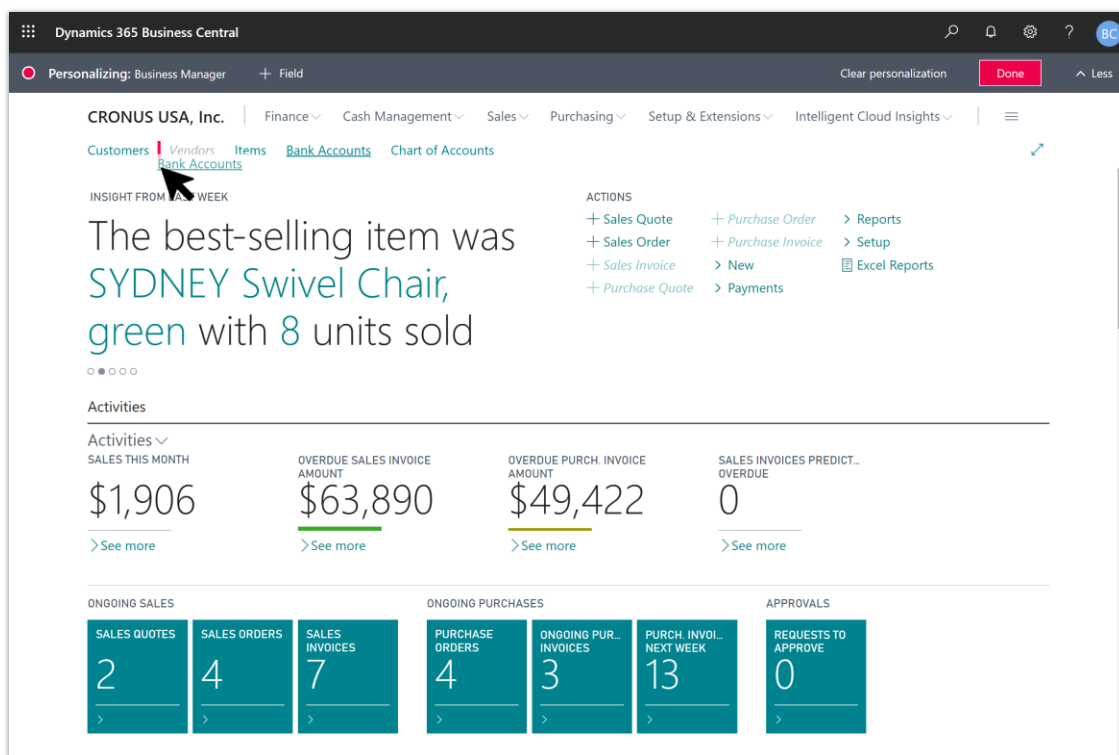
## Business value

Business Central is ready to adapt to the unique needs of each business, department, and user. Desktop users are fully empowered to optimize their workspace to support their daily tasks and the most common data that they work with.

## Feature details

Personalizing the navigation menu includes:

- Moving menu links to another position within the same group or a different group or subgroup.
- Moving menu groups to another position.
- Hiding menu links or entire groups.
- Clearing your personalization, effectively returning the Role Center to its original navigation menu layout.

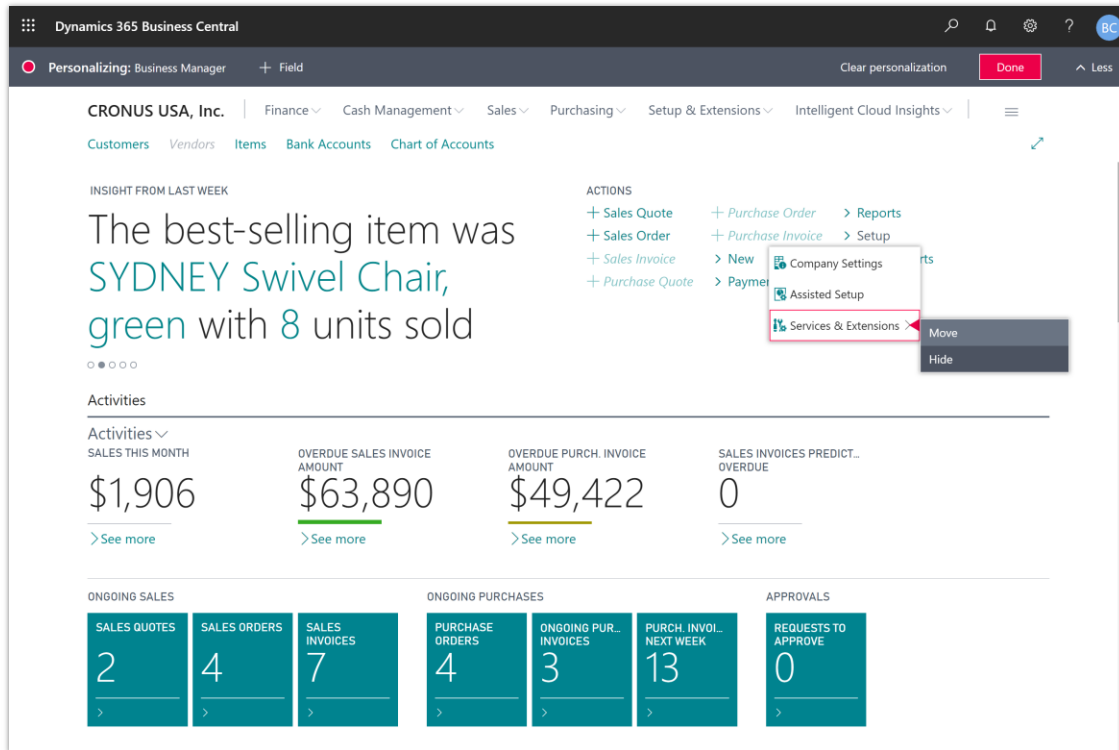


### *Personalizing the navigation menu*

Personalizing Role Center actions includes:

- Moving actions to another position within the same or different group.

- Moving action groups to another position.
- Hiding actions or entire groups of actions.
- Clearing action personalization, effectively returning the Role Center to its original action layout.



### *Personalizing the action menu*

As with all other personalization, the changes are effective immediately and roam with the user, no matter which device they sign in to.

**NOTE** When Business Central 2019 release wave 2 is deployed on-premises, all new personalization features are enabled by default. Personalization is no longer an opt-in feature, and is now fully aligned across online and on-premises experiences.

### **Tell us what you think**

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### **See also**

[Personalize Your Workspace](#) (docs)

## Resize columns with fewer clicks

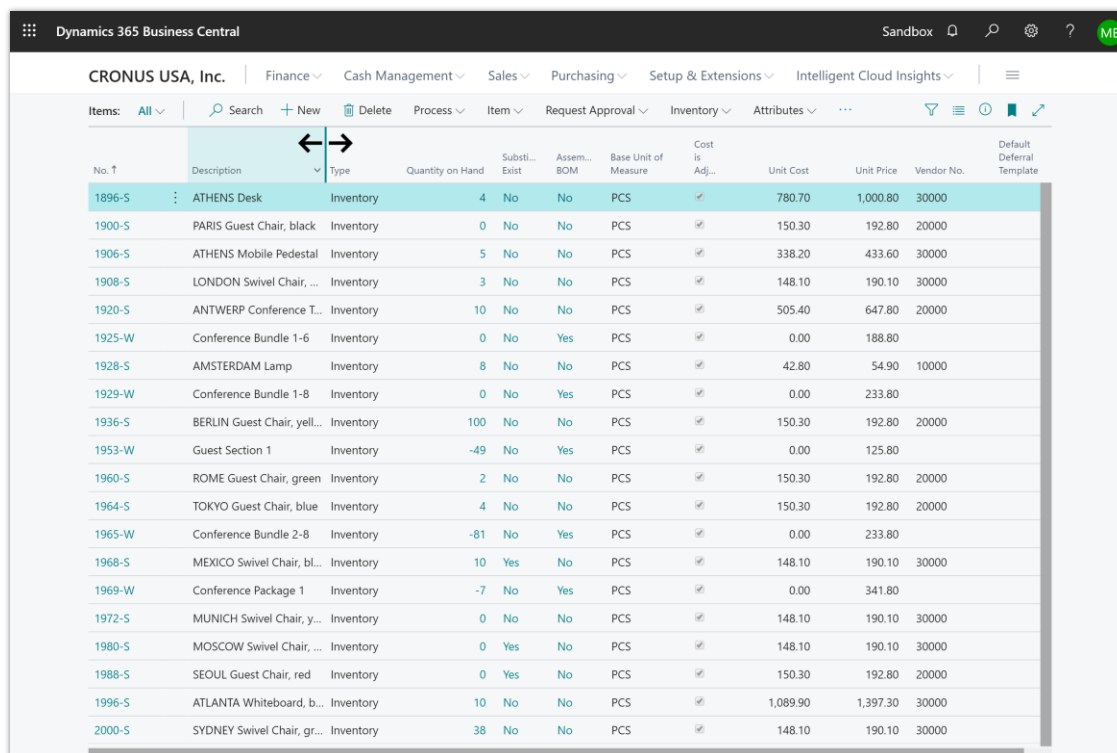
Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

Users need to quickly and easily adjust the interface to get a better view of their business data. As users switch between business and productivity apps, consistency in fundamental interactions, such as resizing columns, keeps the learning curve low.

## Feature details

Adjusting the width of any column just got easier. Without having to start personalizing, you can drag the border of any column header to resize it. Similar to Microsoft Excel, you can double-click the border (AutoFit) to automatically size the column so that the caption and value of all columns on the screen are displayed efficiently.



No. ↑	Description	Type	Quantity on Hand	Subst... Exist	Assem... BOM	Base Unit of Measure	Cost is Adj...	Unit Cost	Unit Price	Vendor No.	Default Deferral Template
1896-S	ATHENS Desk	Inventory	4	No	No	PCS	✓	780.70	1,000.80	30000	
1900-S	PARIS Guest Chair, black	Inventory	0	No	No	PCS	✓	150.30	192.80	20000	
1906-S	ATHENS Mobile Pedestal	Inventory	5	No	No	PCS	✓	338.20	433.60	30000	
1908-S	LONDON Swivel Chair, ...	Inventory	3	No	No	PCS	✓	148.10	190.10	30000	
1920-S	ANTWERP Conference T...	Inventory	10	No	No	PCS	✓	505.40	647.80	20000	
1925-W	Conference Bundle 1-6	Inventory	0	No	Yes	PCS	✓	0.00	188.80		
1928-S	AMSTERDAM Lamp	Inventory	8	No	No	PCS	✓	42.80	54.90	10000	
1929-W	Conference Bundle 1-8	Inventory	0	No	Yes	PCS	✓	0.00	233.80		
1936-S	BERLIN Guest Chair, yell...	Inventory	100	No	No	PCS	✓	150.30	192.80	20000	
1953-W	Guest Section 1	Inventory	-49	No	Yes	PCS	✓	0.00	125.80		
1960-S	ROME Guest Chair, green	Inventory	2	No	No	PCS	✓	150.30	192.80	20000	
1964-S	TOKYO Guest Chair, blue	Inventory	4	No	No	PCS	✓	150.30	192.80	20000	
1965-W	Conference Bundle 2-8	Inventory	-81	No	Yes	PCS	✓	0.00	233.80		
1968-S	MEXICO Swivel Chair, bl...	Inventory	10	Yes	No	PCS	✓	148.10	190.10	30000	
1969-W	Conference Package 1	Inventory	-7	No	Yes	PCS	✓	0.00	341.80		
1972-S	MUNICH Swivel Chair, y...	Inventory	0	No	No	PCS	✓	148.10	190.10	30000	
1980-S	MOSCOW Swivel Chair, ...	Inventory	0	Yes	No	PCS	✓	148.10	190.10	30000	
1988-S	SEOUL Guest Chair, red	Inventory	0	Yes	No	PCS	✓	150.30	192.80	20000	
1996-S	ATLANTA Whiteboard, b...	Inventory	10	No	No	PCS	✓	1,089.90	1,397.30	30000	
2000-S	SYDNEY Swivel Chair, gr...	Inventory	38	No	No	PCS	✓	148.10	190.10	30000	

*A screenshot of a list page where a column is being resized*

Similar to other UI personalization, your changes roam with you no matter which device you sign in to.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### See also

[Feature exploration](#) (video)

[To change the width of a column](#) (docs)

### Save and personalize list views

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

As the business grows, so does table data in the database, making quick analysis or finding records more challenging without the right tools. Defining the perfect set of filters can be a time-consuming, iterative process where the ability to persist filters will save having to recreate them the next time they are needed.

### Feature details

Powerful filtering capabilities in Business Central accelerate work on lists by providing absolute control over which data is shown. The 2019 release wave 2 update eliminates the need to recreate commonly used filters by allowing users to permanently save filters as a view and combining personal views, system views, and those from extensions under one pane.

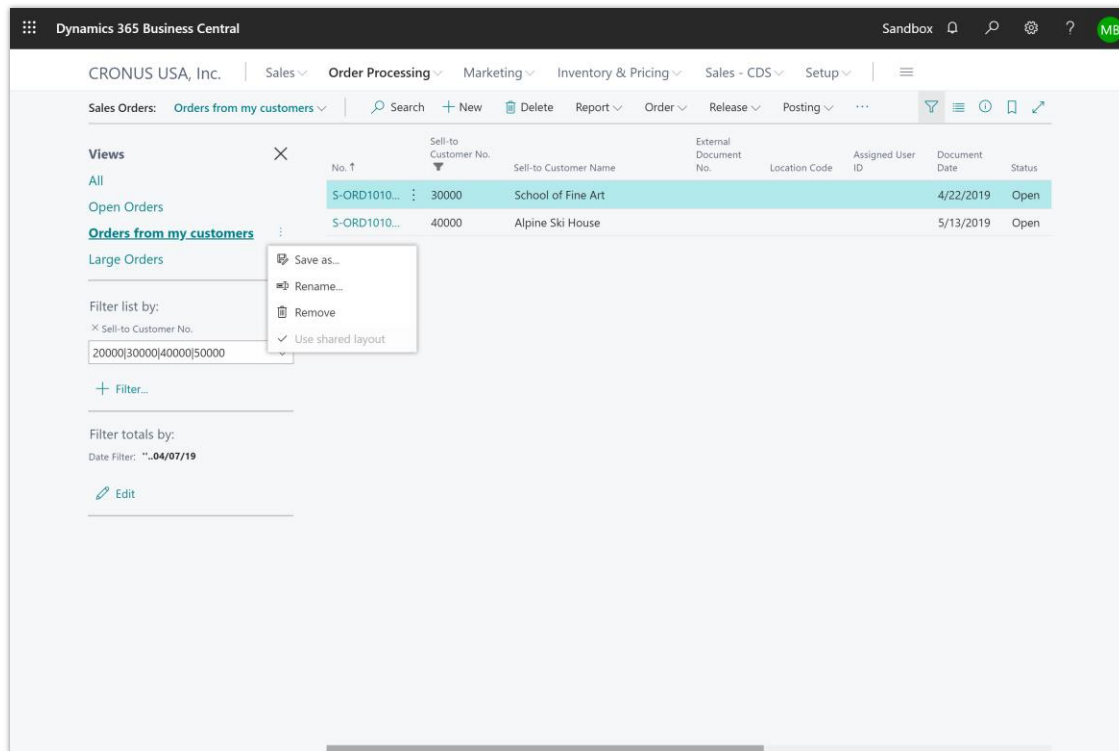
#### [Saving a view](#)

Users can now save filters in the filter pane as a list view with a recognizable name, such as "Items I own."

- Save a new list view with custom filters on specific fields, on totals, and other calculated fields.
- Fine-tune and perfect your views over time by saving changes to them.
- Clone any system view by saving a personal copy that you can modify.



- Easily rename and remove personal views.
- Apply the full spectrum of filter expressions, ranges, and filter tokens (such as %MyCustomers) to dynamically filter to the right data.
- Quickly switch between different views of a list in the filter pane or from the command menu, no matter how you accessed that page.



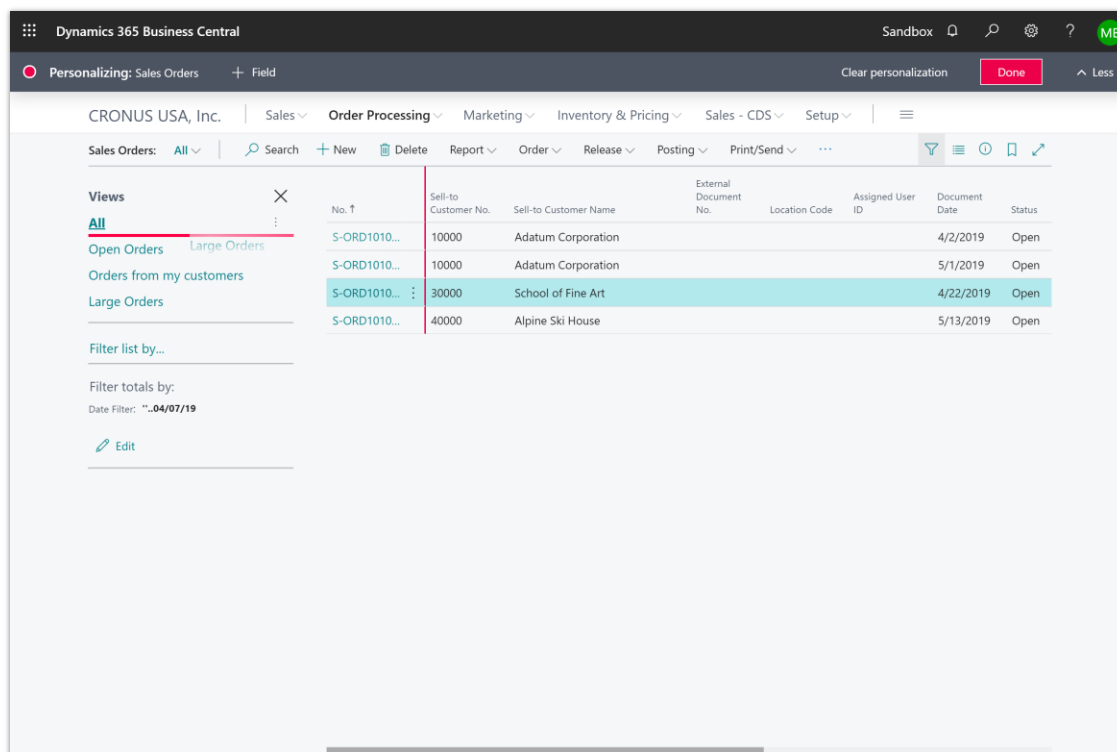
*Screenshot of a list page where the filter pane is open and displaying various views*

Similar to other UI personalization, list views roam with the users no matter which device or browser they sign in to.

### Personalizing the filter pane

As the number of views on a page grows, Business Central gives you new tools to personalize and optimize the filter pane.

- Remove personal views that you no longer need or hide unwanted system views.
- Reorder your views to get the perfect sequence.



*Screenshot of a list page where the filter pane is being personalized*

### Upgrading from an earlier version of Business Central

With this release, the way personal views are defined, stored, and customized has undergone a major overhaul to unlock these capabilities for the cloud and for the modern clients. Notice the following important changes:

- The AL language is now the underlying syntax used to consistently describe list views, whether they were authored by a developer in Visual Studio Code or saved in the client for a specific user or role. Through this technical change, the top five shortcomings of the legacy model have been eliminated. For example, your personal views are always available on the list that they apply filters to, whether you access that list from the navigation menu or through the **Tell Me** window.
- The legacy model used to define list views on a Role Center object is still available to developers for backward compatibility and will become obsolete in a future release.
- When upgrading your database, any legacy views for a specific user or role are discarded. Views created using earlier versions are not compatible with Business Central 2019 release wave 2 and later. Any personal views must be recreated manually.

### More to come

Views will be updated incrementally after the initial release in October 2019. Updates to look forward to include:

- Personalizing the column layout that is unique to a view.
- Toggling between the expression and resolved value of that expression in any filter field.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### See also

[Feature exploration](#) (video)

[Save and Personalize List Views](#) (docs)

## Switch between companies in your business inbox in Outlook

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Many businesses use multiple companies in Business Central, and users want to be able to switch between companies in their business inbox in Outlook. With the ability to quickly switch companies, users save time and feel more productive.

### Feature details

Use the new action in the business inbox in Outlook to switch the Business Central company context.

### See also

[Using Business Central as your Business Inbox in Outlook](#) (docs)

## Multitask across multiple pages

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 15, 2019	✓ Oct 1, 2019

### Business value

Business Central users often work on multiple tasks at a time and have to manage interruptions, such as when a call comes in that they have to take action on. Unblocking users and shortening idle time by allowing them to work in concurrent browser tabs/windows or opening a mini page in a pop-out is very important in these busy times.

### Feature details

In this release, users can open several pages at the same time to perform multiple tasks at the same time. The new functionality supports two scenarios.

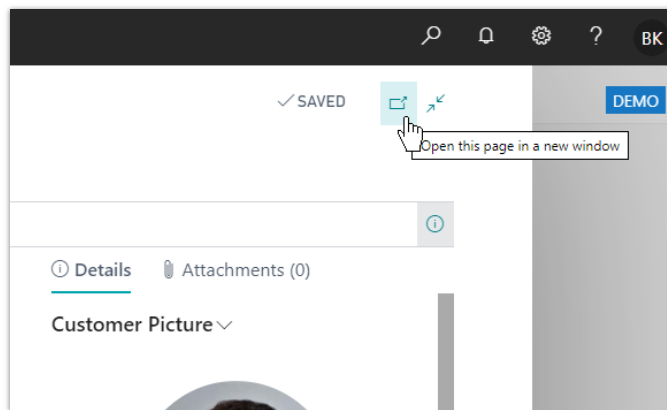
#### New browser tab

This functionality allows users to open several browser tabs or windows while working in the same company. To do this, users can open a new browser window (Ctrl+N) and then use a Business Central bookmark or an icon on the desktop to open Business Central in a new browser. This is safe to use several times, both for the same and another company.

When a user has several browser windows open, each is acting as another connection or session. This works basically in the same way as if one user connects to Business Central from several computers at once. Those separate browser windows allow you to work concurrently on any two or more pages without restrictions, except for any standard network data-locking mechanism or business data validation. Users can also expand the different browser windows or put them on different monitors to quickly switch between tasks or validate data against each other.

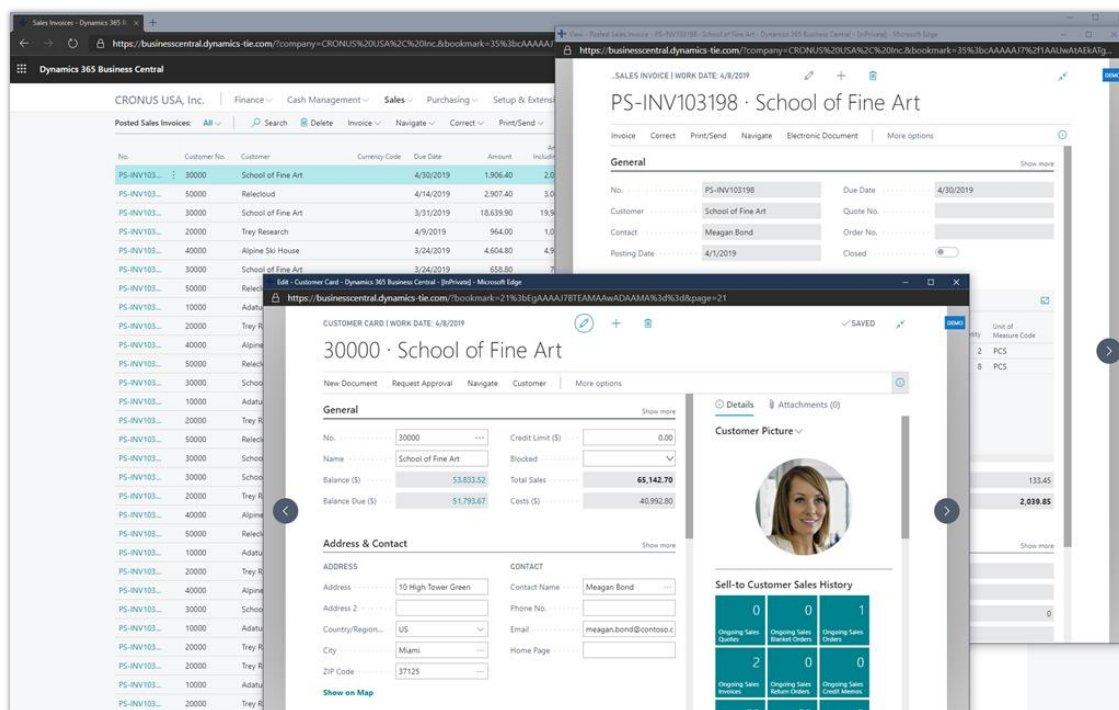
#### Open page in a new window

This functionality allows users to pop out a card or document into a smaller, connected window. You do this by choosing the **Open this page in a new window** button in the upper-right corner of every card or document page, or by pressing Alt+Shift+W.



### *Open the customer card in a new window*

Users can thereby open a page in a separate pop-out window for quick and easy data comparison. This enhances productivity both when working with multiple screens and if users want to place the new windows on top of each other on one screen.



### *Multitasking across windows*

Note that all pages that are popped out using this functionality are linked to the main page so that users can observe data being updated across both windows. Since the pages are opened within the same context, this functionality is more useful when working on similar tasks, such as comparing two posted sales invoices, editing data for an invoice while having the customer card open, or popping out an item card to update it while editing a sales order.

## See also

[Feature exploration](#) (video)

[Multitasking Across Multiple Pages](#) (docs)

## Customize user profiles without writing code

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

## Business value

Organizations are typically composed of well-defined user roles, some of which might be unique to that business, department, or industry. Users might work across multiple departments and occasionally stretch to fill a variety of roles as needed. Where one size does not fit all, Business Central is ready to adapt to unique and changing needs. Power users, department owners, and consultants need control over which tasks are relevant for any role, and are able to manage role-tailoring without the need for code customization.

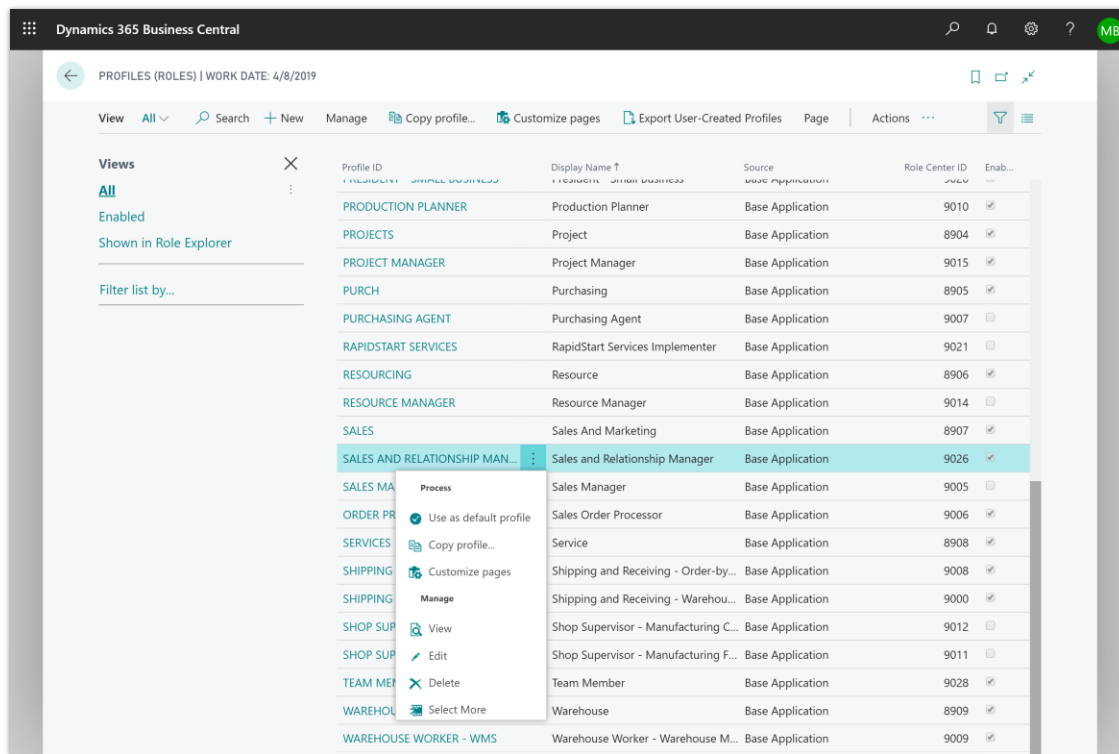
## Feature details

In Business Central, profiles are used to define and distinguish organizational roles along with their basic settings, such as the starting home screen that displays content relevant to that role. Business Central provides a set of profiles covering a variety of specialized roles or departmental needs, which administrators can fully customize using tools similar to when users personalize.

### Administration of profiles (roles)

The **Profiles (Roles)** page is used to perform a variety of tasks in Business Central online and on-premises:

- Get an overview of available profiles, including which extensions they might originate from.
- Remove or disable profiles that are not relevant to your organization.
- Determine which profiles are fit for the Role Explorer so that any user can navigate and find new content across roles or departments.
- Add new profiles to represent unique roles or edit any profile, including those originating from extensions.
- Create and share URLs that link directly to any profile using the profile URL parameter.

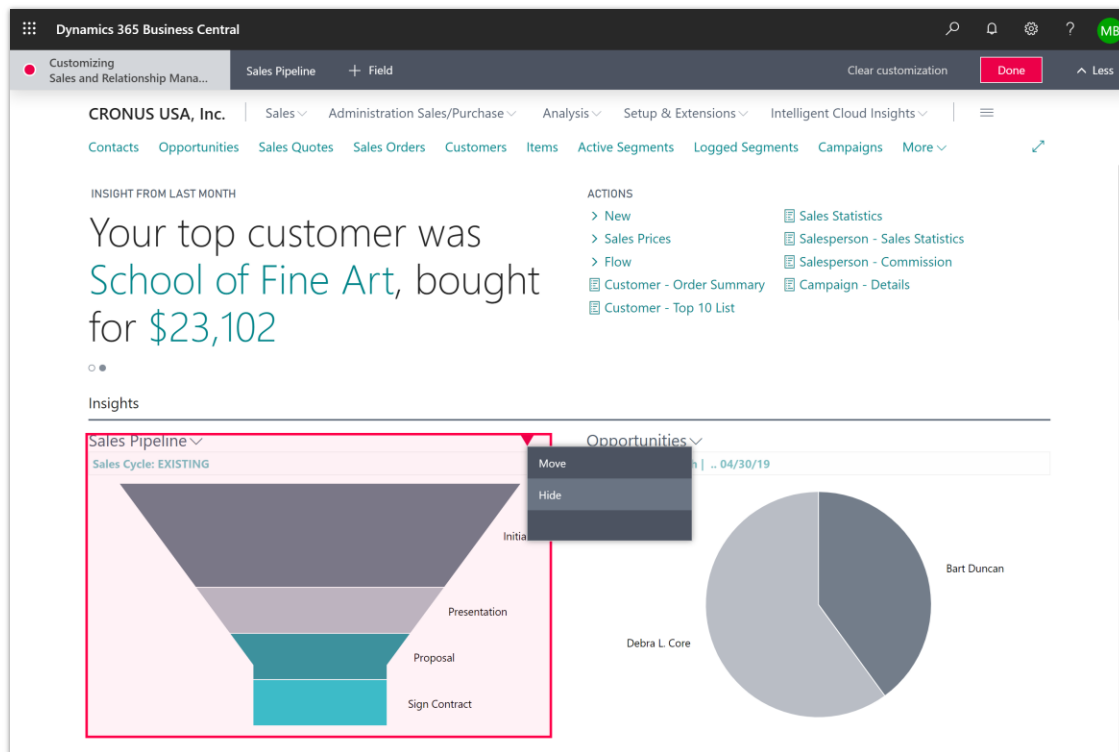


*A variety of profiles shown in the profiles list page*

### Customizing pages for a specific role

Similar to profile configuration mode in Dynamics NAV, the Business Central desktop experience allows lightweight UI customizations for users who share the same profile. This can be done on any production or sandbox environment without the use of Visual Studio Code and AL.

- Leverage all the rich capabilities of the personalization tool to make lightweight UI customization of that profile and test your customization while you design. Examples of such customization include creating a role-specific list view, defining a navigation menu, or hiding fields on a page.
- View the set of pages that have been customized per profile and clear customizations per page.
- Export a copy of all profile customizations in AL format that is ready to hand off to developers to include in an extension, for example.



### *Customizing the sales and relationship manager profile directly in the UI*

Note that customization of user profiles does not secure access to objects or data. Administrators are still required to apply the relevant user groups or permissions sets.

### [More profiles in the box](#)

Business Central online now includes profiles previously available only to sandbox environments. In addition, 10 entirely new profiles covering the breadth of departmental functionality are available in select countries and regions.

### [Upgrading from an earlier version of Business Central](#)

With this release, the way user profiles are defined, stored, and customized has undergone a major overhaul to unlock these capabilities for the cloud and for the modern clients. Both Business Central online and on-premises are now consistent in experience and richness of capability. Below are important changes in this release:

- The AL language is now the underlying syntax used to consistently describe profiles and page customizations, whether they were authored by a developer in AL or by a consultant or power user directly in the client. The legacy XML format is discontinued.



- The set of profiles available with Business Central no longer includes page customizations. Users of these profiles might experience slight differences in the layout of pages for their roles.
- When upgrading your database, any legacy profiles remain available but their accompanying profile configuration is discarded. Legacy profile configuration created using earlier versions is not compatible with Business Central 2019 release wave 2 and later. Page customizations must be either recreated using the Business Central client or as an AL extension.
- Various system tables have been introduced, have changed, or are marked as obsolete. Page objects that depend on them have been updated with fields and functionality to reflect the new profile model.
- Business Central no longer distinguishes between System and Tenant profiles, and administrators can no longer specify a profile of System scope. Defining a starting set of profiles for all customers on a multitenant server can still be achieved using extensions.

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### See also

[Feature exploration](#) (video)

[Customize Pages for Profiles](#) (docs)

### Enter data with speed and agility

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

### Business value

Back-office workers often need to capture information or digitize paper material at high speed. For some users, this is their main activity for the whole workday. When this cannot be automated through means like OCR and AI, users require an efficient interface that does not get in the way of quickly typing in data.

### Feature details

Business Central accelerates repetitive data entry through a more responsive field editing experience.

## Freedom to type unhindered

When typing data into a row, such as a general journal line, you can enter the value of a field, use the tab key to go to the next field and continue typing without having to wait for the server to respond. This allows you to quickly enter an entire record, only having to pause for the row to validate before typing in the next row. Similarly, input fields on cards and other page types also minimize the need to wait for the server to process each field.

While this already provides a more responsive experience in itself, data entry gets faster when combined with personalized Quick Entry that skips over unnecessary fields, keyboard shortcuts for actions like F9 to post a journal, and system shortcuts like Alt+N to create a new record.

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Working with Business Central](#) (docs)

## Filter option fields by multiple values

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 1, 2019	✓ Oct 1, 2019

## Business value

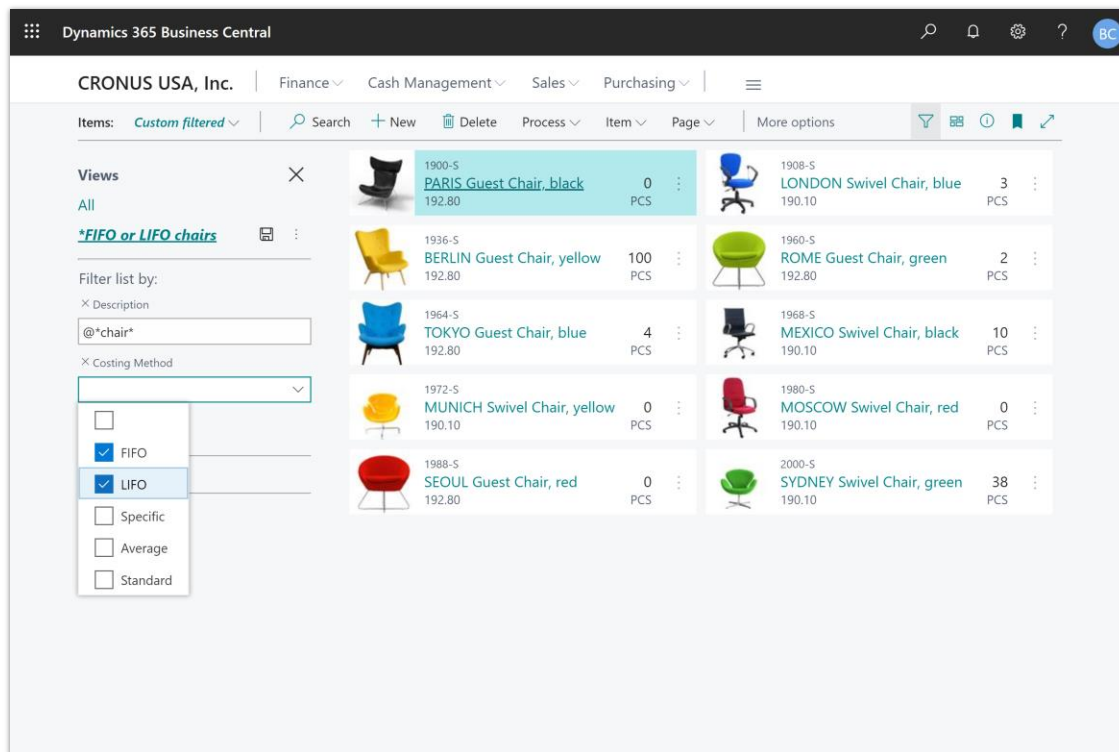
Back-office information workers spend significant amounts of time working with lists and reports and applying filters to narrow down their data to the relevant records. Users often need a higher degree of control as the size of the business database grows. Option fields are essentially enumerations with predefined values. Until now, users have been able to choose only a single value when they set a filter in option fields.

## Feature details

With this wave, we introduce a new multi-selection control in filters for fields of type **Option** so that users can filter on these by multiple values. This is treated as an OR operation. For example, you can filter the **Color** field by red, green, or blue.

Filtering option fields by multiple values is available consistently across filter experiences: On list pages, reports, XMLPorts, and on filter screens driven by the RunRequestPage and

FilterPageBuilder commands. Multi-selection of values is available only when filtering, not when specifying the field value on the record.



*Screenshot of filters on the Items list, including a filter on multiple option values*

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Feature exploration](#) (video)

[Filtering with Option Fields](#) (docs)

## Modern developer tools

### Overview

As we make the move entirely to Visual Studio Code, we continue to invest in areas that enhance productivity for developers. Specifically, we are enhancing the troubleshooting and debugging experiences, improving performance and usability when you work on multiple and

large projects, empowering code insights and telemetry for ourselves and our partners, and extending capabilities in the AL language with, for example, profile extensibility.

The 2019 release wave 2 is the first version that does not include the classic development environment (also known as C/SIDE). Because the classic development environment contains tooling for many areas not directly related to actual development, we are also working on finding new homes for the features that currently reside in C/SIDE.

### Translating other extensions

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Business value

Translate other apps, including the base app.

### Feature details

In earlier versions of Business Central, you could only provide translations of strings that were in that same extension. Now that the base application is reworked into multiple extensions, we are adding support for providing translations across extensions, including the base application.

### See also

[Translating other extensions](#) (docs)

### Access modifiers

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

By using access modifiers, you have control over where it can be called from, be it your own code or third-party code building on top of your code.

### Feature details

You can control access and encapsulation of your code by adding local/private, protected, internal, or public access modifiers to AL language elements. This is similar to the way C# uses access modifiers.

### See also

[Access Property](#) (docs)

### Attach and debug next

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Sometimes you cannot or do not want to publish and invoke functionality to debug it, but instead attach a session to the server and await a process to trigger the breakpoint. With attach and debug next, you can do that.

### Feature details

Set a breakpoint in code and attach to a running server, online or on-premises, and the debugger will break if the breakpoint is hit while it is attached to the server.

### See also

[Attach and Debug Next](#) (docs)

### Base application delivered as AL applications

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

All code customization on-premises is now in AL and the modern Visual Studio Code developer environment, finally unifying the tools for code customization and creating extensions, and enabling much richer developer scenarios going forward.

## Feature details

The 2019 release wave 2 marks the first release of the base application on AL, and code customization on-premises now happens in AL and Visual Studio Code, unifying the tools for code customization and extensions. With the volume of investments in Visual Studio Code, and the stronger compiler support for AL, this allows much richer developer scenarios.

The 2019 release wave 2 is the first version that does not include the classic development environment (also known as C/SIDE) or the Dynamics NAV Client connected to Business Central (also known as the Windows client). The modern developer experience based on Visual Studio Code now supports developing large apps such as the base application from Microsoft, and so C/SIDE is discontinued for Business Central going forward.

## See also

[Overview of the System Application](#) (docs)

## Convert tables from C/AL definitions to AL table definitions

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Feature details

The Windows PowerShell cmdlet Sync-NAVApp is updated so that you can convert all C/AL tables to AL tables with a minimal database overhead and without the need to write any upgrade code. The command `Sync-NAVApp -Mode Sync` renames tables on the tenant database to conform with the naming convention for AL tables. This corresponds to a technical upgrade of the tenant, converting the table structure from the base application in earlier versions to the table structure for AL apps.

## See also

[Sync-NAVApp](#) (docs)

## Database insights made available in AL

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

AL developers can write test code that includes tests on database usage. This way, some performance issues can be caught during development and not in production.

## Feature details

Selected database insights that surfaced in the April '19 release of the debugger will be available from AL.

## See also

[Debugging](#) (docs)

## Filtering XmlPort objects

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

As your business database grows, you often need a higher degree of control over the data that you export out of or into Business Central.

## Feature details

Developers can set the UseRequestPage property to True on an XmlPort object so that users will see a request page in the browser client. Users can then filter on any fields from the source table and potentially reduce the exported data to precisely the records they want, taking advantage of powerful filtering capabilities such as date ranges, expressions, and filter tokens.

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Working with Reports, Batch Jobs, and XMLports](#) (docs)

## Implementing hierarchical menus

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

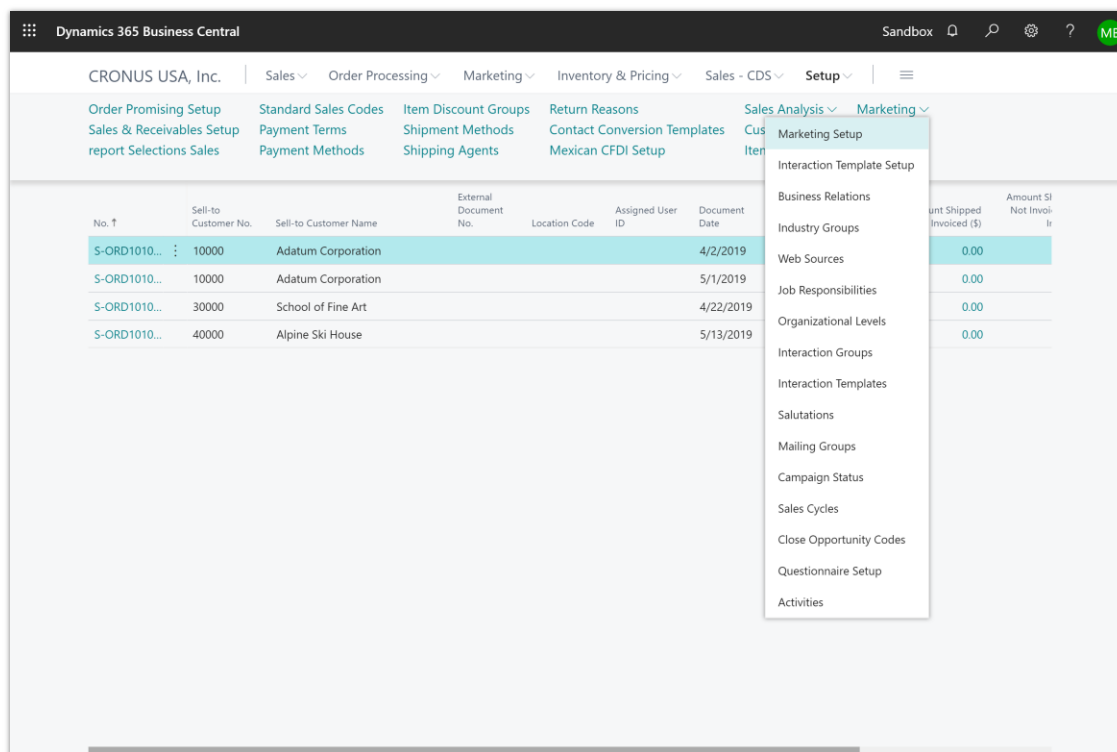
App developers are often asked to present the entire catalog of business functionality that is offered by their solution so that their users or prospects understand what it can do. Similarly, resellers often want to implement business features by some logical grouping that matches the unique needs of their customers' departments or user roles.

### Feature details

In AL, developers can split the sections area control into further subgroups to create more complex hierarchies of links in the navigation menu. Links can run a variety of AL objects including Pages, Reports, XmlPorts, and Codeunits.

In earlier versions of Dynamics NAV, this was achieved through MenuSuites and Departments. In Business Central, these new abilities allow developers to design richer, role-based navigation menus where users can explore functionality available to other roles that might be of interest to them.





*A subgrouping of a typical navigation menu*

### Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

### See also

[Adding Actions to a Page](#) (docs)

### Improved app dependency handling on build and deploy

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Business value

Avoid tedious and manual work on compiling and deploying extensions in the correct order.

## Feature details

Until now, you have had to manually ensure that projects with dependencies are built in the correct order, and deploying extensions with dependencies required manually uninstalling and reinstalling dependent extensions. With the 2019 release wave 2, this is managed by the tools, by traversing the dependency graph.

## More power to developers using Designer

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

## Business value

Writing code in Visual Studio Code is efficient, but designing and adjusting page layout can be cumbersome without having a faithful and visual overview of what the page looks like and how it behaves.

## Feature details

With this release, developers can also use the Designer to:

- Adjust actions and action groups on a Role Center.
- Adjust the navigation menu items, grouping and subgrouping on a Role Center, including building up the menu from scratch by bookmarking relevant pages.
- Double-click to autofit a column on a list page.
- Define filters on a list and save them as a named view.

No.	Name	Net Change	Balance	Income/Bal...	Accour
<b>10001</b>	<b>ASSETS</b>	-	-	Balance Sh...	Asset
10100	Checking account	1,638.40	1,638.40	Balance Sh...	Cash
10200	Saving account	-	-	Balance Sh...	Cash
10300	Petty Cash	96,549.23	96,549.23	Balance Sh...	Cash
10400	Accounts Receivable	72,893.84	72,893.84	Balance Sh...	Accou
10500	Prepaid Rent	-	-	Balance Sh...	Prepa
10600	Prepaid Insurance	-	-	Balance Sh...	Prepa
10700	Inventory	73,141.26	73,141.26	Balance Sh...	Invent
10800	Equipment	5,498.00	5,498.00	Balance Sh...	Equip
10900	Accumulated Depreciation	3,499.00	3,499.00	Balance Sh...	Accur
10910	WIP Job Sales	-	-	Balance Sh...	Asset
10920	Invoiced Job Sales	-	-	Balance Sh...	Asset
10940	Accrued Job Costs	-	-	Balance Sh...	Asset
10950	WIP Job Costs	-	-	Balance Sh...	Asset
<b>10990</b>	<b>TOTAL ASSETS</b>	<b>253,219.73</b>	<b>253,219.73</b>	Balance Sh...	Asset

A screenshot showing the addition of a list view on a list page

## Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the forum at <https://aka.ms/bcideas>.

## See also

[Using Designer](#) (docs)

## New events to unblock printer extensions in Business Central online

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Feb 26, 2020	✓ Mar 2, 2020

## Business value

Using these events, developers can create extensions that implement support for cloud-printing providers.

## Feature details

Using `SetupPrinters`, a developer can insert possible printers to be used in the printer selection page for reports (in the printer virtual table). Each printer can be given a display name as well as a specification of properties such as duplex, number of copies, color, and paper trays. In a paper tray, properties, such as [PaperSourceKind](#), [PaperKind](#), and landscape can be set.

Using `OnDocumentPrintReady`, a developer can react on reports being printed and use information in the printer virtual table to send the document to a printer.

## See also

[Developing Printer Extensions in Business Central](#) (docs)

## Service fundamentals

### Overview

No matter the industry or size of a small or medium-sized business (SMB), business users expect a dependable service and platform on which to run their business, collaborate, and get work done. Along with our wave of innovative new features, we've invested heavily in boosting performance, reliability, and scalability of Business Central, across the platform and business application.

Business Central runs much faster with a focus on typical business scenarios and usage patterns. The experience in the browser is more responsive thanks to on-demand loading of page elements, server resources that are optimized for fast user interaction, and the database being tuned to handle more data and faster load times. We will continue to improve the application performance and are prioritizing common usage scenarios.

Users experience an even more stable service with scheduled upgrades that suit the individual business, maintenance during non-working hours, and matured service health practices to ensure maximum uptime. Users requiring assistance now have a single screen through which to find self-help material, share ideas with the community, and request support with streamlined response time.

The Business Central security team works behind the scenes to safeguard the security of your data. In addition to continual improvements of our security infrastructure and processes, we ensure Business Central continues to meet ISO 27001, ISO 27017, ISO 27018, SOC 1 & 2 Type 2, HIPAA BAA, and FERPA industry security and privacy compliance standards. For more details and a list of all certificates, see [Microsoft Dynamics 365 Service compliance](#).

## New Support Request option in the Business Central Administration Center

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

In the Business Central Administration Center, a new support option will improve the support process for partners. In the Dynamics shell, select the question mark to see **New Support Request**. You will then be directed to a new portal to enter support tickets for Business Central. To get updates and manage the support request, you will use the new portal. The Business Central Administration Center is the new starting point so partners have clear direction on where to enter the tickets.

### See also

[Escalating your customer's support issues](#) (docs)

## Partners can enter support contact details in the Business Central Administration Center

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

In the Business Central Administration Center, the reselling partner can choose an environment, and then specify their name, email address, and/or a website for support. This information is then presented to the customer in their Business Central tenant when they go to the **Help & Support** page. Customers now have a clear picture of how to get support from their reselling partner. Partners do have the option to update all tenants when entering their information to save them time from entering it on all environments.

### See also

[Configuring the support experience](#) (docs)

## Lock-free number series

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Feature details

Users can choose to mark number series to allow gaps in the series. These number series will be non-blocking, which will boost performance.

Selected non-financial number series in the application will be made non-blocking.

### See also

[Number Sequences](#) (docs)

## Page background tasks

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Feature details

A page background task can run a codeunit (without a UI) in a read-only child session of the page session. On completion of the task, a completion trigger with the result is invoked on the page session.

If the page is closed before the task completes or the page record ID changed, the task is canceled.

### See also

[Page Background Tasks](#) (docs)

## Surrogate keys

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Feature details

A surrogate key will be added to all tables. AL developers can look up a record based on the key.

### See also

[Table Keys](#) (docs)

### Sign-in attempt telemetry in Application Insights for partners

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 26, 2020	✓ Mar 2, 2020

### Business value

Partners can set up and use Application Insights to monitor when users experience sign-in issues (for example, because of missing permissions) and proactively help their customers without the need to contact Microsoft support.

### Feature details

The Business Central server will emit telemetry about sign-in attempts (successful or failed). For failed attempts, the reason will be logged in the message as well.

After a successful authorization to Business Central, the server will also emit telemetry about the Open Company operation (successful or failed). For failed authorization to a company, the reason will also be logged in the message.

### See also

[Analyzing Authorization Trace Telemetry](#) (docs)

# Artificial intelligence

## Overview of Dynamics 365 Sales Insights 2019 release wave 2

For many years, customer relationship management (CRM) was a one-dimensional system of records. Sales teams spent long hours entering data into the system, in practice "working for the system." Dynamics 365 Sales Insights helps sales teams transform CRM systems to work on their behalf, leveraging the power of predictive and personalized intelligence.

Dynamics 365 Sales Insights empowers teams with more foresight to enhance productivity and better anticipate outcomes across the sales lifecycle. This empowerment helps sales professionals be consistently ahead of each customer's needs and every competitor's potential move.

Dynamics 365 Sales Insights makes AI accessible to everyone across the sales organization, giving sales teams time back so they can focus on building relationships with customers. Insights tailored to every member of the sales team are now available with a new digital assistant. The assistant offers sellers contextual relationship insights and transforms guided selling with next-best-action recommendations. Sales managers benefit from smart coaching suggestions based on customer conversations.

With the 2019 release wave 2, we will continue to enhance these services and make them available worldwide in more regions and languages.

Our 2019 release wave 2 will focus on the following themes:

- **Availability in more regions and languages:** We continue to invest in making Dynamics 365 Sales Insights available in more regions and in supporting more languages through our machine learning models.
- **Personalized and actionable intelligence:** We are committed to help sellers build meaningful relationships effortlessly. With the new digital assistant and AI-based guided engagement, sales professionals are empowered with contextual assistance that helps them focus on the right activity at the right time and in the right way.
- **Meaningful and relevant conversations:** We continue to invest in assisting sellers to lead meaningful customer interactions by offering seamless and automated analysis across multiple conversation channels. By highlighting gaps as well as compelling product pitches, teams can improve engagement quality, focusing on behaviors that are likely to lead to positive outcomes.
- **Enhanced automation and privacy:** We continue to deliver enhancements to intelligent services based on ongoing customer feedback. This includes in-depth and flexible



automation as well as more granular privacy controls to help promote adoption across the organization.

[Watch overview video](#)

## What's new and planned for Dynamics 365 Sales Insights

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">More personalized and guided assistance</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	-
<a href="#">Customize scoring to adapt to organizational needs</a>	End users by admins, makers, or analysts	✓ Dec 23, 2019	
<a href="#">Extend action options taken from the suggested actions</a>	Admins, makers, or analysts, automatically	✓ Jan 18, 2020	
<a href="#">Capture more customer communications</a>	End users by admins, makers, or analysts	✓ Feb 1, 2020	-
<a href="#">Guide sellers with next best actions through the Assistant Studio</a>	End users by admins, makers, or analysts	✓ Apr 1, 2019	✓ Oct 1, 2019
<a href="#">Understand how sellers are using suggested actions</a>	Admins, makers, or analysts, automatically	-	✓ Jan 18, 2020
<a href="#">Remove the guesswork with predictive forecasting</a>	End users by admins, makers, or analysts	-	✓ Feb 3, 2020

Feature	Enabled for	Public preview	General availability
<a href="#">Uncover hidden insights in your forecasts</a>	End users by admins, makers, or analysts	-	✓ Feb 3, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## More personalized and guided assistance

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	-

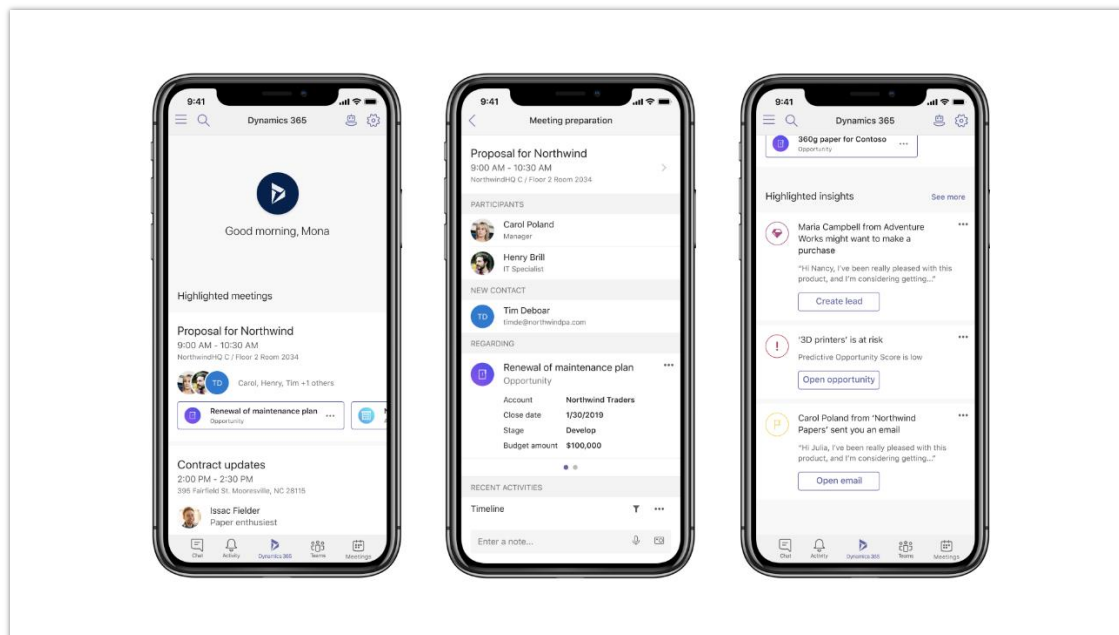
## Business value

To focus on selling, sellers can benefit from a personal assistant that knows their specific context and is available to help across all interactions with Dynamics 365. The assistant can offer guidance and in-the-moment suggestions for the next best course of action, helping to advance every customer engagement.

## Feature details

- **Assistant in Microsoft Teams:** The new assistant in Teams helps sellers be proactive, productive, and personal, offering timely insights and freeing time to focus on relationships. Supported in Teams mobile application.
- **Prepare for your day:** Get a digest of important customer engagements and key information, all in a single place. Receive personalized insights during every phase of the sales journey.

- **Prepare for meetings:** Arrive informed and prepared to meetings by reviewing a summary of customer interactions across the team, as well as the latest news about the customer. Learn who in your company knows the meeting attendees and receive talking points based on past conversations, all helping to build rapport and start the meeting smoothly.
- **Next best action:** Nothing falls between the cracks with the insights feed, proactively offering next best-action suggestions throughout the day. Sales operations can customize the insights feed, adapting to specific processes and guidelines of the organization.
- **Follow up after a meeting:** Transform note-taking. Instead of tediously typing handwritten notes into Dynamics 365 after a meeting, save time by using your phone's camera to capture the notes and analyze them, using optical character recognition to convert writing into text.
- **Capture business cards:** Save time manually entering contacts with the new business card scanner. Easily use your phone's camera to capture business cards, analyze, and save relevant information as new contacts in Dynamics 365.
- **Assistant in Sales Insights for managers:** Assistant displays relevant insights on each seller to help managers recognize issues that require immediate attention or action. By tying together Dynamics 365 sale outcomes and processes with Office 365 activities and sales calls, the assistant can surface out-of-the-box coaching insights to help managers and sellers directly in the app.



*Sales Insights Assistant*

**See also**

[Feature exploration](#) (video)

[Use Sales Insights Assistant to guide customer communications](#) (docs)

**Customize scoring to adapt to organizational needs**

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Dec 23, 2019	-

**Business value**

Organizations rely on intelligent predictions to make critical business decisions. To make predictions more meaningful, it is key to adapt to the nuances of each organization's processes and strategies. Now, organizations can add their unique business-specific inputs to the overall scoring models and customize them to fit their specific business needs.

**Feature details**

**Add custom fields to predictive opportunity scoring and predictive lead scoring:** Business analysts can add custom signals that are specific to the business, extending out-of-the-box predictive models.

**See also**

[Feature exploration](#) (video)

[Configure predictive lead scoring](#) (docs)

**Extend action options taken from the suggested actions**

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Jan 18, 2020	-

**Business value**

Sellers must track many things at once. Suggested actions can help them determine their next steps. Following up on them can be a lot of work, but automation can improve sellers' productivity.

With this release, organizations have the option to extend the actions a seller can take. Previously, sellers could only open an entity, like an opportunity, or open a URL as a follow-up for suggested action. Now, you can preview extending those actions for custom actions, REST APIs, launching a playbook, and triggering a flow.

### Feature details

- **Change the name of the displayed action:** Make your actions more descriptive. Currently, the only option to show to the seller is **Open**. Now, you can customize the texts for your needs.
- **Automate suggested actions with flows:** Like a custom action in Dynamics 365, you can run Power Automate as a response to your seller interacting with the system. You can, for example, automate sending a document via email.
- **Automate suggested actions with custom actions:** Let your sellers trigger the execution of a custom action from a suggested action. Simple actions, like updating a field, can be triggered directly from within the suggested action.
- **Automate using a REST API call:** If you can't use Power Automate or a custom action to help to automate an action, you can configure a REST API call that lets sellers execute any automatic action directly from the suggested action within Dynamics 365.

### See also

[Add actions to cards](#) (docs)

### Capture more customer communications

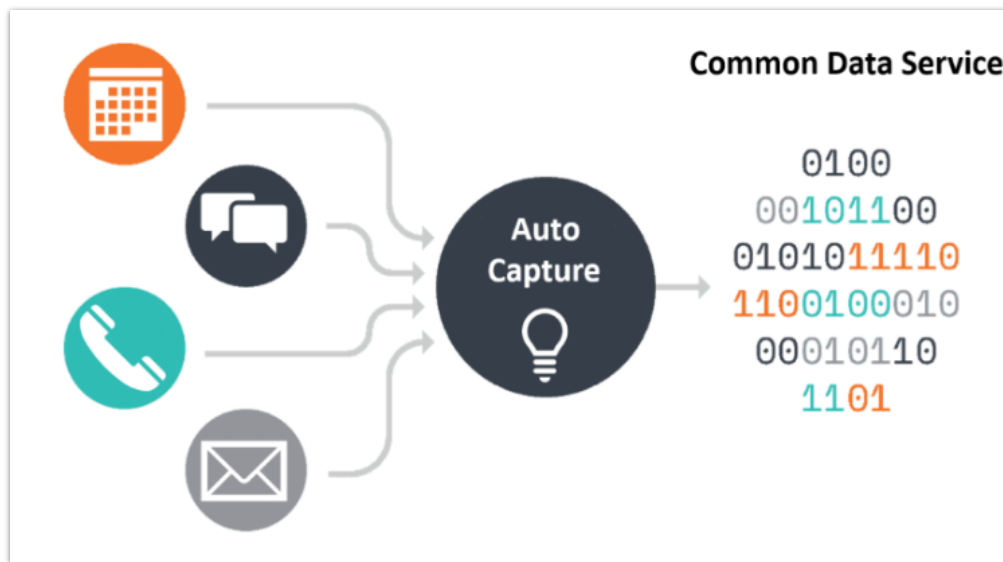
Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Feb 1, 2020	-

### Business value

Sellers seek to focus their time on selling rather than updating Dynamics 365 data and logging every customer-related activity. Now, Auto capture goes beyond capturing emails with customers to also capture meetings on the calendar, logging them into appropriate records. Auto capture also provides suggestions to create new contacts, based on communications, reducing overall time spent on these tedious tasks and freeing sellers to focus on what matters most.

## Feature details

- **Automatically capture communication with customers:** Automatically add emails and meetings with customers to the timeline of related records and share them across the organization.
- **Enrich CRM by proposing to track specific emails, meetings, and contacts:** Surface suggestions to enrich data in Dynamics 365 and make sure nothing falls between the cracks by proposing emails, meetings, and contacts.
- **Privacy controls:** Allow admins to manage privacy settings with highly granular controls.



*Zero-click Auto capture*

## See also

[Feature exploration](#) (video)

[Premium auto capture](#) (docs)

## Guide sellers with next best actions through the Assistant Studio

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 1, 2019	✓ Oct 1, 2019

## Business value

Sellers are busy. They spend significant time collecting information, reaching out to peers, and preparing for customer engagements. All the while, they ensure that they follow up with the right customer, at the right time, and in the right way. Suggested actions can help sellers optimize their next best action and can help save time and maximize effectiveness, improving overall sales productivity.

In April 2019, we started offering organizations the ability to create custom suggested actions for sellers. These suggested actions empower organizations to transform the sales process by helping guide sellers with more targeted suggestions. Organizations can use events from many systems and define conditions to describe circumstances under which each suggestion will be surfaced. This provides flexibility when guiding sellers in their business processes. The guidelines proactively push the right information into the seller's workflow at the right moment. By streamlining business practices and introducing more predictability into sales motions, the studio helps organizations enforce best practices and transform productivity, guiding sellers on a path to close deals faster and increase revenue.

## Feature details

- **Guide sellers with customized suggested actions:** Use Power Automate and the studio to create new insight cards that adhere to particular sales processes and are delivered to sellers at the right moment via the Relationship Assistant and other surfaces. Suggested actions can be based on events triggered by over 200 services registered with Power Automate, such as emails received or updates in Dynamics 365 Sales, offering unique flexibility to adhere to every organizational best practice.
- **Target roles for personalized guidance:** Select the addressable audience for each action, to target suggested actions at the right seller roles, ensuring the right content is surfaced to the right individual at the right time. When the context is right, sellers are more likely to leverage sales materials.
- **Benefit from enhanced experiences:** As part of our commitment to customers, we are actively listening to feedback and improving experiences accordingly. Users can now search for cards they have created, benefit from more filters, and enjoy a more streamlined experience. Notably, the flow creation experience is embedded into the studio to save unnecessary context switching.

## See also

[Feature exploration](#) (video)

[Insight cards reference](#) (docs)

## Understand how sellers are using suggested actions

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 18, 2020

### Business value

Sellers are busy and need to keep track of numerous customers and a wide range of sales materials. Organizations also invest significant time and resources producing materials and guidance to maximize revenue. Giving sellers the right information in the right context can help ensure they leverage their sales materials, which helps to maximize ROI and improves the selling process.

We're empowering sales organizations so you can create suggested actions in the flow, delivered to sellers via Assistant, meeting sellers wherever they are. This will help to ensure the most pertinent information is promoted and to avoid unnecessary distractions. We're offering measures to help maximize the usage and health of suggested actions and to help you understand the impact of sales guidance. These measures highlight which sales materials are used and whether they are useful for sellers, ensuring suggested actions are more targeted, better prioritized, and drive impact.

### Feature details

**Understand the usefulness of a suggested action:** To understand the usefulness of an insight card, organizations need to understand how each suggestion is used. Measures for each suggested action include:

- How often was a suggested action shown, and to how many sellers?
- How often did sellers interact with a suggested action and what was the interaction?
- How many sellers gave positive or negative feedback via dedicated buttons?

To ensure this information is easy to access, health information is also shown as part of the manage insight-cards tab within the studio.

### See also

[View card usage metrics](#) (docs)



## Remove the guesswork with predictive forecasting

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Feb 3, 2020

### Business value

Growing volumes of sales data offer a unique opportunity to inform business decisions and enhance sales performance. Sales organizations can transform forecasting with large-scale sales data to make more comprehensive and reliable sales predictions.

Predictive forecasting complements subjective bottom-up projections with objective data-driven forecasts. Leveraging both historical and pipeline data, sales managers can forecast sales more accurately and without bias.

### Feature details

- **Explore historical evidence:** Complement subjective bottom-up forecasts with predictive projections to identify discrepancies or inconsistencies without manual effort.
- **Leverage your existing data:** Compare actual performance directly against predictions to visually contrast how the number of deals won are pacing against predictions. The predictive model captures all related data from past deals and open pipelines to identify signals that have the most impact.

### See also

[Project accurate revenue with sales forecasting](#) (docs)

## Uncover hidden insights in your forecasts

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Feb 3, 2020

### Business value

To ensure sales managers can provide the leadership team with meaningful forecast numbers that they trust, the forecasting capabilities of Dynamics 365 Sales offer great flexibility. Sales managers are empowered to take snapshots, to freeze a forecast in the moment, and to analyze forecasts, gaining a deeper understanding through changes that occur between snapshots.

With deal flow analyses, comparing two snapshots visually, sales managers can easily view changes in forecasted values as well as the underlying records that contribute to the change. For example, if as a sales manager, your team forecasted to close 100,000 deals, but only closed 80,000, you can investigate which deals slipped and why—to get a deeper understanding and inform future planning.

### Feature details

- **Take advantage of snapshots:** Trigger snapshot creations before or after adjustment periods end. This empowers sales enablement managers to offer automated snapshots.
- **View snapshot history:** Explore a log of all snapshots taken per forecast and manage these as needed. This empowers sales enablement managers to develop valuable learnings for the organization.
- **Benefit from deal-flow and snapshot visualization:** Visually compare two forecast snapshots to better understand how and why forecasting has changed over time.
- **Take advantage of cumulative trend chart:** Inspect forecast projections visually across a timeline chart.

### See also

[Analyze deals flows between snapshots](#) (docs)

## Overview of Dynamics 365 Customer Service Insights 2019 release wave 2

Dynamics 365 Customer Service Insights provides an actionable view into critical performance metrics, operational data, and emerging trends using industry-leading artificial intelligence. These insights empower customer service managers to make better decisions to improve customer satisfaction and operational efficiency with confidence.

Thanks to the power of artificial intelligence (AI), machine learning, and business intelligence (BI), you can easily get a clear view into your contact center on what is happening, why it is happening, and what could happen, and then decide your best course of action. The AI model used by Customer Service Insights proactively learns from users' gestures and optimizes over time per each individual customer. Best of all, the AI capabilities are included out of the box and don't require any AI expertise to use.

With the product's general availability (GA) in April 2019, we enabled an integrated experience with more enterprise capabilities that give you a richer view into your customer service organization.

In the 2019 release wave 2 updates, you'll see a number of new capabilities released every month. These features include the ability to create shared workspaces that connect to your case data stored in Dynamics 365 and Common Data Service, which can include data from Salesforce, Zendesk, ServiceNow, or other sources.

In addition, you'll be able access Customer Service Insights directly from the Dynamics 365 Customer Service application without losing context. Additional dashboards and metrics in your Customer Service Insights workspaces will provide a deeper view into your organization and opportunities to improve. Enhancements to existing AI-driven topic generation features as well as additional features using artificial intelligence will continue to help you make better decisions and proactively improve customer satisfaction with confidence.

Throughout 2019 release wave 2, you'll see a number of new capabilities in Customer Service Insights. Review the "what's new" page regularly for the latest updates. Additional feature requests can be added in the [Customer Service Insights ideas page](#).

[Watch overview video](#)

### What's new and planned for Dynamics 365 Customer Service Insights

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Better access to continuous topic improvement such as topic controls and opportunities for user feedback</a>	Admins, makers, or analysts, automatically	✓ Dec 2, 2019	-
<a href="#">More insights across dashboards including improved navigation and new metrics to measure customer impact</a>	Admins, makers, or analysts, automatically	✓ Feb 3, 2020	
<a href="#">Improved integrations across business application products</a>	Admins, makers, or analysts, automatically	✓ Mar 3, 2020	
<a href="#">Support topic generation based on case titles in French, German, and Spanish</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 8, 2019
<a href="#">Improve Power Virtual Agents through topics for automation</a>	Admins, makers, or analysts, automatically	-	✓ Dec 3, 2019
<a href="#">Improved support for topic generation for non-English case titles</a>	Admins, makers, or analysts, automatically	✓ Oct 8, 2019	✓ Dec 20, 2019

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
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- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

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## Better access to continuous topic improvement such as topic controls and opportunities for user feedback

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Dec 2, 2019	-

### Feature details

Customer Service Insights provides AI-driven topic generation based on the case titles imported into the system. While the AI model has been tuned for customer service scenarios, we understand not every business is the same and have enabled multiple controls and feedback avenues within the products, so that customers can ensure the model works best for them.

In this wave of updates, we released an improved navigation experience, making it easier for users to drill into topics and provide specific feedback on the cases grouped within them. The improved navigation makes it easier to find the controls used to influence and provide feedback to the model, such as topic renaming and thumbs up or thumbs down. The improved navigation also helps users improve the topic clustering result more efficiently and effectively.

### See also

[Feature exploration](#) (video)

[Manage and improve AI grouping of support cases as topics](#) (docs)

## More insights across dashboards including improved navigation and new metrics to measure customer impact

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Feb 3, 2020	-

### Feature details

A new landing page in each workspace highlights the key insights in your organization. These landing pages distill your organization's Customer Service Insights information and help

customer service managers understand which issues are having the most impact so they can take action quickly.

In addition, we've improved navigation between the dashboards by updating the Customer Service Insights home page, the topic visuals across the dashboards, and the topic's details page. These updates help you move across related content to get the details you need.

Dynamics 365 Customer Service Insights provides five out-of-the-box dashboards showing key topics and support issues that customers are facing, along with more than 100 different business metrics. Although the breadth of information ensures that users can view what they need, they can also benefit from additional guidance on how to read the data and take action.

### See also

[Feature exploration](#) (video)

[Discover key insights from your customer service data](#) (docs)

## Improved integrations across business application products

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 3, 2020	-

### Feature details

This release further improves the integration with Power Virtual Agents by including suggestions for the best topics to automate based on a number of factors related to the topic. These factors include the topic's overall impact and the channels where customers typically engage.

These suggestions will appear on the home page of Customer Service Insights as a separate card, with links to the details for each topic.

Dynamics 365 Customer Service Insights works better with other business application products, and in this wave of updates, you'll also see improved integration with Dynamics 365 Customer Service, Common Data Service platform, and others based on customer requests.

### See also

[Consider automating these topics with Power Virtual Agents](#) (docs)

## Support topic generation based on case titles in French, German, and Spanish

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 8, 2019

### Feature details

Customer Service Insights now supports AI-generated topics from case data in more languages than English. Previously, an English-only model was used to understand the case titles and automatically group the similar cases into topics. While this model could be used with case titles that were in other languages, the accuracy and relevance of the topics would be decreased as the full meaning of the case titles was not understood.

With this addition of specific language models, including French, German, and Spanish, customer service managers who work with cases in those particular languages will now receive benefits from much more accurate topic generation. In addition, if the customer service organization serves customers in a dominant language we support as well as English case titles, the language-specific model will still perform and provide accurate topic generation across both languages. The support for additional languages will be continuously added into the service.

### See also

[Feature exploration](#) (video)

[Language support for case grouping as topics](#) (docs)

## Improve Power Virtual Agents through topics for automation

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 3, 2019

### Feature details

Customer Service Insights identifies the topics that are best suited for automation using Power Virtual Agents. You can review the list of suggestions, import the suggested topics into a virtual agent, and deploy the virtual agent in minutes using the integrated experience with the Power Virtual Agents Designer.

- Discover all potential topics from support data, and efficiently identify high business value topics best suited for Power Virtual Agents.
- Analyze and present the potential business impact for each suggested topic; for example, the impact on customer satisfaction (CSAT), or agent handling time.
- Select and import suggested topics into Power Virtual Agents with an integrated experience, to help create the virtual agent content quickly.

## See also

[Feature exploration](#) (video)

[Automate topics for a Power Virtual Agents bot](#) (docs)

## Improved support for topic generation for non-English case titles

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 8, 2019	✓ Dec 20, 2019

## Feature details

Customer Service Insights started with topic generation based on case titles with an AI model focused on English only. The 2019 release wave 2 includes support for additional languages including French, German, and Spanish as well as accounts that have a mix between one of those languages and English. While that expands the capabilities to many more customers, we understand that there are additional dominant languages in customer case titles that are not fully addressed by these models.

This wave of updates will include additional language support, including:

- Italian
- Japanese
- Portuguese
- Simplified Chinese

Additional support can be requested through our ideas forum.

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.



**See also**

[Language support for case grouping as topics](#) (docs)

## Overview of Dynamics 365 Market Insights 2019 release wave 2

Dynamics 365 Market Insights Preview is no longer available as a standalone application to new customers starting on April 10, 2020, and will end the service for all existing customers on May 11, 2020. We will incorporate the core technology and learnings from Market Insights Preview into [Dynamics 365 Customer Insights](#) and [Microsoft Bing Industry Updates](#). Customers and partners can email their inquiries to [MIEOL@microsoft.com](mailto:MIEOL@microsoft.com).

## Overview of Dynamics 365 Customer Insights 2019 release wave 2

Dynamics 365 Customer Insights enables every organization to unify disparate data—be it transactional, observational or behavioral sources—to gain a unified view of customers and derive intelligent insights that drive key business processes.

### Eliminate data silos and unify customer data

- Connect and unify data with ease, bringing in transactional, observational, and behavioral data from data sources by leveraging prebuilt connectors.
- Transform customer data intelligently to build a unified customer profile conforming to the [Common Data Model](#).

### Enrich customer profiles with audience intelligence contained within the Microsoft Graph

- Build richer customer profiles by incorporating aggregated audience intelligence leveraging the power of Microsoft Graph.

### Enable powerful AI and insights

- Leverage data around the customer entity for AI, insights, and KPIs on top of the unified view of the customer.
- Accelerate the process with AI and machine learning templates or custom algorithms using Azure Machine Learning.

### Empower business processes and personalize customer experiences

- Empower marketing, sales, and service professionals to drive personalized engagement across channels. Leverage out-of-the-box, contextual customer insights and tailored customer profile cards that integrate in the other business applications.
- Leverage rich APIs and Microsoft Power Platform to enable and extend line-of-business experiences. This includes the ability to gain deeper customer insights with Power BI, build custom apps with Power Apps and trigger workflows based on customer actions and signals using Power Automate.

## What's new and planned for Dynamics 365 Customer Insights

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Extending Customer Insights with Power Platform</a>	Admins, makers, or analysts, automatically	✓ Oct 1, 2019	
<a href="#">Infusing Customer Insights into Dynamics 365 apps</a>	End users by admins, makers, or analysts	✓ Oct 1, 2019	-
<a href="#">Ability to link accounts and contacts in the customer model</a>	Admins, makers, or analysts, automatically	✓ Oct 31, 2019	-
<a href="#">AI-driven experience to create customer segments</a>	Admins, makers, or analysts, automatically	✓ Mar 11, 2020	
<a href="#">Guided experience to predict customer patterns</a>	Admins, makers, or analysts, automatically	✓ Mar 11, 2020	
<a href="#">Customer Insights consulting services available in Microsoft AppSource</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Segment builder and measures wizard enhancements</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Data unification improvements</a>	Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019
<a href="#">Extend Customer Insights with Azure Machine Learning</a>	Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019
<a href="#">Flexible deployment options</a>	Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Recommended segments and measures</a>	Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019
<a href="#">Guided experience to create KPIs and dashboards</a>	Admins, makers, or analysts, automatically	-	✓ Mar 11, 2020

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## Extending Customer Insights with Power Platform

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 1, 2019	-

### Business value

Get started quickly with out-of-box templates and connectors for Power BI, Power Automate, and Power Apps.

### Feature details

Extend Customer Insights with Power Platform:

- Out-of-box templates for Power Apps help users to build apps more quickly.
- Enhanced Power Automate connectors include triggers to set up workflows.
- Updated Power BI connectors improve the get-data experience and performance.

## See also

[Dynamics 365 Customer Insights – September 2019 release notes](#) (blog)

[Configure the Power BI connector](#) (docs)

## Infusing Customer Insights into Dynamics 365 apps

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 1, 2019	-

## Business value

Unlock more insights and take more decisive action with an improved customer card that provides a more comprehensive timeline of the customer journey across the marketing, sales, and customer service functions.

## Feature details

A variety of enhancements in the customer card include visual indicators for measures, the ability to display data sources to direct users to the source document, options to re-order fields, as well as the ability to expand and collapse timeline controls.

## See also

[Dynamics 365 Customer Insights – June 2019 release notes](#) (blog)

[Install the Customer Card Add-in](#) (docs)

## Ability to link accounts and contacts in the customer model

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 31, 2019	-

## Business value

Create more actionable Customer Insights depending on your business model for both organizations (B2B) and individuals (B2C).

## Feature details

Users can now build segments and measures to combine the activities and attributes of both individuals and organizations by using the Account to Contact relationship functionality.

That relationship will become available in other areas of Customer Insights such as segments and measures.

## See also

[Home](#) (docs)

## AI-driven experience to create customer segments

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 11, 2020	-

## Feature details

A new AI-driven experience provides recommendations to create customer segments based on data patterns.

## See also

[Create segments and customer groups](#) (docs)

## Guided experience to predict customer patterns

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 11, 2020	-

## Business value

Spend less time building machine learning capabilities and more time benefiting from the results they deliver.

## Feature details

Guided experience:

- Helps create predictions based on unified customer profiles.
- Adds ability to use results in measures, segments, and reporting.

## See also

[Complete data using value predictions](#) (docs)

## Customer Insights consulting services available in Microsoft AppSource

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

## Business value

Quickly identify Microsoft partners to help you implement Customer Insights.

## Feature details

Microsoft AppSource now includes consulting service offers for Dynamics 365 Customer Insights to help business users find a partner and get started quickly.

## Segment builder and measures wizard enhancements

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

## Business value

Enhanced wizard functionality helps build customer segments and measures that business analysts can use to more effectively track customer activity and engagements.

## Feature details

Improved segment and measures creation wizard to author your own queries, support for additional operators, and complex query definition capabilities.



## See also

[Dynamics 365 Customer Insights – October 2019 release notes](#) (blog)

[Create segments and customer groups](#) (docs)

## Data unification improvements

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

## Business value

Advanced configuration options provide users with greater control on how data is unified.

## Feature details

Advanced configuration options provide:

- Ability to manually overwrite system-generated matches.
- Ability to implement weighted scores to better control how the system matches records—for example, name and address can have a different weighted score.
- Ability to normalize addresses to help increase match results.

## See also

[Match entities](#) (docs)

## Extend Customer Insights with Azure Machine Learning

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

## Business value

Easily extend Customer Insights through your own Azure Machine Learning models, predict outcomes, and create deeper insights within your unified customer profile—for example, by predicting next steps.

## Feature details

Extend Customer Insights with Azure Machine Learning:

- Automate the export of Customer Insights unified profiles to your Azure subscription, run your models using Azure Machine Learning, and ingest the results back into Customer Insights.
- Add the ability to use model results in measures, segments, and reporting.

## See also

[Implement custom machine learning models](#) (docs)

## Flexible deployment options

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

## Business value

Enable customers to bring their own Azure data storage for data ingestion and storage of unified data, providing flexible configuration options and help to support customer-specific requirements.

## Feature details

As part of the initial deployment and configuration process, admins can now select their own Azure storage for data ingestion and storage of unified customer data.

## See also

[Create a Customer Insights instance](#) (docs)

## Recommended segments and measures

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

## Business value

Reduce the manual efforts needed by getting recommendations for segments and measures.

## Feature details

System-generated recommendations for segment creation-based data patterns found in the unified customer profiles.

## See also

[Create segments and customer groups - Recommended segments](#) (docs)

## Guided experience to create KPIs and dashboards

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 11, 2020

## Feature details

Provides a guided experience to help users understand how to use Customer Insights to achieve business goals such as reducing churn, increasing upselling opportunities, and driving customer loyalty.

## See also

[Define measures and KPIs](#) (docs)

## Overview of Dynamics 365 Fraud Protection 2019 release wave 2

Today's digitally transformed enterprise conducts most of its business online and in real time with little human intervention. This reduces costs and improves the customer experience, but it also exposes the enterprise to serious threats from those who attempt to take advantage of the online channel's relative anonymity and accessibility.

For example, in e-commerce, people may attempt to use compromised accounts and stolen payment instruments to commit payment fraud. They also attempt other nefarious activities like account takeover, free-trial abuse, fake product reviews, warranty fraud, refund fraud, reseller fraud, abuse of program discounts, and many more—all of which impact the enterprise's profitability and reputation.

Some types of fraud even have grave consequences to society at large. Examples include laundering money and posting fake news. Because the ROI for online fraud is so high, it is highly likely that every vulnerability of an enterprise will ultimately be discovered and fully exploited. Moreover, unlike during the nascent years of the internet, fraud today is committed by well-funded and well-equipped rings of professionals. Fraud protection professionals are best equipped to fight them.

*It is our mission to help digitally transformed enterprises to fight fraud while keeping their doors open for genuine customers and partners.*

Dynamics 365 Fraud Protection will initially focus on payment fraud protection and account creation. It will help enable an e-commerce merchant to drive down fraud loss, increase bank acceptance rates to yield higher revenue, and improve the online shopping experience of its customers.

Microsoft has many years of experience protecting our own e-commerce businesses from fraud. We have developed a sophisticated technology stack that uses connected big data across multiple lines of business and applies cutting-edge artificial intelligence (AI) to help provide more accurate decisions in real time. We have core differentiators such as device fingerprinting, operations research, a fraud protection network, and transmission of trust knowledge to banks.

Using Dynamics 365 Fraud Protection, you can help protect your business from fraud using innovative and advanced capabilities, including:

- Artificial intelligence and insights from the fraud protection network.
- A rules engine and virtual fraud analyst.
- Graph explorer and KPI scorecard.
- Transaction acceptance booster.

These are part of a comprehensive set of features grouped into three user experiences that will accelerate your journey into full production.

- Gain insights into fraud issues in your environment using the *Diagnose* experience in Dynamics 365 Fraud Protection.
- Understand the effectiveness of Dynamics 365 Fraud Protection relative to your incumbent fraud protection solution using the *Evaluate* experience.
- In the *Protect* experience of Dynamics 365 Fraud Protection, use risk assessments to configure business rules for making e-commerce transaction decisions.

**NOTE** You can enter any of these three experiences at any time.

Capability	Diagnose	Evaluate	Protect
Be secure and compliant, and have full transparency into data handling and privacy.	X	X	X
Understand the conditions of your business. Diagnose and analyze the state of your fraud protection.	X	X	X
Send transactions through application programming interfaces (APIs) in real time, and gain risk insights through inline evaluation that includes explanations.		X	X
Use the scorecard to understand the performance of Dynamics 365 Fraud Protection. Compare Dynamics 365 Fraud Protection to your existing fraud solution.		X	X
Upload your historical data to tune the machine learning model to your business scenarios. Extend and tailor Dynamics 365 Fraud Protection to the needs of your business.		X	X
Reap the benefits of AI, and derive insights from the fraud protection network.		X	X
Configure lists and model operating points to shape real-time decision making.		X	X
Use the virtual fraud analyst to configure optimal risk score thresholds.		X	X

Capability	Diagnose	Evaluate	Protect
Use the graph explorer to investigate fraud and do linkage analysis.		X	X
Use device fingerprinting to help identify devices that engage with your business, while respecting customer privacy.		X	X
Use the customer (risk) support tool to evaluate and act on customer escalations for risk-related rejections.		X	X
Use the transaction acceptance booster to help improve bank acceptance.			X
Make Dynamics 365 Fraud Protection your solution of record.			X

## What's new and planned for Dynamics 365 Fraud Protection

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

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This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Artificial intelligence and insights from the fraud protection network</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Boost bank acceptance rates</a>	End users by admins, makers, or analysts	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Device fingerprinting</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Diagnose</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Evaluate</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Graph explorer</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Protect</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Rules engine</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Scorecard</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Virtual fraud analyst</a>	End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019
<a href="#">Sign-up assessment</a>	End users by admins, makers, or analysts	✓ Jul 31, 2019	✓ Oct 1, 2019
<a href="#">External compliance certification</a>	End users, automatically	✓ Aug 9, 2019	✓ Oct 1, 2019

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## Artificial intelligence and insights from the fraud protection network

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

Dynamics 365 Fraud Protection enables merchants to assess, in real time, whether an incoming purchase transaction or sign-up event should be approved or rejected. Dynamics 365 Fraud Protection assesses a transaction's likelihood of fraud using Microsoft's industry-leading AI platform. The AI platform uses transactional data to train machine learning models and detect linkages of fraud that occur across all merchants in the fraud protection network. By participating in this network, merchants can derive insights from the collective experience of other merchants who use Dynamics 365 Fraud Protection. In this way, merchants can help businesses handle emerging fraud vectors.

### See also

[Artificial intelligence and insights](#) (docs)

## Boost bank acceptance rates

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

Microsoft fraud detection technology has a proven track record with banks and issuers based on many years of experience protecting our own multi-billion-dollar business. Dynamics 365 Fraud Protection helps merchants boost their acceptance rates with banks and reduce wrongful declines. This market differentiator, called the transaction acceptance booster, enables merchants to share contextual information about Dynamics 365 Fraud Protection's assessment of the transaction to participating banks and issuers, who can then incorporate this information in their own evaluation to make a more informed assessment. Merchants can benefit from this feature by simply opting in to the program, without having to change their authorization-settlement flow with banks and issuers.



Additionally, merchants can opt in to receive MID recommendations from Dynamics 365 Fraud Protection. These recommendations can be used to group transactions being submitted to banks and issuers and increase the overall acceptance rate.

### See also

[Boost bank acceptance rates](#) (docs)

## Device fingerprinting

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

Dynamics 365 Fraud Protection offers device fingerprinting based on cutting-edge machine learning and artificial intelligence. This enables the service to collect information about devices that engage with protected merchants. Device fingerprinting runs on Azure. It is cloud-scalable, reliable, and provides enterprise-grade security. A major advantage over similar products in the marketplace is that device fingerprinting is being continually tested against the latest fingerprinting-evasion tools.

### See also

[Implement device fingerprinting](#) (docs)

## Diagnose

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

Dynamics 365 Fraud Protection offers a **Diagnose** experience where you can preview the product's ability to detect fraud. After analyzing a representative dataset from your business, the product will generate risk evaluation reports that provide an array of valuable risk insights. These reports summarize the fraud patterns that exist in your business and will give you a quantitative analysis of fraud and revenue opportunity, which can help you identify opportunities to improve your fraud protection capabilities.

## See also

[Diagnose experience](#) (docs)

## Evaluate

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

## Feature details

The Evaluate experience in Dynamics 365 Fraud Protection enables merchants to use their real-time transactional traffic to compare Dynamics 365 Fraud Protection with their existing fraud solution. Not only can merchants send their transactions through real-time APIs to get an inline evaluation, they can also upload their historical data and load asynchronous data (for example, chargebacks) to tune the model to their business scenarios.

## See also

[Purchase protection](#) (docs)

## Graph explorer

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

## Feature details

Dynamics 365 Fraud Protection provides a graph explorer for easy viewing of your e-commerce data. You can use the graph explorer to search and find linkages between entities, like payment instruments, users, addresses, devices, and many others. This includes connections of fraudulent and legitimate transactions to these entities. This can indicate, for example, if someone used a stolen payment instrument to make purchases across several user accounts. The graph explorer, therefore, can be a powerful fraud investigation tool.

## See also

[Visually explore your data](#) (docs)

## Protect

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

The Protect experience embeds Dynamics 365 Fraud Protection into a merchant's full production environment. Dynamics 365 Fraud Protection can provide risk assessments for transactions, which merchants can leverage to make their own decisions about acceptance or rejection. Merchants can use the customer support tool to efficiently adjudicate any escalations from customers regarding rejections, and can use the transaction acceptance booster to share pertinent information about transaction trustworthiness with banks and issuers to boost their acceptance rates.

### See also

[Protect experience](#) (docs)

## Rules engine

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

Using the rules engine, merchants can create model operating points and policy rules to help manage the handling of their transactions. These model operating points and rules leverage payload attributes, custom lists (safe and block lists of customers, along with custom lists of data relevant to your business scenarios), and more to help merchants manage the trade-offs inherent in preventing fraud and abuse while minimizing false positives.

### See also

[Manage lists and rules](#) (docs)

## Scorecard

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

Use the scorecard to understand the month-by-month performance of your fraud protection. In the **Evaluate** experience, your scorecard lets you evaluate the capabilities of Dynamics 365 Fraud Protection. In the **Protect** experience, you can monitor the real-time performance of Dynamics 365 Fraud Protection as your system of record. The scorecard can be filtered and pivoted on business critical attributes that provide valuable snapshots of key performance indicator (KPI) trends.

### See also

[Learn from the scorecard](#) (docs)

## Virtual fraud analyst

Enabled for	Public preview	General availability
End users, automatically	✓ Apr 23, 2019	✓ Oct 1, 2019

### Feature details

The virtual fraud analyst will support additional functionality to allow for a more customized fraud protection strategy. It will offer benchmarking and a flexible rules engine alongside the powerful model operation experience that exists today. Updates will include:

- Ability to view model operation and policy rules holistically to make decisions for a merchant's full stack quickly and easily.
- Updates to the risk score thresholds to achieve optimal profitability.

### See also

[Use the virtual fraud analyst](#) (docs)

## Sign-up assessment

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Jul 31, 2019	✓ Oct 1, 2019

### Feature details

Users intending to commit fraudulent activity might create fake accounts to obtain free or promotional benefits as a new user, or create sleeper accounts that can be leveraged later for fraud attacks against a merchant. These actions can lead to financial and non-financial losses. Dynamics 365 Fraud Protection will provide merchants the capability to assess account creation events in their ecosystem and protect themselves from abuse or automated attacks. It will also help minimize the impact to legitimate customers, thus maintaining a seamless sign-up experience.

### See also

[Dynamics 365 Fraud Protection overview](#) (docs)

## External compliance certification

Enabled for	Public preview	General availability
End users, automatically	✓ Aug 9, 2019	✓ Oct 1, 2019

### Feature details

Fraud products use considerable amounts of sensitive data. Thus, customers require strong security and compliance adherence from any product they intend to use for their fraud prevention business. Dynamics 365 Fraud Protection addresses this concern with high standards of compliance.

Dynamics 365 Fraud Protection is certified to be compliant with assessment standards ISO/IEC 27001:2013 and ISO/IEC 27018:2019 by an accredited third-party certification body. This provides independent validation that applicable security controls are in place and operating effectively. As part of this compliance verification process, auditors have validated in their statement of applicability that the Microsoft in-scope cloud service has incorporated ISO/IEC 27001:2013 and ISO/IEC 27018:2019 controls for the protection of PII in Azure as well. To remain compliant, Dynamics 365 Fraud Protection will be subject to annual third-party reviews.

**See also**

[Dynamics 365 Fraud Protection overview](#) (docs)

## Overview of Dynamics 365 Product Insights 2019 release wave 2

Dynamics 365 Product Insights enables organizations to transform their product development, marketing, sales, and support by acting on real-time insight into their customers' usage and experience. In minutes, organizations can easily collect signals from their products and services and gain actionable insights tailored to their industry and strategy.

Product Insights transforms the product-related business processes from slow, reactive processes driven by manual customer feedback in a traditional "sell-and-forget" model into fast, proactive processes powered by automated observational data from the product itself. Product development teams can easily use Product Insights to make data-driven decisions and grow their business.

Product Insights provides out-of-the-box insights about the usage, performance, and health of products and services so businesses get value right away. Because businesses want signals and insights tailored to their product and strategy, Product Insights makes it easy for business users to create custom signals and custom insights.

Product Insights integrates seamlessly with Dynamics 365 Customer Insights as well as the rest of the Dynamics 365 suite so that customers can gain holistic and actionable insights into their customers, products, marketing, sales, and customer service.

### What's new and planned for Dynamics 365 Product Insights

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

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This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">360-degree signals</a>	End users, automatically	✓ Oct 1, 2019	-
<a href="#">Built-in collaboration</a>	End users, automatically	✓ Oct 1, 2019	-

Feature	Enabled for	Public preview	General availability
<a href="#">Deep integration</a>	End users, automatically	✓ Oct 1, 2019	-
<a href="#">High-value AI insights</a>	End users, automatically	✓ Oct 1, 2019	-
<a href="#">Interactive drilldowns</a>	End users, automatically	✓ Oct 1, 2019	-
<a href="#">Out-of-the-box insights</a>	End users, automatically	✓ Oct 1, 2019	-
<a href="#">Rich custom metrics</a>	End users, automatically	✓ Oct 1, 2019	-
<a href="#">Sharing and discovery</a>	End users, automatically	✓ Oct 1, 2019	-

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## 360-degree signals

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

## Feature details

Users can easily instrument their Internet of Things (IoT) devices, mobile applications, web sites, cloud services, and line-of-business applications. They can also easily bring in existing signals from a variety of data sources, including Azure IoT. This enables them to understand their products holistically, not just the devices but also companion apps and supporting services.



## See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Built-in collaboration

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

## Feature details

As users find opportunities and issues, they can easily collaborate with their colleagues and other teams to discuss, analyze, and resolve them. This breaks down the silos across the product development teams.

## See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Deep integration

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

## Feature details

Users can easily embed their product insights in the marketing, sales, and customer service applications in the Dynamics 365 suite. This eliminates the silos between product development and other departments in an organization and enables transforming how organizations market, sell, and support their customers.

## See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## High-value AI insights

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

### Feature details

Using the latest advancements in AI and machine learning, Product Insights helps users prioritize their attention and explore their data. Upon launching it, they get news feeds of the top insights, such as outliers and anomalies, into the metrics that matter to them. For each of the insights, they can drill down into the data and take actions. As they explore the data, they get AI-powered suggestions on interesting paths to explore.

### See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Interactive drilldowns

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

### Feature details

Users can drill down from aggregate-level insights to the instance-level product signals to understand what happened and identify what action to take. They can explore and analyze petabytes of data with interactive latencies.

### See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Out-of-the-box insights

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

### Feature details

Users can get started quickly with out-of-the-box templates for Product Insights. From there, customers can easily customize the signals and insights to the unique nature of their products and their strategy for differentiation.

### See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Rich custom metrics

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

### Feature details

Users can create the metrics that matter for their products and services. They can aggregate the signals (for example: counts, averages, percentiles), filter and split by dimensions, smooth and clean the data, and compute expressions.

### See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Sharing and discovery

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 1, 2019	-

### Feature details

Users can share their projects, signals, and insights with their colleagues and collaborate on them. They can leverage the modern fine-grained tenancy model to provide access to the right people while maintaining control of data privacy.

### See also

[Announcing Microsoft Dynamics 365 Product Insights – Now in preview](#) (blog)

[Product Insights](#) (docs)

## Overview of Dynamics 365 Connected Store 2019 release wave 2

Dynamics 365 Connected Store is a new product that helps store managers understand and manage their connected physical spaces.

- Grow in-store retail profitability with actionable insights by using data from cloud-connected sensors.
- Use AI and IoT to turn observational data captured in your store into insights that managers and employees can act on.
- Learn what's going on across the business, such as long checkout lines and equipment failures, with insights presented in data visualizations and actionable alerts.

The Dynamics 365 Connected Store observational data is stored in Common Data Service, which makes it possible for analysts and developers to create customized insights and integrate this new class of data into existing Dynamics 365 workflows.

Dynamics 365 Connected Store provides the tools necessary to measure the performance of your physical spaces to make informed, data-driven decisions that help optimize your entire operation, reduce costs, and increase revenue.

# Mixed reality

## Overview of Dynamics 365 Remote Assist 2019 release wave 2

Dynamics 365 Remote Assist empowers technicians to solve problems faster the first time. With heads-up, hands-free video calling on Microsoft HoloLens, technicians can collaborate with remote experts on a PC or mobile device to troubleshoot issues in context.

The list of capabilities for the 2019 release wave 2 includes:

- Capture and share annotations without being in a call.
- Improved call experience for low-bandwidth situations.
- Dynamics 365 Remote Assist for mobile phones.

[Watch overview video](#)

## What's new and planned for Dynamics 365 Remote Assist

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Dynamics 365 Remote Assist for mobile phones</a>	End users, automatically	-	✓ Oct 1, 2019
<a href="#">Join Microsoft Teams meetings</a>	End users, automatically	-	✓ Oct 17, 2019
<a href="#">HoloLens 2 support</a>	End users, automatically	-	✓ Oct 29, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Improved call experience for low-bandwidth situations</a>	End users, automatically	-	✓ Feb 27, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Dynamics 365 Remote Assist for mobile phones

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Feature details

Our first augmented reality application for mobile phones launched as an Android-based public preview in April 2019. On October 1, Dynamics 365 Remote Assist for mobile became generally available. In the GA release, we added support for iOS and also added support for Android and iOS tablets, as well as additional features to bring the mobile and HoloLens experiences closer to parity. First-line workers can annotate and mark up the world in a method similar to using a HoloLens, but with their phone.

Dynamics 365 Remote Assist for mobile phones provides a pathway for customers who are unable to meet all of their Dynamics 365 Remote Assist needs due to limited HoloLens device availability. The app will also result in wider usage of Dynamics 365 Remote Assist due to the scale that mobile phones represent.

## See also

[Feature exploration](#) (video)

[Remote Assist mobile overview](#) (docs)

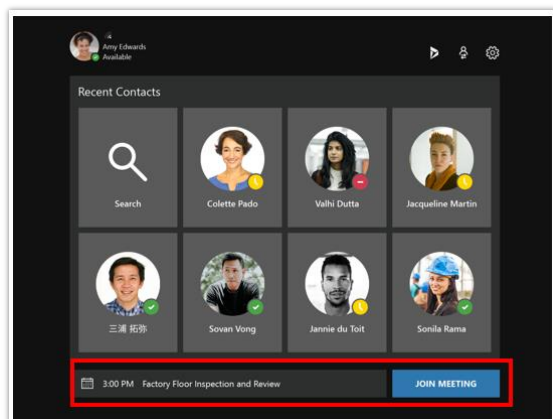
## Join Microsoft Teams meetings

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 17, 2019

## Feature details

You can now join a Microsoft Teams meeting directly from Dynamics 365 Remote Assist. This is useful for maintenance and repairs that are scheduled in advance. It's also useful for inspections and other recurring scenarios.

To join a call, select the **Join Meeting** button below the **Contacts** screen. The **Join Meeting** button appears if the meeting is happening now or sometime in the next 30 minutes.



### Join Meeting button

For more information on joining a meeting from Dynamics 365 Remote Assist, see the [Dynamics 365 Remote Assist user guide](#).

## See also

[Join a Dynamics 365 Remote Assist meeting on HoloLens](#) (docs)



## HoloLens 2 support

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 29, 2019

### Feature details

When HoloLens 2 is generally available, we'll simultaneously ship a compatible version of Remote Assist as an in-box application. As part of this support, users will be able to take advantage of Windows Hello iris detection, which will simplify and speed up user sign-in.

Bundling Remote Assist with HoloLens 2 will also result in a significant overall cost savings for customers versus buying the hardware and software separately.

### See also

[Getting around HoloLens 2](#) (docs)

## Improved call experience for low-bandwidth situations

Enabled for	Public preview	General availability
End users, automatically	-	✓ Feb 27, 2020

### Feature details

Customers experience various types of bandwidth situations. With the added support for low-bandwidth scenarios, Dynamics 365 Remote Assist will scale gracefully from full two-way video with annotations (available today) to live annotations and audio over a still image, as well as points in between.

### See also

[Using Remote Assist in low bandwidth scenarios](#) (docs)

## Overview of Dynamics 365 Layout 2019 release wave 2

Dynamics 365 Layout provides a new way for space planners to bring designs from concept to completion with confidence and speed. Lay out spaces with imported or gray box assets and view high-quality holograms overlaid in the real world with Microsoft HoloLens or in a virtual representation in Windows Mixed Reality. Import 3D models and experience designs as high-quality holograms.

The list of capabilities for the 2019 release wave 2 includes:

- Application compatibility with HoloLens 2.
- Optimized room-scanning capabilities.
- Locked assets view for Dynamics 365 Layout reviews.

### What's new and planned for Dynamics 365 Layout

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Animated out-of-the-box experience for HoloLens 2</a>	End users, automatically	✓ Oct 22, 2019	
<a href="#">App compatibility with HoloLens 2</a>	End users, automatically	-	✓ Oct 1, 2019
<a href="#">Asset lock</a>	End users, automatically	-	✓ Oct 1, 2019
<a href="#">Optimized room scan</a>	End users, automatically	-	✓ Oct 1, 2019

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
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For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#).

## Animated out-of-the-box experience for HoloLens 2

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 22, 2019	-

### Feature details

We heard a lot of feedback from customers about the need for a quick demo of Dynamics 365 Layout. The new hands-free, animated experience showcases the value and key capabilities of Dynamics 365 Layout for space planning. The experience starts automatically for every fresh installation before users sign in to the app. Users also have the option to skip the experience.

### See also

[Dynamics 365 Layout user guide](#) (docs)

## App compatibility with HoloLens 2

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Feature details

Dynamics 365 Layout will be available as an in-box application on Microsoft HoloLens 2. Users will be able to continue using all the currently supported features, but with a better field of view and better performance supported by the new device. We'll also include a new out-of-the-box

experience through a non-interactive tour to introduce the application and demonstrate its value.

## Asset lock

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Feature details

Users will be able to use a view to lock 3D models for reviewing purposes, so the models can't be edited by other collaborators or peers. This will help reduce any intentional or unintentional manipulation of spaces.

## Optimized room scan

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Feature details

Set up a new layout and start planning in seconds with optimized room scan. Users can simply select the floor and rotate the floor grid to adjust the coordinate system to their preferred orientation. Users can still place walls and ceilings, but it's not required to start a new layout.

## Overview of Dynamics 365 Product Visualize 2019 release wave 2

A salesperson's ability to achieve a shared understanding with the customer as early as possible in the sales process is critical for faster deal closure, fewer changed orders, and increased customer trust. Microsoft Dynamics 365 Product Visualize empowers salespeople to convey the true potential of their products to their customers by harnessing the power of augmented reality on their mobile devices (iOS devices only for the 2019 release wave 2).

Deep integration with Dynamics 365 Sales ensures salespeople have a continuous workflow between opportunity management and product visualization. Additional tools for creating notes with spatial context and integration with Microsoft Teams ensures the full context of the conversation can be captured and shared with colleagues across the organization.

For the 2019 release wave 2, we're focusing on integrating customer feedback to make our app more usable. Usability updates include (but are not limited to) user interface improvements for 3D model layers, and improvements that will make the app more inclusive and accessible. We'll also focus on localizing the app for new regions and languages.

### What's new and planned for Dynamics 365 Product Visualize

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Usability improvements</a>	End users, automatically	✓ Oct 11, 2019	-

Description of **Enabled for** column values:

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- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.

- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Usability improvements

Enabled for	Public preview	General availability
End users, automatically	✓ Oct 11, 2019	-

### Feature details

We'll integrate customer feedback to make our app more usable. Updates include (but are not limited to) user interface improvements for 3D model layers, and improvements that will make the app more inclusive and accessible.

### See also

[Dynamics 365 Product Visualize User Guide](#) (docs)

## Overview of Dynamics 365 Guides 2019 release wave 2

Dynamics 365 Guides is a mixed-reality application for Microsoft HoloLens that enables employees to learn in the flow of work by providing holographic instructions when and where they need them. Dynamics 365 Guides:

- Engages employees through hands-on learning.
- Helps organizations improve training efficiency.
- Generates data to improve processes.

Dynamics 365 Guides addresses the needs of three key personas: content authors, operators, and managers/analysts.

### Content authors

Authoring includes two steps:

**Step 1: Create the guide.** Using the Dynamics 365 Guides PC app, create the guide by defining the steps required to perform a task and attach 2D images/videos and/or 3D assets to each step from a central content library. Media files are automatically optimized for best quality and performance on HoloLens.

**Step 2: Preview the guide and place the objects.** Using the Dynamics 365 Guides HoloLens app, preview the guide flow and place the instruction cards and 2D/3D assets in the appropriate place in the physical world. Add aids such as 3D tethers and styles (such as a warning or caution).

### Operators

The Dynamics 365 Guides HoloLens app provides employees both first-time training or on-the-job assistance, by placing the information employees need in the physical space where they work. Users can control the experience completely hands-free, using their gaze to navigate through the app. Instructions follow users around but don't get in the way, and when users don't need the instructions anymore, they can turn them off with a glance.

### Managers/analysts

Dynamics 365 Guides Analytics provides insight into details behind every step of each guide, which can be used to assess production line processes, measure improvements, and drive efficiencies by modifying processes and updating the corresponding guide.

## Focus for 2019 release wave 2

The list of capabilities for the 2019 release wave 2 includes:

- Assign or filter guides through prebuilt or custom entities.
- General availability of Dynamics 365 Field Service integration.

[Watch overview video](#)

## What's new and planned for Dynamics 365 Guides

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

Feature	Enabled for	Public preview	General availability
<a href="#">Assign or filter guides through prebuilt or custom entities</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Opt out of collecting Dynamics 365 Guides data</a>	End users, automatically	-	✓ Oct 1, 2019
<a href="#">Try a demo of Dynamics 365 Guides</a>	End users, automatically	-	✓ Oct 1, 2019
<a href="#">Integration with Dynamics 365 Field Service</a>	Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019
<a href="#">Follow mode</a>	End users, automatically	-	✓ Oct 29, 2019
<a href="#">Support for node-based animations</a>	End users, automatically	-	✓ Oct 29, 2019



Feature	Enabled for	Public preview	General availability
<a href="#">Support for STL and PLY file formats for 3D models</a>	End users, automatically	-	✓ Oct 29, 2019
<a href="#">Turn animations on or off</a>	End users, automatically	-	✓ Oct 29, 2019
<a href="#">Additional resources in Help menu for the PC app</a>	Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020
<a href="#">Assign Operator and Author roles to users</a>	End users by admins, makers, or analysts	-	✓ Jan 28, 2020
<a href="#">Drag and drop multiple files into the PC app gallery</a>	Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020
<a href="#">Instinctual interactions for authors on HoloLens 2</a>	Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020
<a href="#">Open a website from the HoloLens app</a>	Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020
<a href="#">Anchor a guide with a QR code</a>	End users, automatically	-	✓ Feb 25, 2020
<a href="#">Create and copy a link to a guide or step</a>	Admins, makers, or analysts, automatically	-	✓ Feb 25, 2020
<a href="#">Deactivate, reactivate, or delete a guide</a>	Admins, makers, or analysts, automatically	-	✓ Feb 25, 2020
<a href="#">Open an app created in Power Apps from a step</a>	End users, automatically	-	✓ Feb 25, 2020
<a href="#">Sort items in the PC app gallery by recently added or by name</a>	Admins, makers, or analysts, automatically	-	✓ Mar 31, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
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- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Assign or filter guides through prebuilt or custom entities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

Dynamics 365 Guides will expose a configuration that allows customers to define a view in the Guides entity. They can use this view to specify the guides assigned to a signed-in user. The user will see an ordered list of guides when they sign in to the HoloLens app, which will make it easy to find the content they need to do their assigned tasks. This view retrieves information from entities in Common Data Service, which makes it easy for customers to integrate Dynamics 365 Guides with their existing systems via the Common Data Service API.

### See also

[Feature exploration](#) (video)

## Opt out of collecting Dynamics 365 Guides data

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

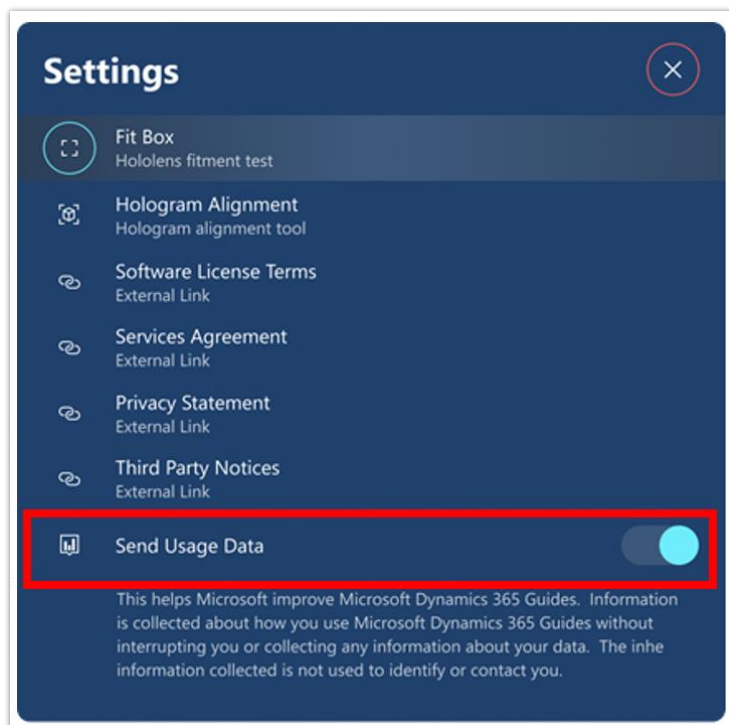
## Feature details

You can choose to opt out of:

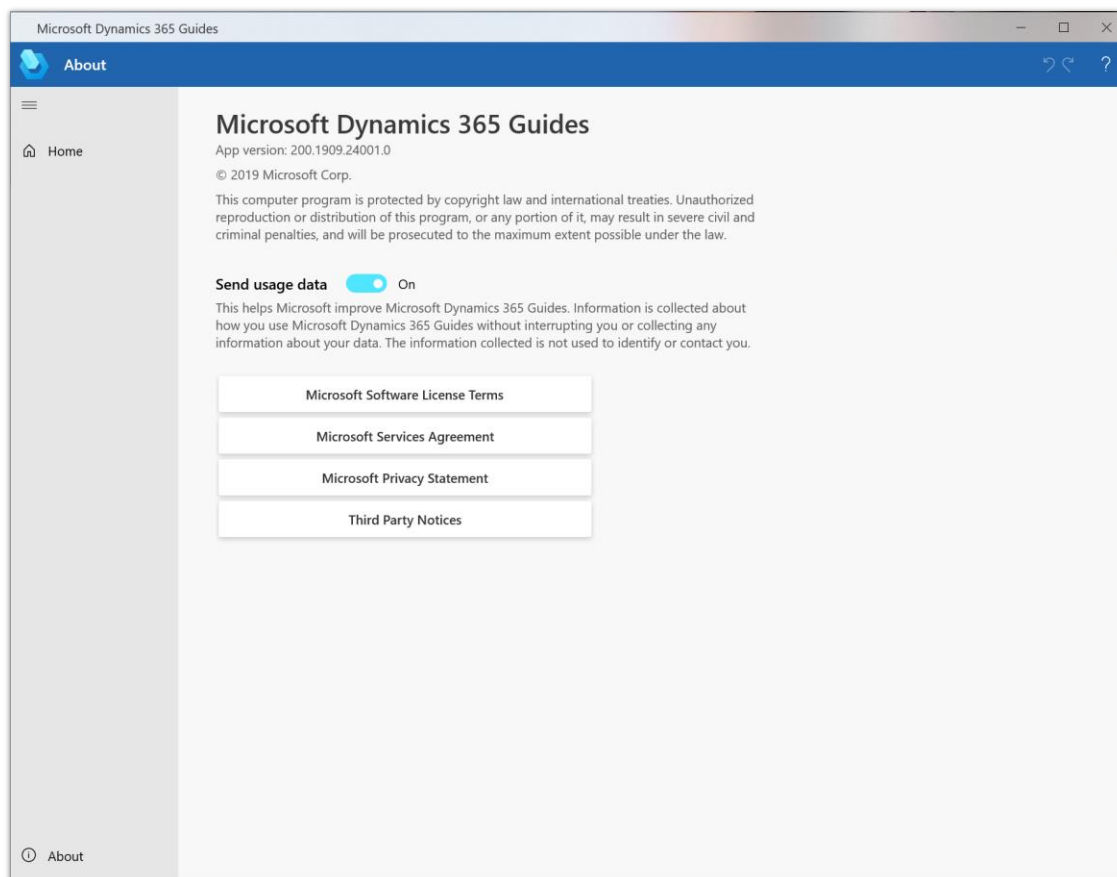
- Sending telemetry data to Microsoft.
- Data collection for Guides Analytics.

### Opt out of sending telemetry data to Microsoft

For privacy reasons, you can now turn off the ability to send telemetry data to Microsoft from both PC and HoloLens.



*Send usage data HoloLens app setting*



### *Send usage data PC app setting*

Microsoft uses this data to improve the product. Opting out prevents Microsoft from collecting any activity data.

## **Opt out of data collection for Guides Analytics**

To prevent usage data from showing in Power BI dashboards, administrators can turn off data collection for specific users directly from Common Data Service. This data is never sent to Microsoft. It's stored in a customer's tenant to help them collect insights about how Dynamics 365 Guides is being used in their company. For more information on Guides Analytics, see [Analyze your guides](#).

For information on opting out of data collection for Guides Analytics, see [Opt out of storing Dynamics 365 Guides events data in Common Data Service](#).

## **See also**

[Opt out of storing Dynamics 365 Guides usage data in Common Data Service](#) (docs)

## Try a demo of Dynamics 365 Guides

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 1, 2019

### Feature details

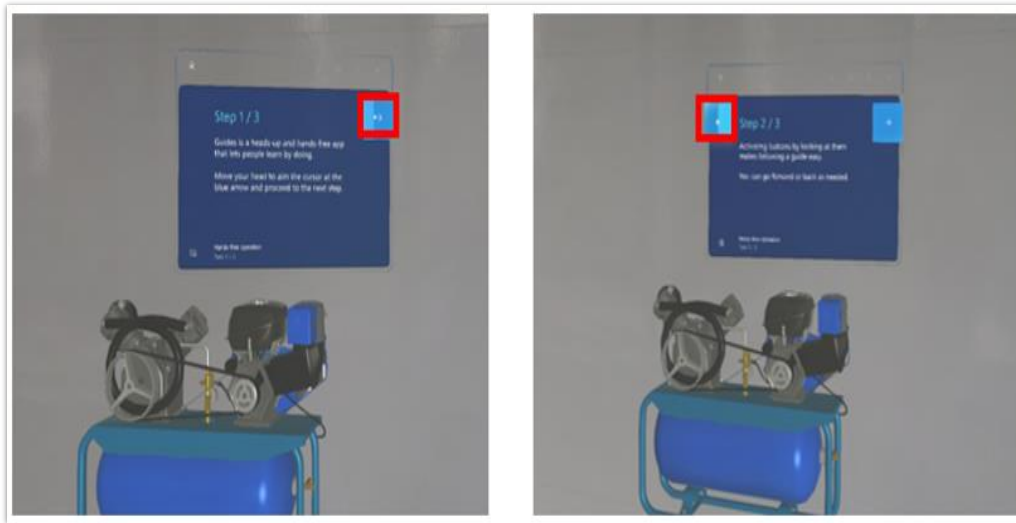
You can now demo a sample guide on the HoloLens app without signing up for a license or authoring a guide yourself. The demo showcases the value of Dynamics 365 Guides for your company.

This five-minute demo is useful for any type of Dynamics 365 Guides user whether you're an author, operator, process engineer, or business decision maker. Use the demo to get a quick overview of how Dynamics 365 Guides works.



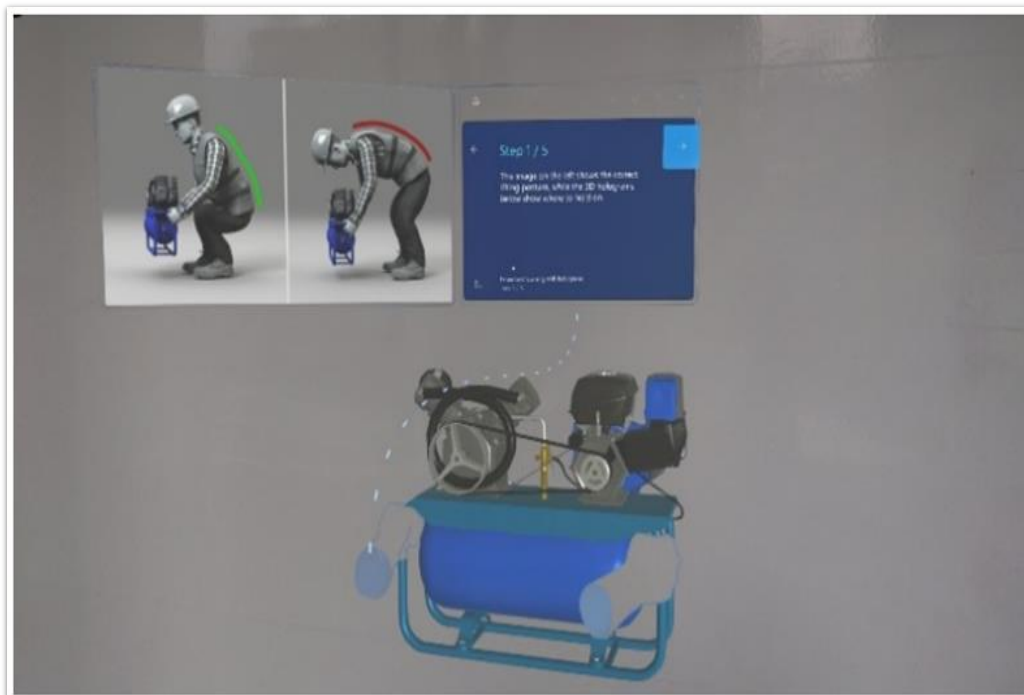
#### *Try the demo button*

- Try the hands-free interface to activate buttons even when your hands are full. Gaze at the **Next** button to move forward in a guide and the **Back** button to move backward.



### *Next and Back buttons*

- Understand how steps can show safe procedures with 3D holograms and 2D photos.



### *Safe procedure examples*

- Experience step-by-step instructions that point to where the work takes place.



*Dotted line examples*

For more information on the demo, see [Get started with Dynamics 365 Guides](#).

### See also

[Get started with Dynamics 365 Guides](#) (docs)

## Integration with Dynamics 365 Field Service

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Aug 1, 2019	✓ Oct 1, 2019

### Feature details

Dynamics 365 Field Service integration is now generally available. Dynamics 365 Field Service integration enables Field Service customers to attach guides to Field Service tasks. When work orders are assigned to technicians, the technicians can use the dedicated **Field Service** tab in the HoloLens application to launch the assigned guide and do their work.

### See also

[Feature exploration](#) (video)

[Field Service integration blogpost](#) (blog)

[Integrate Dynamics 365 Field Service with Dynamics 365 Guides](#) (docs)

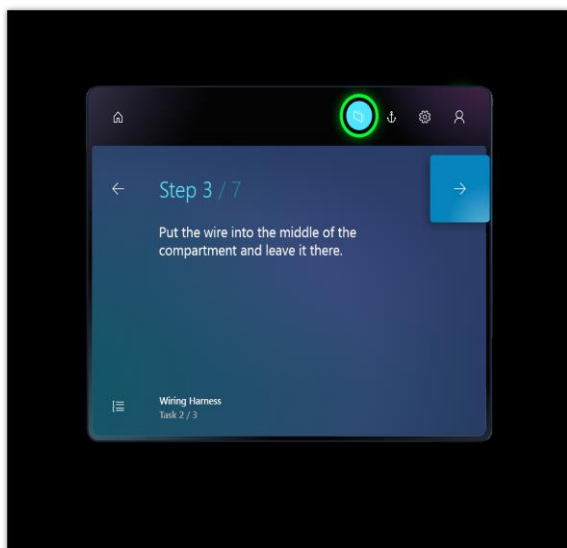
## Follow mode

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 29, 2019

## Feature details

The Step card provides the instructions that an operator follows to complete a task. As an operator goes through the steps in a task, the Step card follows them on HoloLens to keep the instructions where they need them. Wherever the operator looks, the Step card follows their gaze so they never have to worry about where their instructions are.

Operators can stop the Step card from following them by turning the Follow mode behavior off from the navigation bar. They can also grab the card's navigation bar at any time to place the card where they like.



*Step card example*

## See also

[Use Follow mode and pinning in Dynamics 365 Guides](#) (docs)



## Support for node-based animations

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 29, 2019

### Feature details

You can now import 3D models with node-based animations and use them in your work instructions.

### See also

[Turn off animations in Dynamics 365 Guides](#) (docs)

## Support for STL and PLY file formats for 3D models

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 29, 2019

### Feature details

In addition to the glTF, GLB, and FBX file formats, Dynamics 365 Guides now supports STL and PLY file formats. You can use a combination of third-party tools and Dynamics 365 Import Tool (Preview) to prepare your 3D (CAD) models.

### See also

[Convert 3D models to use as holograms in Dynamics 365 Guides](#) (docs)

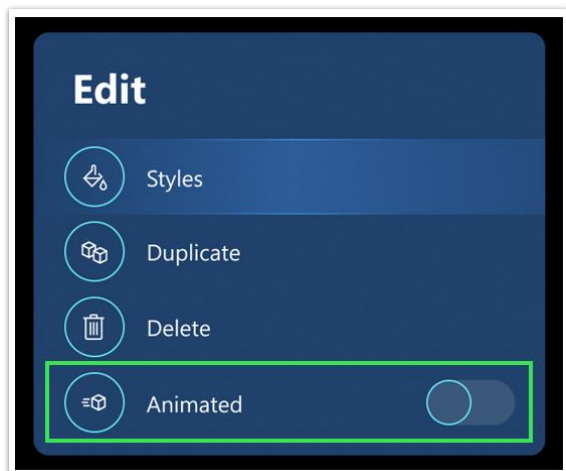
## Turn animations on or off

Enabled for	Public preview	General availability
End users, automatically	-	✓ Oct 29, 2019

## Feature details

If you use animated 3D models in your guide, you can turn the animation off if you plan to show it with animation in one step and without animation in another. This option is available from the **Edit** menu when you select the model.

You might also want to use this feature when placing animated models in space. You can turn the animation off, place the model, and then turn the animation back on again. This way the animation will not interfere with your ability to place it.



*Animated command in Edit menu*

## See also

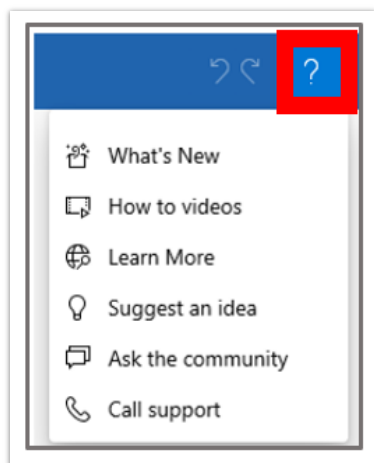
[Turn off animations in the Dynamics 365 Guides HoloLens app](#) (docs)

## Additional resources in Help menu for the PC app

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020

## Feature details

Select the **Help** (question mark) button in the PC app to find resources, such as video tutorials on creating guides, customer support phone numbers, and ways to send feedback and ideas to the Dynamics 365 Guides team.



*Additional resources in Help menu*

### See also

[Get help and provide feedback](#) (docs)

## Assign Operator and Author roles to users

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Jan 28, 2020

### Feature details

Administrators can control which users have access to Author mode and Operate mode. Users with Author mode privileges can use the PC and HoloLens apps to create, operate, and edit guides. Users with Operate mode privileges can use guides but can't create or edit them. Operators can also open guides directly; they don't have to select **Operate** mode.

### See also

[Assign an Author or Operator role to a user in Dynamics 365 Guides](#) (docs)

## Drag and drop multiple files into the PC app gallery

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020

## Feature details

Drag and drop multiple files from your local file folder into the PC app gallery to import them all at once.

## See also

[Create steps and add 3D models or 2D media in the Dynamics 365 Guides PC app](#) (docs)

## Instinctual interactions for authors on HoloLens 2

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020

## Feature details

Select and position holograms with direct touch, just like real objects. Interact with holograms in a consistent way when they're out of reach. On HoloLens 1, the app works the same as before since HoloLens 1 doesn't support hand tracking.

## See also

[HoloLens 2 gestures for authoring and navigating in Dynamics 365 Guides](#) (docs)

## Open a website from the HoloLens app

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 28, 2020

## Feature details

Add a website link to a step so operators can see and interact with information outside of Dynamics 365 Guides. The website opens within Dynamics 365 Guides so operators keep the context of the guide. For example, you might want to provide a link to a parts diagram, parts inventory system, analytics dashboard, or information about IoT sensors. Website links enable authors to create a seamless workflow for operators.

## See also

[Access a website linked from a Step card in Dynamics 365 Guides](#) (docs)

## Anchor a guide with a QR code


Enabled for	Public preview	General availability
End users, automatically	-	✓ Feb 25, 2020

### Business value


QR codes are a more reliable anchoring method than circular codes or holographic anchors, and you can print them in different sizes. You can also embed a guide in a QR code, which makes it possible for operators to launch a specific guide or step directly from the HoloLens shell.

### Feature details


QR codes are a more reliable anchoring method than circular codes or holographic anchors, and you can print them in different sizes. You can also embed a guide in a QR code, which makes it possible for operators to launch a specific guide or step directly from the HoloLens shell.



**QR Code**  
[Learn more](#)



**Circular Code**  
[Learn more](#)



**Holographic**  
[Learn more](#)

High accuracy ⓘ	✓	✓	-
Flexible marker size	✓	-	-
HoloLens 2 feature ⓘ	✓	-	-
Required items	Printer	Printer	-

Cancel

Currently Selected

Select

Select

*QR code for anchoring*

### See also

[Anchor your guide to the real world in the Dynamics 365 Guides PC app](#) (docs)

## Create and copy a link to a guide or step

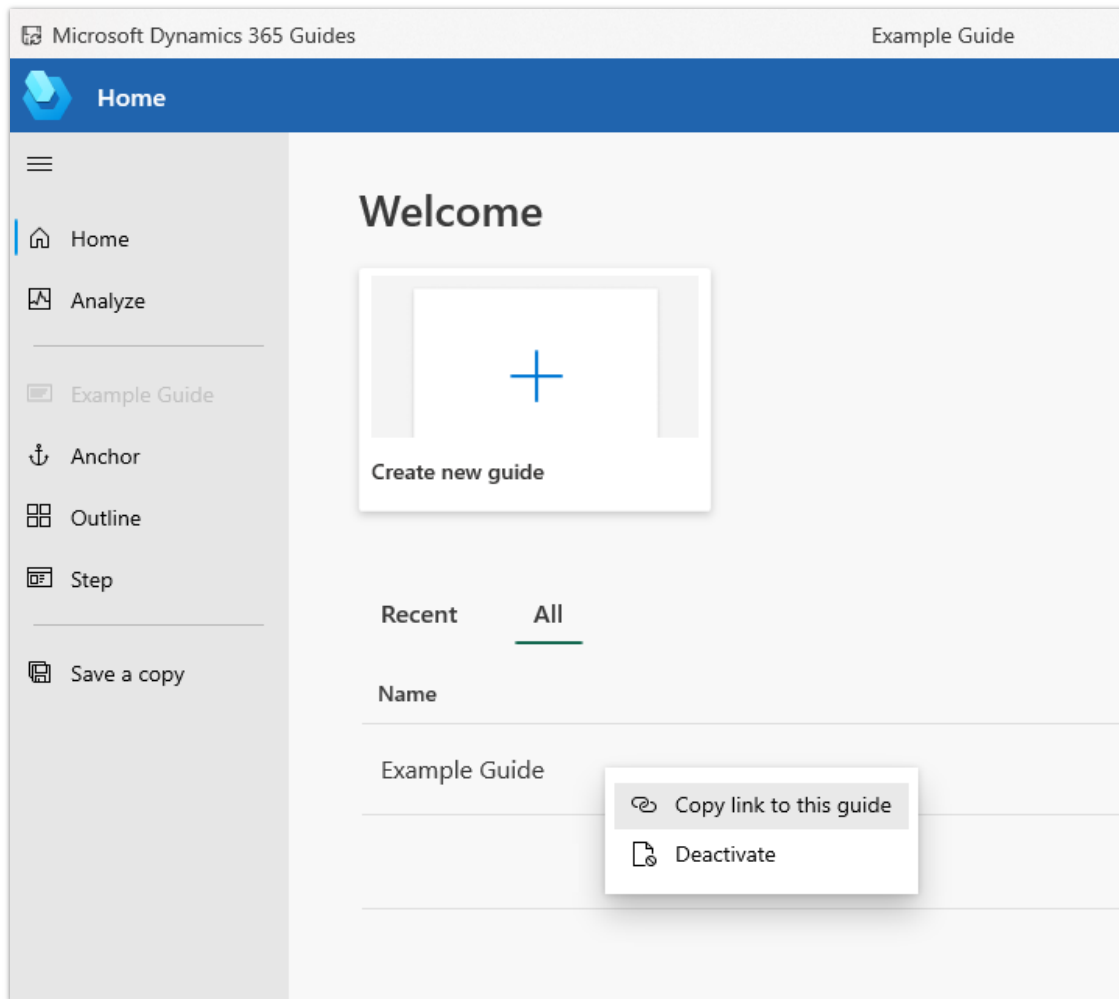
Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Feb 25, 2020

### Business value

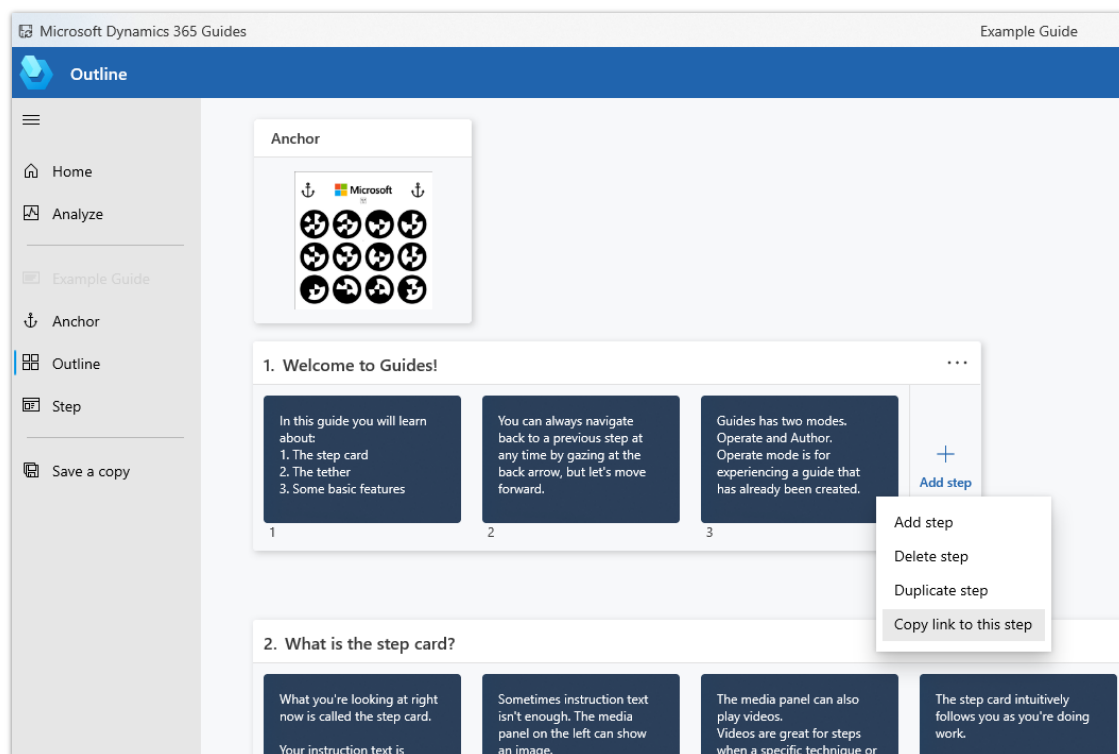
Share links to a specific guide (or step) with another author to collaborate on a guide. You can also embed a link in a QR code to launch a guide (or step) from the HoloLens shell.

### Feature details

You can create and copy a link to a guide or a step from the PC authoring app. Share the link with a team member, make the link available from another app, or embed it in a QR code so the operator can open a guide or step directly from the HoloLens shell.



*Copy link to a guide*



*Copy link to a step*

## See also

[Create and copy a link to a guide or step](#) (docs)

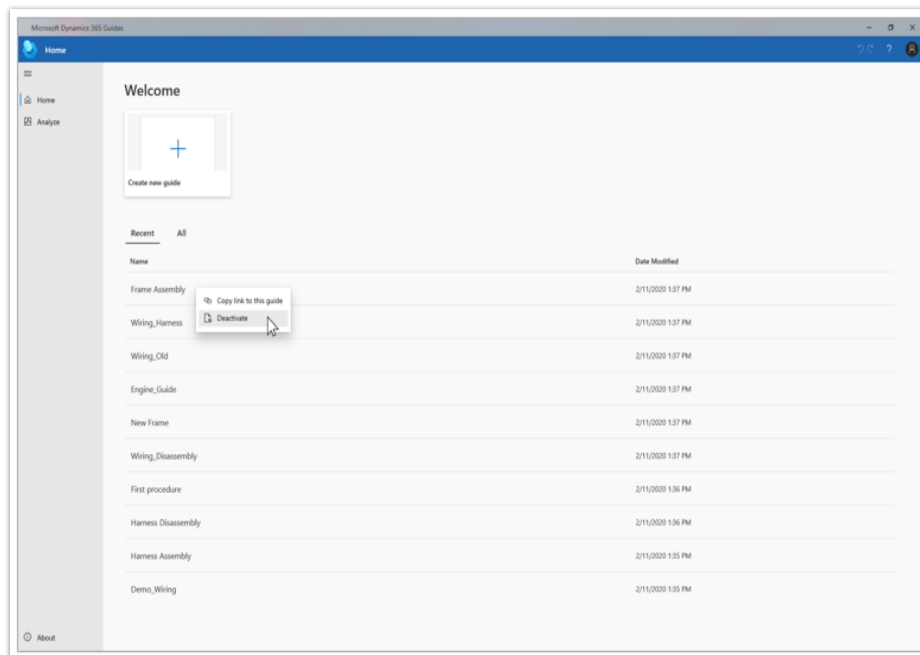
## Deactivate, reactivate, or delete a guide

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Feb 25, 2020

## Feature details

Authors can now deactivate guides that are no longer needed. Admins can activate, deactivate, or delete guides.





*Deactivate a guide*

## See also

[Deactivate a guide \(for authors\)](#) (docs)

## Open an app created in Power Apps from a step

Enabled for	Public preview	General availability
End users, automatically	-	✓ Feb 25, 2020

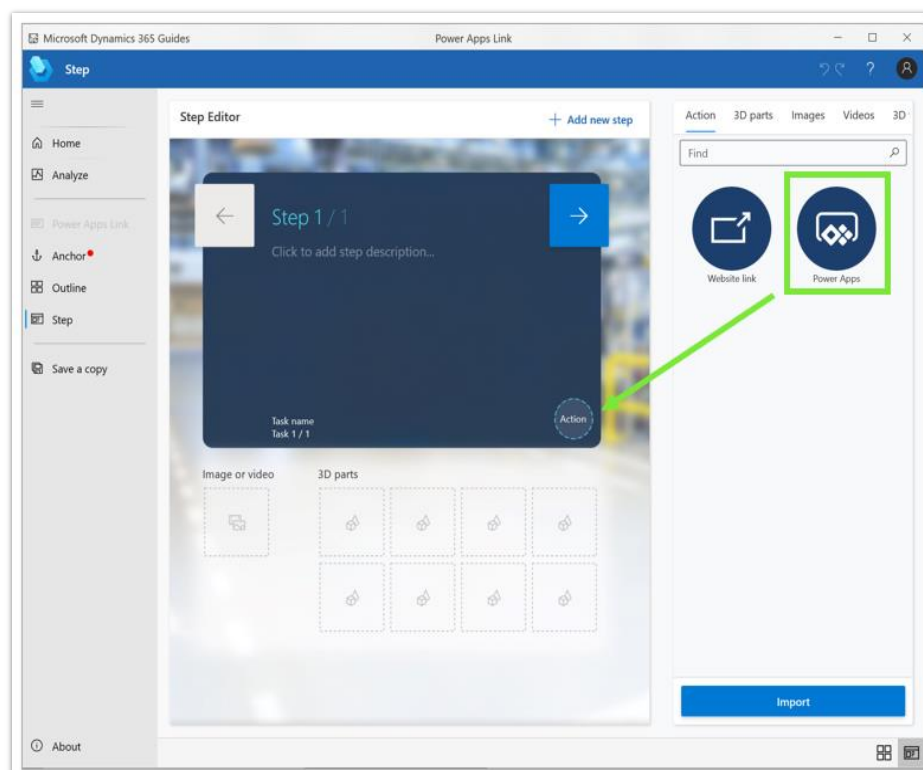
## Business value

Customize your business workflows by providing operators with access to IoT data, quizzes, or data entry through a Power Apps link attached to a guide.

## Feature details

Power Apps enables teams to create custom applications with low-code tools to solve unique business workflows. By combining Dynamics 365 Guides and Power Apps, you can extend Dynamics 365 Guides capabilities to create a more seamless end-to-end solution that fits the needs of your operators.

For example, add a link to an interactive quiz app, parts reordering app, or an app that provides the latest status on IoT sensors.



*Add a Power App to a step*

## See also

[Add a website or Power Apps link to a step](#) (docs)

## Sort items in the PC app gallery by recently added or by name

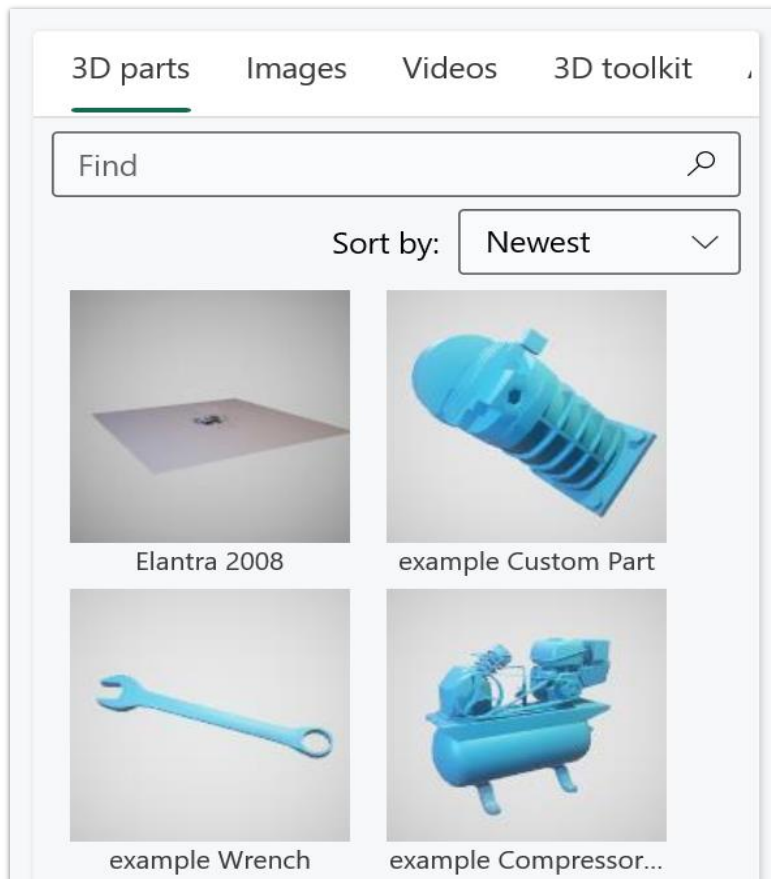
Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 31, 2020

## Business value

Enables authors to quickly find the files they recently uploaded to the gallery or to find files that were recently added by their teammates.

## Feature details

Authors will be able to sort items in the PC app gallery by the most recently added or by name of the item. This makes it easy to find the files they recently uploaded or that were uploaded by their teammates.



*Sort items in gallery by recently added guides or by name*

## See also

[Create steps and add 3D models or 2D media in Dynamics 365 Guides](#) (docs)

# Microsoft Forms Pro

## Overview of Microsoft Forms Pro 2019 release wave 2

Customers today expect businesses to adapt and align to their needs continually. When those needs are not met, they are often quick to share their opinions with others or turn to alternative solutions. It is therefore important for every business to actively listen to customers so they can quickly address any gaps and improve experiences, transforming one-time casual purchasers into loyal customers.

While there are multiple solutions for collecting customer feedback, results are often disparate. With Forms Pro, businesses can build on their familiarity with Microsoft Forms, connecting input from the full customer journey—purchase through support—and offering a comprehensive and meaningful perspective that can help make meaningful changes.

Following our public preview release in March 2019, we have collected customer feedback and made improvements accordingly. Key improvement areas for this release include:

- **Survey distribution:** Improve your survey response rate through built-in survey incentives from Microsoft.
- **Survey insights:** Autotag your survey response comments using the AI model powered by the new Microsoft AI Builder.

## What's new and planned for Microsoft Forms Pro

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

### Survey distribution

Enhanced distribution that allows survey owners to increase responses.

Feature	Enabled for	Public preview	General availability
<a href="#">Survey incentives</a>	End users, automatically	✓ Sep 2, 2019	✓ Oct 1, 2019

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Survey distribution

### Overview

Survey response rate is one of the key metrics when you send out surveys. Microsoft Forms Pro helps you improve your response rate by making sure the survey is sent by a trusted sender and making it easy for your survey recipient to fill out the survey. Forms Pro also helps survey owners to easily follow up with contacts and remind them to respond to the survey.

### Survey incentives

Enabled for	Public preview	General availability
End users, automatically	✓ Sep 2, 2019	✓ Oct 1, 2019

### Business value

One of the key goals for a survey owner when sending a survey is to get as many responses as possible. The more survey responses received, the better insights the survey owner can get from the survey. Offering incentives to people when they are filling out a survey has been proven to be an effective way to increase the response rate.

### Feature details

Microsoft Rewards and Microsoft Forms Pro are partnering to offer Microsoft Rewards as incentives for survey respondents to fill in surveys created by Forms Pro. When Forms Pro users send Forms Pro surveys, the survey recipients are informed that they will be entered into the Microsoft Reward Sweepstakes for a chance to win a Microsoft Surface Book when they complete the survey.

### Geographic areas

This feature will be released into the following Microsoft Azure geographic area:

- United States

### See also

[Offer survey incentives to your respondents](#) (docs)

# Change history

This topic is updated when a feature's release date changes or when a feature is added or removed. You can see the full topic in the Power Platform [Change history](#) online.

# 2019 release wave 2 features available for early access

This topic lists the Power Platform features that can be enabled for testing in your environment beginning August 2, 2019.

Features from the following apps are available as part of early access:

- Power Apps (Unified Interface features)
- Power Automate (features impacting Dynamics 365)
- Power BI
- Power BI template apps

The features from these apps update the existing user experiences. You can opt in early to enable these features in your environment. This will allow you to test these features and then adopt them across your environments. For information on how to enable these features, see [Opt in to 2019 release wave 2 updates](#).

For Dynamics 365 early access features, see [Release wave 2 features available for early access](#).

## Power Apps

For a complete list of the Power Apps features, see [What's new and planned for Power Apps](#).

Feature	Enabled for	Early access	General availability
<a href="#">Anchoring error notifications in Unified Interface</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">Connection role enabled in Unified Interface</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">Form header usability improvements</a>	End users, automatically	August 2, 2019	October 2019



Feature	Enabled for	Early access	General availability
<a href="#">Improved usability, density, and filtering capabilities for the Unified Interface grid</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">Manage email on the timeline wall in Unified Interface</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">Timeline wall filter improvements</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">Timeline wall improvements in Unified Interface</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">Usability enhancements to lookups in Unified Interface</a>	End users, automatically	August 2, 2019	October 2019
<a href="#">View inline images for emails that are read-only</a>	End users, automatically	August 2, 2019	October 2019

## Power Automate

For a complete list of the Power Automate features, see [What's new and planned for Power Automate](#).

Feature	Enabled for	Early access	General availability
<a href="#">Fluent experience for flows in Dynamics 365 and SharePoint available</a>	End users, automatically	August 2, 2019	October 2019

# Power Apps

## Overview of Power Apps 2019 release wave 2

Power Apps is a suite of apps, services, connectors, and a data platform that provides an environment for rapidly developing custom apps for your business needs. Using Power Apps, you can quickly build custom business apps that connect to your business data stored either in the underlying data platform (Common Data Service) or in various online and on-premises data sources (SharePoint, Excel, Office 365, Dynamics 365, SQL Server, and so on). Use Power Apps [documentation](#) to get expert information and answers to address your needs, regardless of how you use Power Apps.

The 2019 release wave 2 provides major improvements across the themes in this list to enable app makers to build higher-quality apps more easily, while still supporting more advanced enterprise and administrator requirements.

Improvements in Power Apps focus not only on introducing capabilities but also on simplifying existing concepts to improve maker and end-user productivity in Power Apps and Dynamics 365 apps built upon Power Apps and the Unified Interface.

[Watch overview video](#)

## What's new and planned for Power Apps

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

## Add intelligence using AI Builder

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Add intelligence to Power Apps with AI Builder</a>	Admins, makers, or analysts, automatically	✓ Jun 9, 2019	-	✓ Oct 7, 2019

## Easier to deliver high-quality apps

Provide the right tools and components to build awesome apps for end users.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Build and consume reusable canvas components</a>	End users by admins, makers, or analysts	✓ Feb 26, 2020	-	-
<a href="#">Faster, reliable, and stable canvas and model-driven apps on mobile</a>	End users, automatically	-	-	✓ Oct 2, 2019
<a href="#">Improvements to entity designer</a>	Admins, makers, or analysts, automatically	✓ Aug 28, 2019	-	✓ Oct 2, 2019
<a href="#">Sign in using an email address in the Dynamics 365 mobile app on an Android device</a>	End users, automatically	-	✓ Aug 28, 2019	✓ Oct 2, 2019
<a href="#">Power Apps component framework for model-driven apps</a>	End users by admins, makers, or analysts	-	-	✓ Oct 7, 2019
<a href="#">Office 365 suite header coming to Power Apps</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 16, 2019
<a href="#">Video control for Microsoft Stream videos</a>	End users, automatically	-	✓ Jan 20, 2020	✓ Jan 20, 2020

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Power Apps component framework for canvas apps</a>	End users by admins, makers, or analysts	✓ Feb 26, 2020	-	To be announced

## Integrated experience and tooling for administrators

Admin experiences are key to the adoption of any trusted platform.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Improved capacity governance</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 16, 2019

## Portal capabilities for Power Apps

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Portal Checker enhancements</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 14, 2019
<a href="#">Power BI Embedded support for portals</a>	End users by admins, makers, or analysts	-	-	✓ Oct 14, 2019
<a href="#">Power Apps Portals</a>	End users by admins, makers, or analysts	✓ Apr 10, 2019	-	✓ Oct 14, 2019

## Scalable enterprise solutions

Enterprises have scalable solutions as part of the Power Platform.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Environment variables in solutions</a>	Admins, makers, or analysts, automatically	✓ Nov 2, 2019	-	-
<a href="#">Power Apps test framework</a>	Admins, makers, or analysts, automatically	✓ Jan 29, 2020	-	
<a href="#">Model-driven app sharing made easy</a>	Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	
<a href="#">Share apps with users outside your tenant, B2B</a>	End users by admins, makers, or analysts	✓ Jul 26, 2019	-	✓ Oct 16, 2019
<a href="#">The Power Apps Checker includes rules for canvas apps and flows</a>	Admins, makers, or analysts, automatically	✓ Sep 4, 2019	-	✓ Oct 16, 2019
<a href="#">Improved reliability of cascading changes</a>	Admins, makers, or analysts, automatically	-	✓ Sep 9, 2019	✓ Oct 28, 2019
<a href="#">Enhanced offline capabilities for apps on the Dynamics 365 mobile app</a>	End users by admins, makers, or analysts	-	-	✓ Oct 30, 2019

## Unified Interface for everybody

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Improving Save Changes dialog</a>	End users, automatically	-	✓ Aug 1, 2019	✓ Oct 2, 2019

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Adding Save and Create Another record option to Quick Create buttons</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Anchoring error notifications in Unified Interface</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Connection role enabled in the Unified Interface</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Form header usability improvements</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Improved usability, density, and filtering capabilities for the Unified Interface grid</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Manage email on the timeline wall in Unified Interface</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Timeline wall filter improvements</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Timeline wall improvements in Unified Interface</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Usability enhancements to lookups in Unified Interface</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">View inline images for emails that are read-only</a>	End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019
<a href="#">Delegate support in Dynamics 365 App for Outlook</a>	End users by admins, makers, or analysts	-	-	✓ Feb 10, 2020

\* Some features are available for you to opt-in as part of early access on August 2, 2019, including all mandatory changes that impact end users. Learn more about [early access](#).

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
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For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Add intelligence using AI Builder

### Overview

AI Builder is a new Power Platform capability for teams with the business expertise to easily automate processes and predict outcomes to improve business performance. AI Builder is a turnkey solution that brings the power of Microsoft AI through a point-and-click experience. You can now build AI without knowing programming or data science. Using AI is made even easier with integration directly into Power Apps and Power Automate.

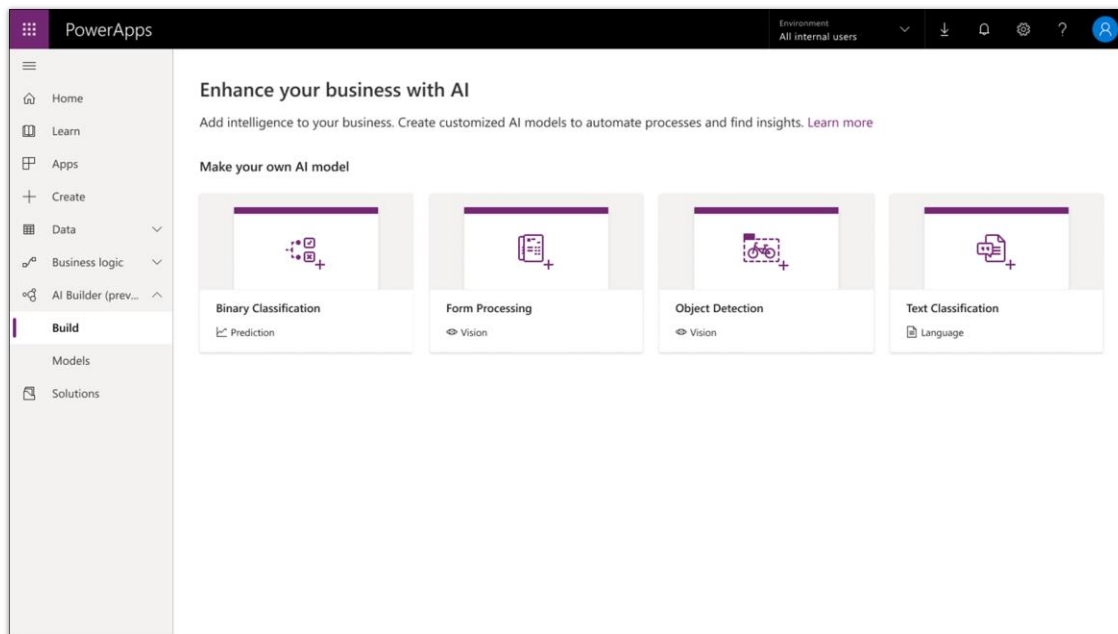
### Add intelligence to Power Apps with AI Builder

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Jun 9, 2019	-	✓ Oct 7, 2019

### Feature details

To start using AI Builder from Microsoft Power Apps:

1. Sign in to [Microsoft Power Apps](#).
2. Select **Build** under **AI Builder (preview)** in the menu on the left side of the page.
3. Select one of the templates.
4. Get started creating AI models for your organization.



### *AI Builder in Power Apps*

## Geographic areas

This feature will be released into the following Microsoft Azure geographic areas:

- United States
- Europe

## See also

[Introducing AI Builder for Power Platform](#) (blog)

[Learn about AI Builder](#) (docs)

## Easier to deliver high-quality apps

### Overview

Improvements for app makers and users are focused on improving productivity by introducing capabilities and simplifying existing concepts to remove barriers while still providing rich capabilities for advanced users. Power Apps introduces capabilities for pro-developer components and reusable components, as well as improvements for working with Common Data Service for both canvas and model-driven apps. In addition to improvements to the app-maker experiences, Power Apps also introduces updates to the Unified Interface to improve density, usability, and navigation.



## Build and consume reusable canvas components

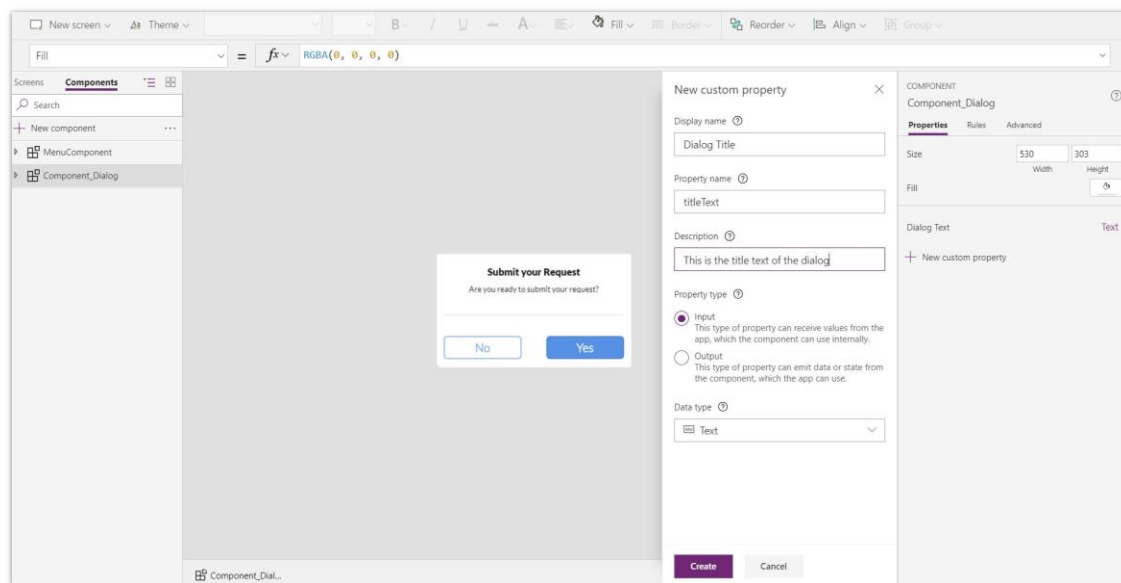
Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Feb 26, 2020	-	-

### Feature details

Canvas components are generally available for app makers to use in production apps. App makers can build and share elements, such as menus or calendars, on multiple screens of the same app or in multiple apps. App makers can build these reusable components and composite controls in Power Apps, just as they build canvas apps.

In addition, canvas components are fully supported as part of solutions and Power Apps environments. These components participate in the solution lifecycle for managing and updating components and apps between environments. App makers can browse components across their environments and insert them directly into their apps without importing or exporting the component.

By using canvas components, app makers can quickly create, consume, and share their building blocks across screens and apps, build apps more quickly, and maintain apps more easily.



*Pane for defining a custom property*

### See also

[Feature exploration](#) (video)

[Announcing the public preview of canvas components and Power Apps component framework](#) (blog)

[Component library documentation](#) (docs)

### Faster, reliable, and stable canvas and model-driven apps on mobile

Enabled for	Public preview	Early access	General availability
End users, automatically	-	-	Oct 2019

#### Feature details

Canvas applications on mobile devices are more reliable and faster. With improved reliability, errors and unexpected experiences are minimized. Load time of applications has significantly improved. Time to load data and navigate through the application has also improved, contributing to a better user experience.

- With optimizations to the email sign-in and app-loading experience, the Dynamics 365 mobile app is significantly faster for users.
- First-time users can sign in and get to their app of choice within a few seconds reliably.
- Returning users can jump right into their app from their previous session and view their most up-to-date information, with background refresh.
- Errors and unexpected experiences are minimized, with reliability of actions and updates greatly improved.

### Improvements to entity designer

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Aug 28, 2019	-	✓ Oct 2, 2019

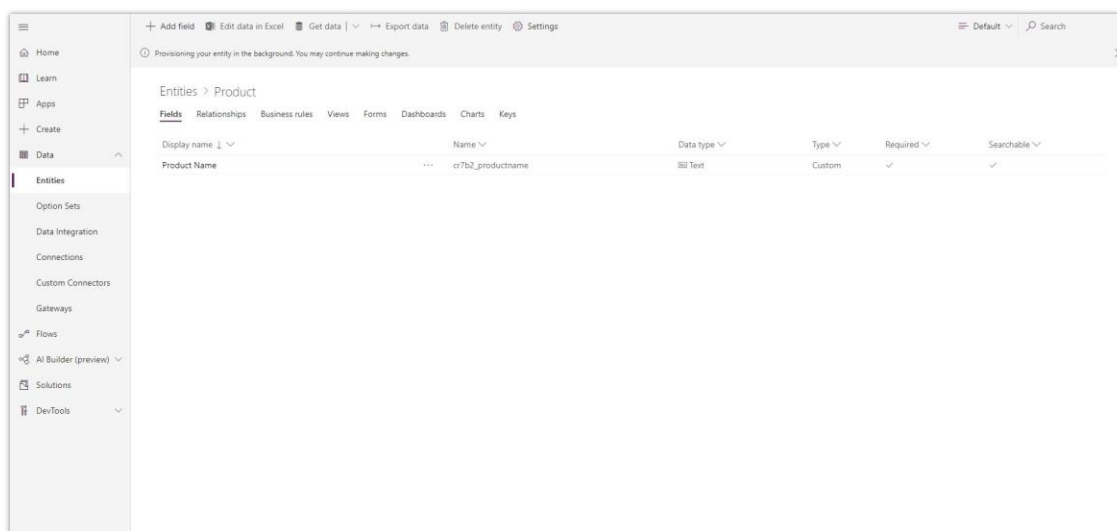
#### Feature details

The new entity designer for Common Data Service lets makers create and edit app components, such as entities, fields, and relationships more quickly. Some notable feature improvements to the entity designer include the ability to:

- Create the entity in the background so the maker can proceed with adding fields and relationships and make key changes while the entity, its default forms, and views are created. These additional changes can be saved after the entity is created.

- Modify the primary field properties along with the entity definition.
- Add fields for the new image and file data types.
- Make changes to the managed properties.
- Add, edit, delete, and view data in the updated and accessible **Data** tab.
- Add or edit data in Microsoft Excel using the **Edit data in Excel** command.

These enhancements will further improve the usability, convenience, and productivity for makers.



### Background entity create

### See also

[Entity relationships overview](#) (docs)

## Sign in using an email address in the Dynamics 365 mobile app on an Android device

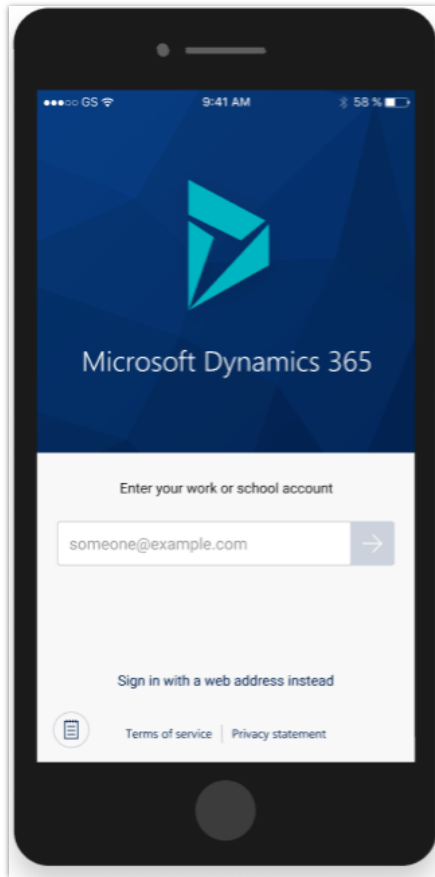
Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 28, 2019	✓ Oct 2, 2019

### Feature details

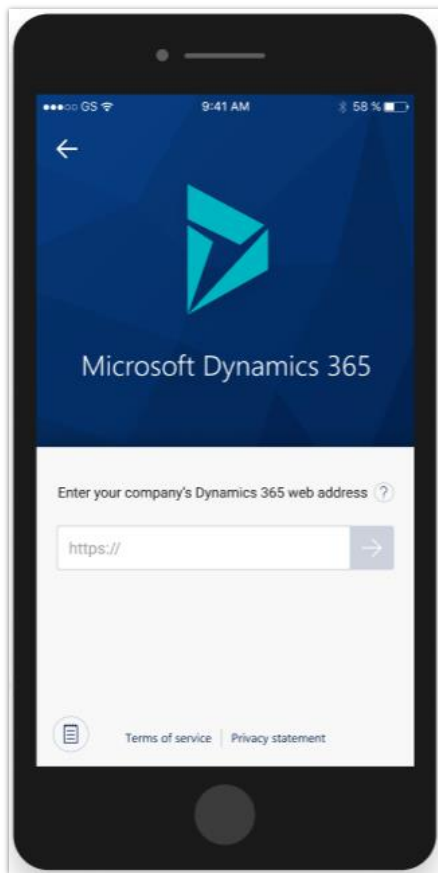
Model-driven app users can now sign in to the Dynamics 365 mobile app on an Android device using their corporate email addresses.

Details about the experience:

- Online users can sign in easily using their email addresses and on-premises users can still sign in using the web address option.

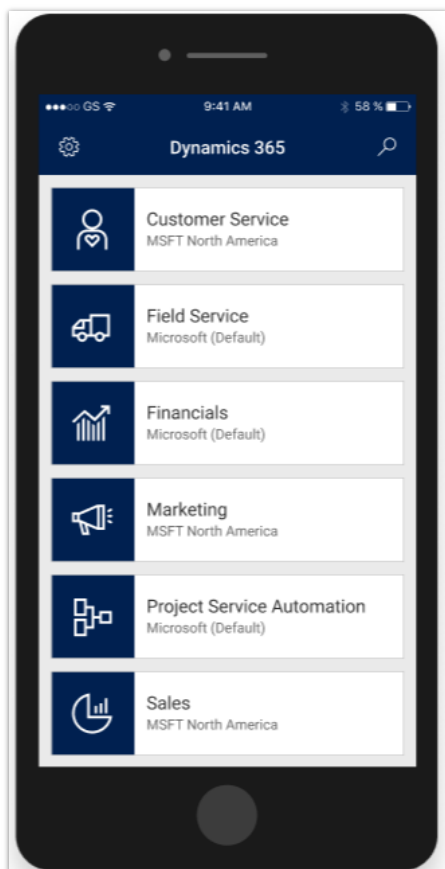


*Sign in using email address*



### *Sign in using web address*

- Online users now have access to all their apps across multiple instances in a single list. Users no longer need to sign out and sign in multiple times with different instances to use all their apps.
- The sign-in and app selection experience is easy and intuitive with a modern look and feel.



*Choose an app*

### See also

[Public Preview: Email-based sign-in for Android users of Dynamics 365 for Phones and Tablets](#) (blog)

[Sign in using your email address \(Preview feature for Android users\)](#) (docs)

### Power Apps component framework for model-driven apps

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 7, 2019

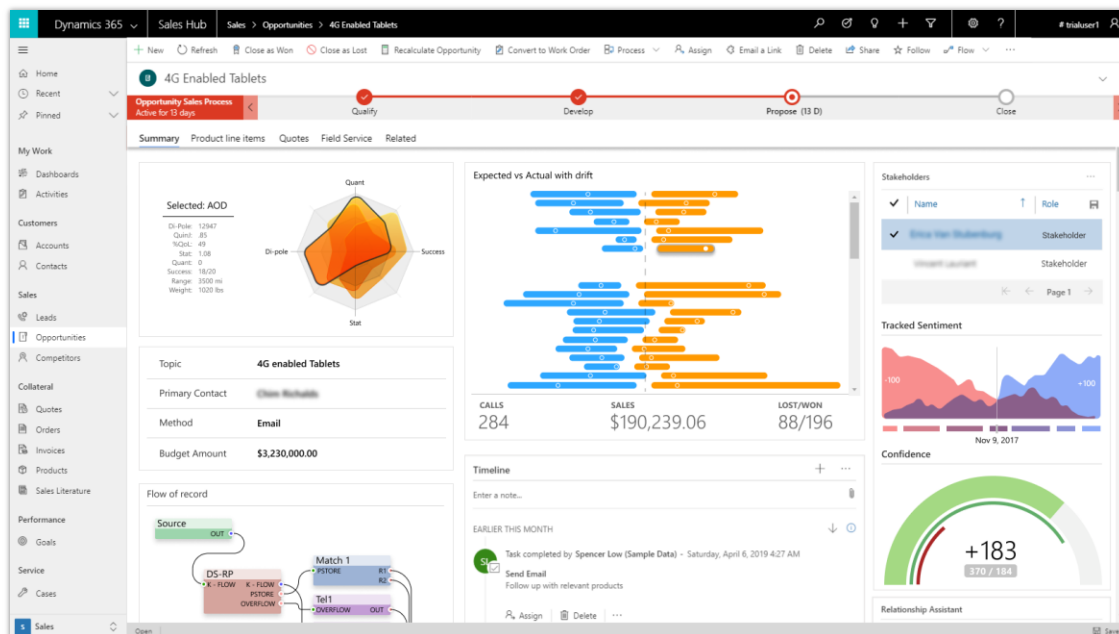
### Feature details

The Power Apps component framework is generally available for model-driven apps, allowing professional developers to create custom components for use across the full breadth of Power

Apps capabilities. Third-party developers can now create their own custom components using the libraries and services of their choice and add these reusable components to any model-driven app. The framework not only saves time but also unlocks powerful capabilities for advanced interactions. To facilitate the development of custom components, the Microsoft Power Apps CLI tool enables fast component creation, easy debugging, built-in validation, and testing using the code editor of your choice.

Professional developers can now add to user experiences that are available out of the box. Custom components have access to a rich set of framework APIs that expose capabilities like control lifecycle management, contextual data and metadata access, seamless server access, utility, data formatting methods, device features like camera, location, and microphone along with easy-to-invoke UX elements like dialogs, lookups, and full-page rendering. Component developers can use modern web practices and harness the power of external libraries to create advanced user interactions. The framework automatically handles component lifecycle, retains application business logic, and optimizes for performance (no more async iframes).

Components created using the framework are fully configurable and can be reused on multiple surfaces in the model-driven apps like forms, dashboards, grids, and business process. Component definition, dependencies, and configurations can all be packaged into a solution and moved across environments and shipped via AppSource. The Power Apps component framework is the foundation for the new Unified Interface released with Common Data Service that uses responsive web design principles to provide an optimal viewing and interaction experience for any screen size, device, or orientation.



*Power Apps component framework example*

**See also**

[Feature exploration](#) (video)

**Office 365 suite header coming to Power Apps**

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 16, 2019

**Feature details**

The Office 365 suite header is coming to powerapps.com, and Power Apps is coming to the Office 365 suite header.

The Power Platform will align with the new Office header, allowing you to access all of your Microsoft applications, notifications, and messages from a consistent header. Additionally, panels like help, notifications, and feedback will be aligned so that you always get the same experience across all of Microsoft.

We'll also take this opportunity to make improvements to existing controls that are specific to Power Apps, like the environment picker, so that they are easier to use.



*Aligned header*

**Video control for Microsoft Stream videos**

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Jan 20, 2020	✓ Jan 20, 2020

**Feature details**

App makers can show Microsoft Stream videos and channels in an app with the new Microsoft Stream media control.

**See also**

[Microsoft Stream videos and channels in canvas apps](#) (blog)

[Microsoft Stream video control in Power Apps](#) (docs)



## Power Apps component framework for canvas apps

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Feb 26, 2020	-	To be announced

### Business value

By taking advantage of the Power Apps component framework, professional developers can now procure or build their own custom UI extensions for canvas apps.

### Feature details

Power Apps code components are reusable, metadata-driven, and solution-aware so they can easily be packaged and moved across organizations to support multiple form factors. Once imported, any canvas app maker can simply add these components to their app, enabling custom functionality that is not available out of the box.

Public preview of Power Apps component framework allows developers and makers to add data sets and test their custom components in canvas apps, taking advantage of the growing list of supported framework APIs. Pro-dev extensibility on a low-code platform opens up possibilities enabling the best of both worlds.

### See also

[Feature exploration](#) (video)

[Announcing the public preview of canvas components and Power Apps component framework](#) (blog)

[Code components for canvas apps](#) (docs)

## Integrated experience and tooling for administrators

### Overview

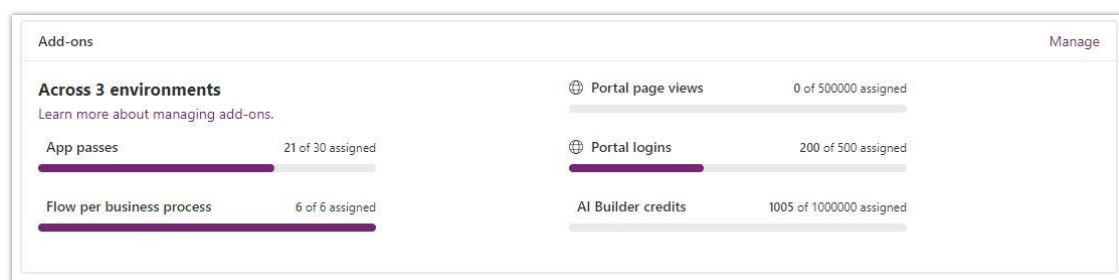
Power Apps makes maintaining and managing apps across your organization easier than ever. The [Power Platform Admin center](#) is now the single admin center for Power Apps and Power Automate admins and partners, offering a more reliable, unified experience to manage storage capacity, environments, and deployments. Powerful analytics empowers admins to investigate and diagnose issues with their deployments, and the integrated help and support experience allows them to find the help they need and escalate to Microsoft Support when necessary.

## Improved capacity governance

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 16, 2019

### Feature details

With the introduction of the new capacity-based provisioning model in April '19, citizen developers are able to more easily provision environments they need for their applications. With this change comes the need for IT admins to be able to better plan and manage database, file, and log capacity consumption within their organization. To support this, the Power Platform Admin center will provide a new real-time view of capacity consumption (Database, File, and Log), historical trends for up to 12 months, and storage breakdowns by entity and application to help facilitate capacity planning and cross-charging to the business units that consume platform capacity.



### Add-ons

## Portal capabilities for PowerApps

### Overview

Use the portal capabilities of Power Apps to create websites that external users can access either with a wide variety of identities (such as personal accounts and LinkedIn) or anonymously.

### Portal Checker enhancements

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 14, 2019

## Business value

The Portal Checker tool released in the October '18 wave looks at portal configuration and identifies potential configuration problems as well as provides solutions on how to resolve the issues. Portal customizers and administrators can use this tool to quickly resolve common issues and reduce the amount of time spent on diagnosing issues. As part of this feature enhancement, we will be adding enhancements to identify more scenarios that will help customers to resolve common issues with their portal.

## Feature details

The feature enhancements allow users to:

- Identify complex entity permissions that can cause slowness.
- Identify performance-impacting slow queries and views.
- Identify configuration issues with authentication-related site settings.

Issue	Category	Result
> Potential cache invalidation issues on your portal	Cache Invalidation	Warning
> Portal does not load and displays "Server Error"	Portal Startup Issue	Pass
> Entities not enabled for cache invalidation	Cache Invalidation	Pass
> Web page tracking	Performance	Pass
> Web file tracking	Performance	Pass
> Login tracking	Performance	Pass
> Header output cache	Performance	Pass
> Footer output cache	Performance	Pass
> Large number of web file records	Performance	Pass

### Portal Checker

## Geographic areas

This feature will be released into the following Microsoft Azure geographic areas:

- United States
- Europe
- Asia Pacific
- United Kingdom

- Australia
- South America
- Canada
- India
- Japan
- US Gov

### See also

[Portal checker](#) (docs)

### Power BI Embedded support for portals

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 14, 2019

### Business value

In the April 2019 release of Dynamics 365 Portals, we started a preview for Power BI Embedded service. With Power BI Embedded service, customizers can provide access to Power BI dashboards and reports to users who don't have a Power BI account. As part of this release, this functionality would be generally available for all customers.

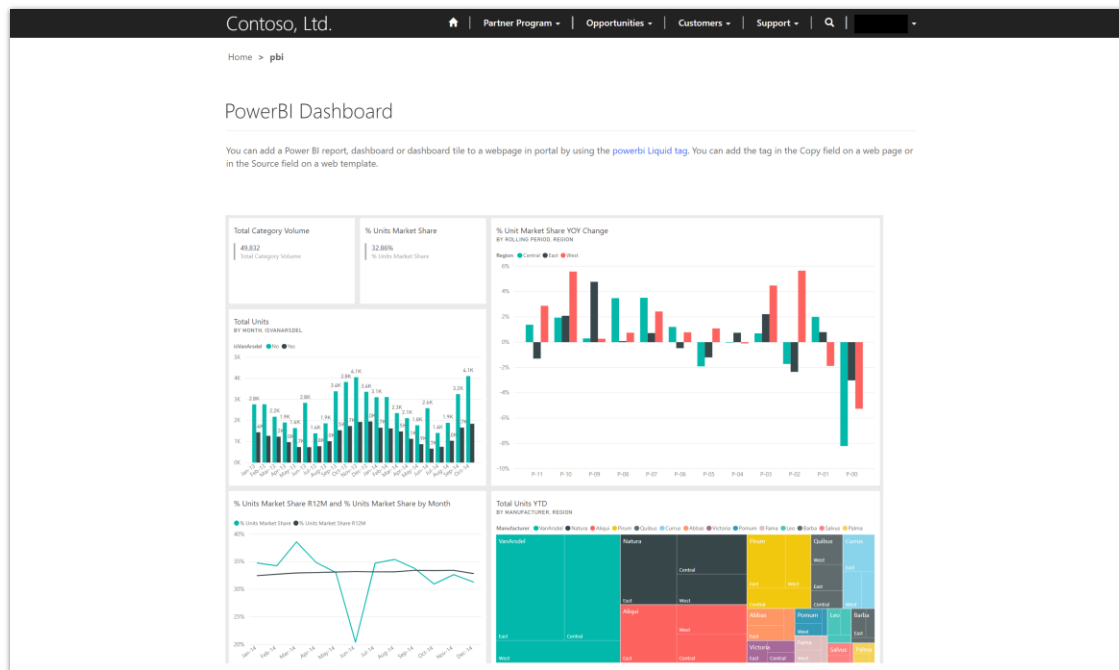
### Feature details

This feature provides the ability to surface Power BI Embedded service components (reports, dashboards, and tiles) contextually to portal users who don't have a Power BI license.

With this feature you can embed Power BI components on a portal and contextually serve the data to users coming to the portal. Some of the core capabilities of this feature include:

- Pass automatic filters to reports using a filter parameter along with the **powerbi** liquid tag. This will help you to filter down the data contextually based on what the user is viewing on the portal.
- Enable Power BI row-level security (RLS) capabilities by passing the **roles** parameter in the context of the signed-in user. This will help organizations to secure the data that is visible to users and show them only what they are allowed to see.

More details about this feature can be found at [Enable Power BI Embedded service](#) and [powerbi](#).



## Power BI

### Geographic areas

This feature will be released into the following Microsoft Azure geographic areas:

- United States
- Europe
- Asia Pacific
- United Kingdom
- Australia
- South America
- Canada
- India
- Japan

### See also

[Enable Power BI Embedded service](#) (docs)

## Power Apps Portals

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Apr 10, 2019	-	✓ Oct 14, 2019

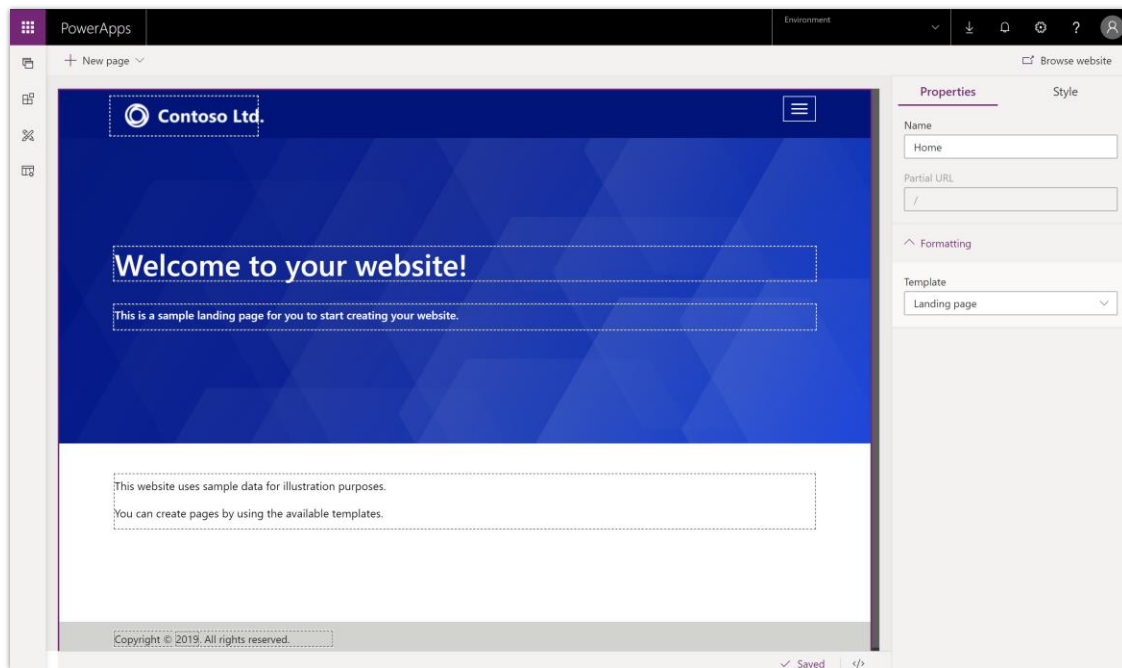
### Business value

Power Apps makers can now create a powerful new type of experience: web portals that surface data stored in Common Data Service to employees or users outside their organizations.

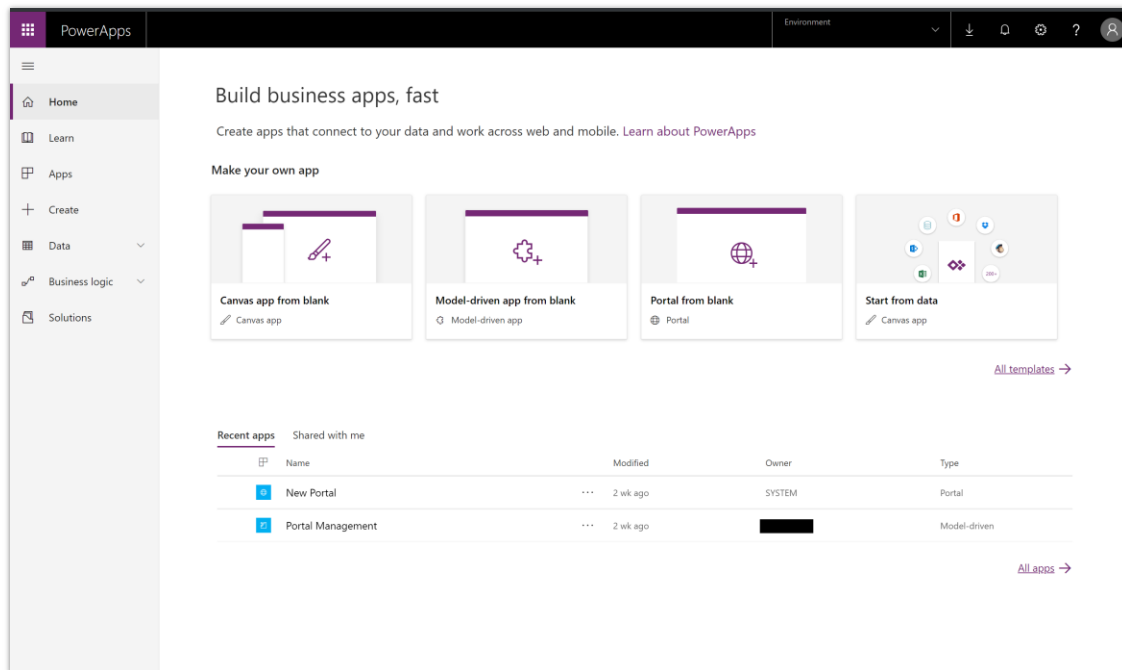
### Feature details

As part of this feature, Power Apps and Dynamics 365 makers can create a new type of app called **Portals** to create a website that can be extended to users who are outside your organization and can sign in with a wide variety of identities, or even browse the content anonymously.

This feature will provide full capabilities of Dynamics 365 Portals, previously offered only as an add-on to Dynamics 365 model-driven applications. It also features a revamped end-to-end experience for makers to quickly create a website, customize it with pages, layout, and content, reuse page design through templates, add forms, views, and other key data from Common Data Service, and publish to users. With these new capabilities, makers can deliver rich, web-based experiences to users far beyond their fellow employees, unlocking a host of business scenarios for employees, business to business (B2B) partners, and end customers.



## Maker image



## Web Power Apps

## Geographic areas

This feature will be released into the following Microsoft Azure geographic areas:

- United States
- Europe
- Asia Pacific
- United Kingdom
- Australia
- South America
- Canada
- India
- Japan
- US Gov

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

## See also

[Feature exploration](#) (video)

[PowerApps Portals are now Generally Available](#) (blog)

[What is Power Apps portals?](#) (docs)

## Scalable enterprise solutions

### Overview

Enterprise makers have quality embedded throughout their experiences. Diagnostic data is available for canvas apps to make troubleshooting easier, and a test framework is available in canvas apps for makers to create test coverage for their mission-critical apps. Enterprises can share apps with vendors, contractors, and other partners outside of their companies.



## Environment variables in solutions

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	Nov 2019	-	-

### Business value

Apps and flows often require different configuration settings across environments. Environment variables allow you to transport application configuration data with solutions and optionally manipulate the values in your Application Lifecycle Management (ALM) pipeline. They act as configurable input parameters allowing you to reference an environment variable within other solution components. You can update a value without modifying other components directly when using environment variables.

### Feature details

Benefits of using environment variables:

- No need to manually edit other solution components in a production environment.
- Configure one or more variables in one place and reference like a parameter across multiple solution components.
- Update configurable values without a code change.
- Granular-level security managed by Common Data Service.
- Managed properties can be set to block editing of the definitions and values.
- Unlimited number of variables (max solution size is 29 MB).
- Service the definitions and the values independently or together.
- Supported by SolutionPackager and DevOps tools enable continuous integration and continuous delivery (CI/CD).
- Localize display strings.

Current limitations:

- Caching
- Native support for canvas apps
- Not a secure store for secrets, such as passwords
- Dependencies are not enforced for certain component types

## See also

[Announcing Environment variables in solutions](#) (blog)

[Environment variables](#) (docs)

## Power Apps test framework

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Jan 29, 2020	-	-

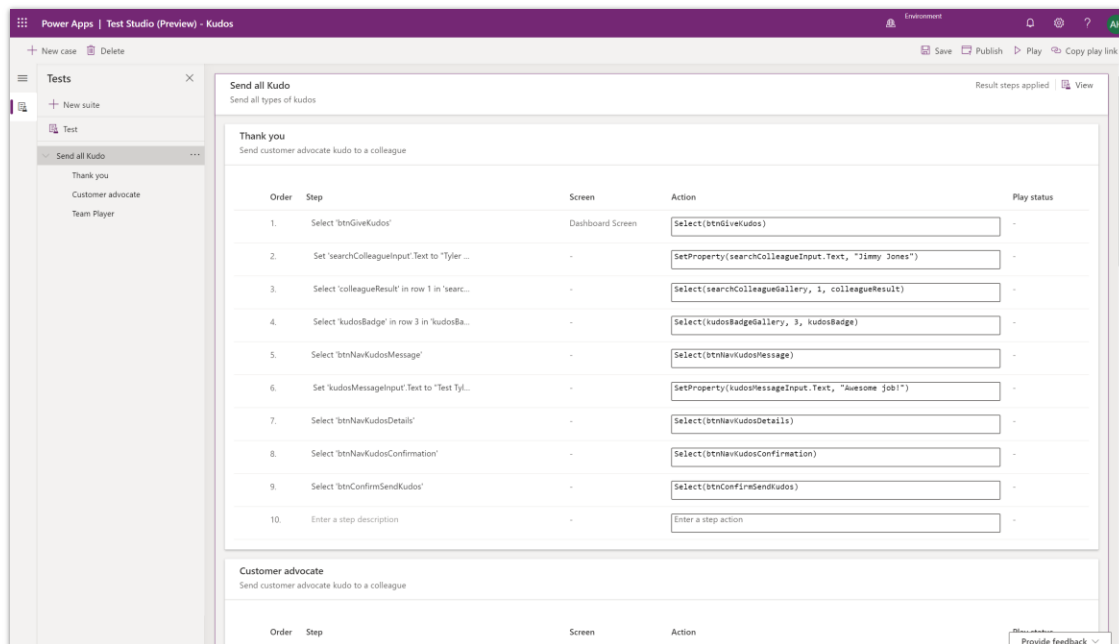
## Business value

App makers and testers can leverage the Power Apps test framework to create UI automation and end-to-end tests for their canvas apps. App makers can catch and react to issues early as they move across environments, test out the latest service versions, or push updates to their existing production applications.

## Feature details

Use Power Apps test framework to automate your UI testing for canvas apps.

- Create and organize test suites and test cases for your app in a new test designer.
- Capture your actions and create test steps automatically by using an intuitive recorder.
- Manually create test steps and validate expected results by using new Power Apps testing expressions.
- Play back your tests to quickly identify issues early and understand any failures.



## Test Studio

## See also

[Feature exploration](#) (video)

[Introducing Test Studio to build end-to-end tests and maintain your app quality](#) (blog)

[Test Studio](#) (docs)

## Model-driven app sharing made easy

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	Feb 2020	-	-

## Business value

Model-driven app sharing was previously a very cumbersome process requiring several steps across various areas of the product. We've streamlined this into a single sharing panel so you can share your amazing apps with ease.

### Feature details

Model-driven apps now have a similar sharing experience as canvas apps. You can quickly see who has access to the app, add or remove security roles associated with the app, and add additional users. This experience also supports the per app plan.

**NOTE** You must have a security role with appropriate permissions for sharing model-driven apps.

### Share apps with users outside your tenant, B2B

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Jul 26, 2019	-	✓ Oct 16, 2019

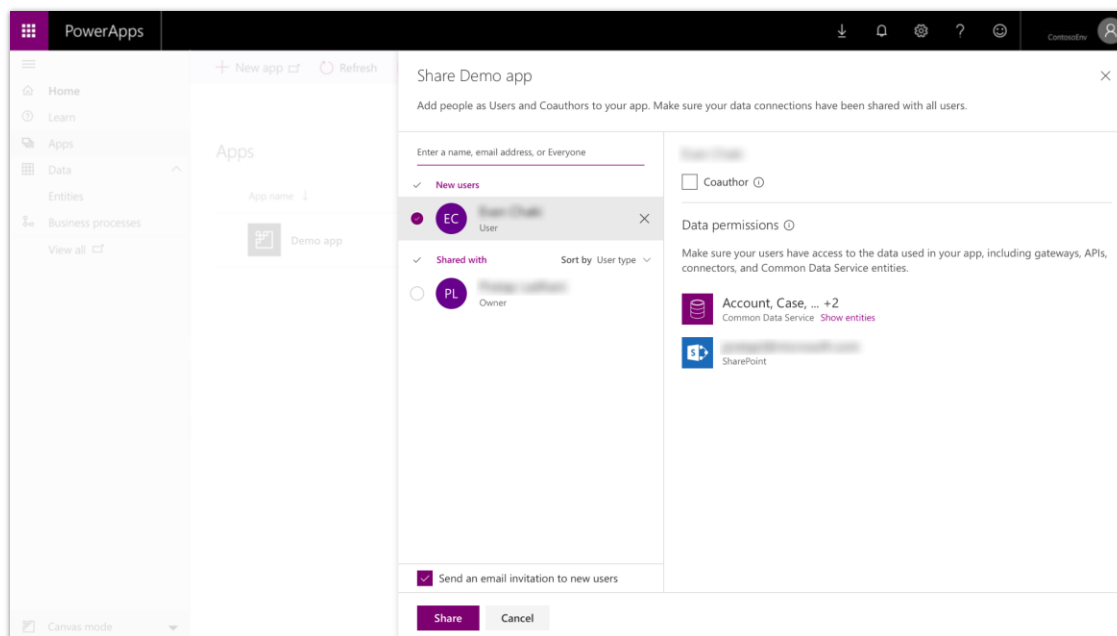
### Feature details

You can invite external business partners, contractors, and third parties to run your company's canvas apps. You can share your apps with any guest of your Azure Active Directory tenant.

You can share a canvas app with a guest as easily as you do with a co-worker. Type your guest's email address to quickly share both the app and its data.

If a SharePoint list has been shared with a guest user, that user can also run any canvas apps that are embedded in that list.

To run standalone apps, guest users need the same license as users in your tenant.



*Sharing pane for canvas apps*

## See also

[Feature exploration](#) (video)

[Share canvas apps with guests](#) (blog)

[Share with guests](#) (docs)

## The Power Apps Checker includes rules for canvas apps and flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Sep 4, 2019	-	✓ Oct 16, 2019

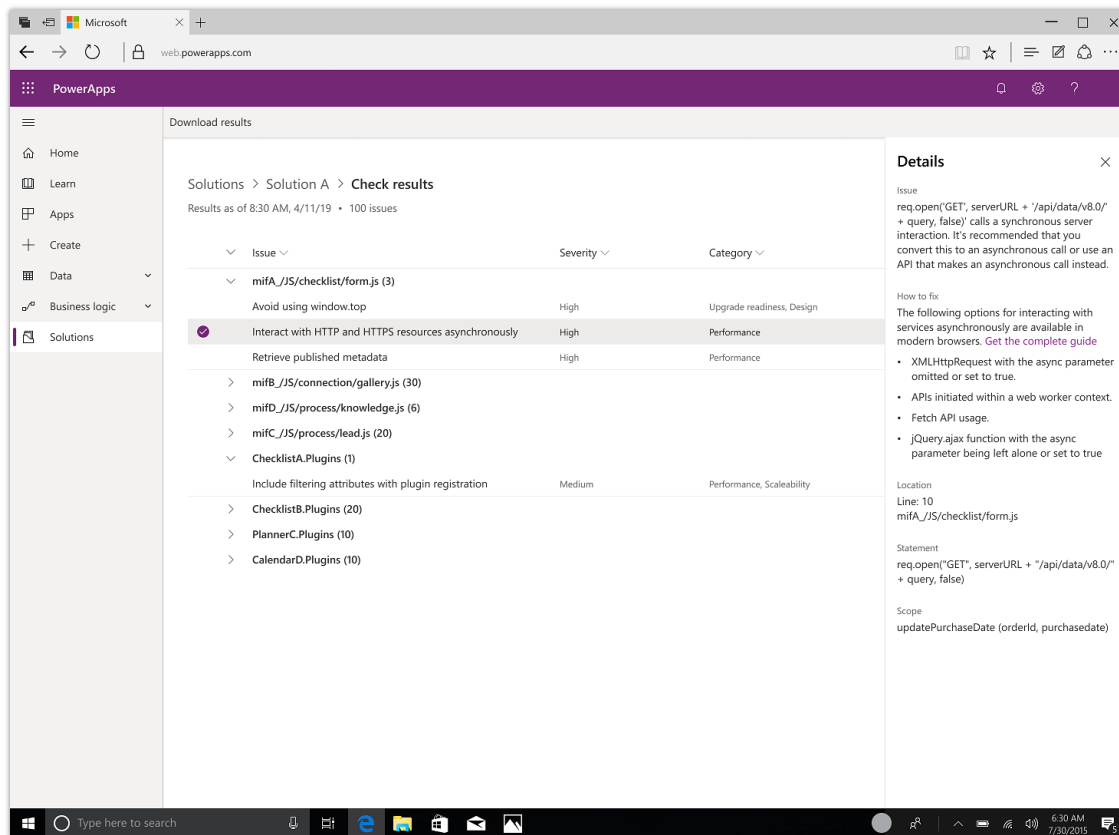
## Business value

Power Apps has added components to the rule set that encourages best practices in the Power Apps Checker. You can check your canvas apps and flows that are included in solutions and then review all issues in a single, consolidated report.

## Feature details

The Power Apps Checker has helped hundreds of admins and makers pinpoint potential issues in their solutions and quickly resolve them with rich documentation. That experience has been

enhanced in several ways. The Power Apps Checker pulls data not only from the App Checker in Power Apps Studio but also the Flow Checker in the flow designer.



*Details pane of the Power Apps Checker*

## See also

[Power Apps checker now includes App checker results for Canvas apps in solutions](#) (blog)

## Improved reliability of cascading changes

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	✓ Sep 9, 2019	✓ Oct 28, 2019

## Business value

By moving cascading (assign, delete) jobs into the background, users will be able to resume interaction with the application sooner with fewer timeouts. Large volume cascading changes

will have a higher success rate with fewer database timeouts. Long-running cascade jobs will no longer block other processes from being executed.

### Feature details

Cascading changes (assign, delete) that affect more than 100 records will be processed in the background asynchronously. This allows users to resume interaction with the UI sooner and reduces UI and database timeouts when processing cascading changes. Processing these changes in the background allows for a higher rate of success when large numbers of records are involved and prevents the changes from blocking other processes that are being run on the system.

There will be a delay between when the initial change is made and when all records have been processed. The delay duration will be based on the number of records processed. The status of the background processing can be viewed in the **Settings** for the organization using the **Jobs** list.

**NOTE** At preview this feature will only support asynchronous processing of Assign and Delete, however, by October 2019 all cascading changes will be asynchronous.

### See also

[Feature exploration](#) (video)

[Asynchronous cascading](#) (docs)

### Enhanced offline capabilities for apps on the Dynamics 365 mobile app

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 30, 2019

### Feature details

Ability to work with data in offline mode is a key business requirement for field scenarios. We released the first phase of robust offline functionality early this year. With our commitment to provide a great offline solution, we are continuously investing in building more capabilities on top of it.

New capabilities and enhancements:

- Notes on timeline are available in offline mode. Users are now able to access their notes, create notes, and add attachments in offline mode.

- Quick views are available in offline mode for users to access all their important data in the forms.
- User experience is better in offline mode, such as improved messaging to the users, automatic reconnection to the app when online, and more.

### See also

[Mobile offline user documentation](#) (docs)

## Unified Interface for everybody

### Overview

The Unified Interface is the model-driven app layer that generates great user experiences over Common Data Service. The Unified Interface uses responsive web-design principles to provide an optimal viewing and interaction experience for any screen size, device, or orientation. The new Unified Interface brings all the rich experiences to any client that you're using. Whether you're on a browser, a tablet, or a phone, you can consume similar experiences with:

- Similar form experiences to update and view your records.
- Interactive dashboards across all devices to view your information and drill into it.
- Improved performance.
- Support for right-to-left (RTL) languages.
- Accessibility improvements across all experiences on the Unified Interface.

### Improving Save Changes dialog

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 1, 2019	✓ Oct 2, 2019

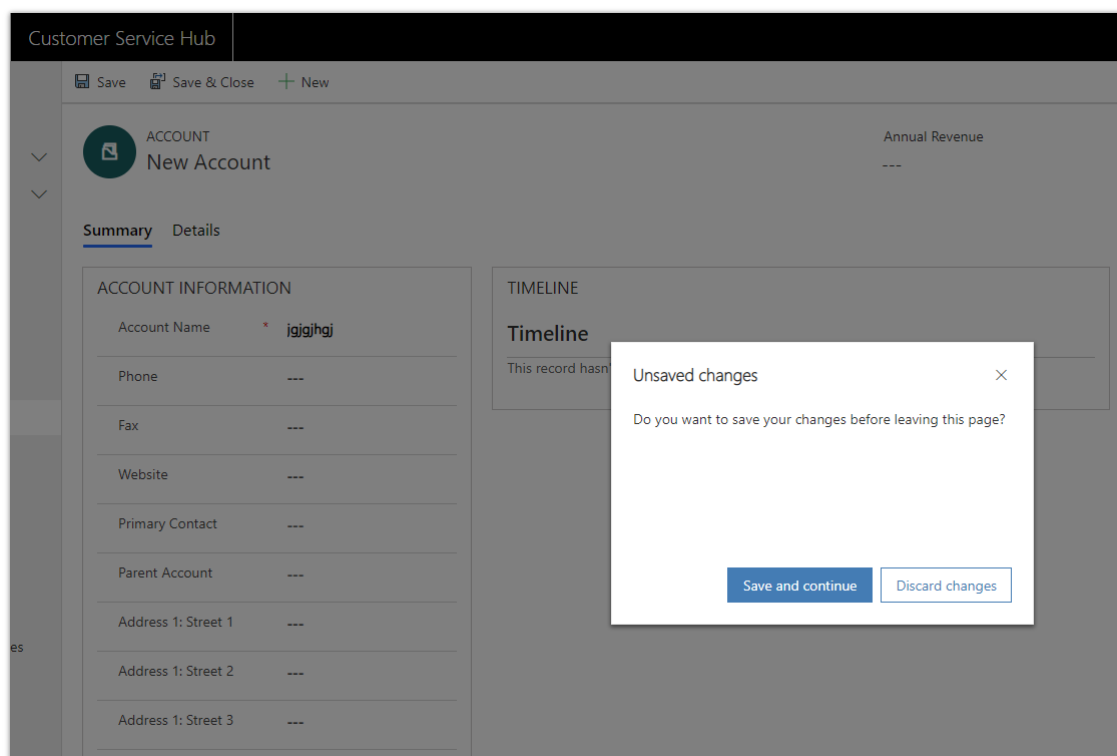
### Business value

The new experience will make it very clear when a user is going to be navigated away from a main form to another record. The new messaging and call to actions will help the user make informed decisions on the action they want to take including saving and continuing, discarding changes and continuing or simply closing the dialog.



## Feature details

The current save changes dialog is unclear and confusing to customers. The new experience will make it very clear when a user navigates away from the main form to another record. The new messaging and call to actions will help the user make informed decisions on the action they want to take including save and continue, discard changes and continue, or simply closing the dialog. The buttons will be updated to say **Save and continue** or **Discard changes**.



*Save dialog*

## See also

[Unsaved Changes Dialog Improvements](#) (blog)

## Adding Save and Create Another record option to Quick Create buttons

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Business value

Users do not have to save and click on the **Quick Create** form when they need to quickly add multiple records. The new buttons on the quick create forms will support both saving and closing the form and saving and opening a new **Quick Create** form to add additional records with less clicks, which improves overall productivity when adding new records.

## Feature details

The current **Save and Close** button will change to support a multi-select option, including **Save and Close** and **Save and Create New**. The new action will save the existing record and open a new **Quick Create** form for a user to quickly add another record without additional clicks or actions.

## See also

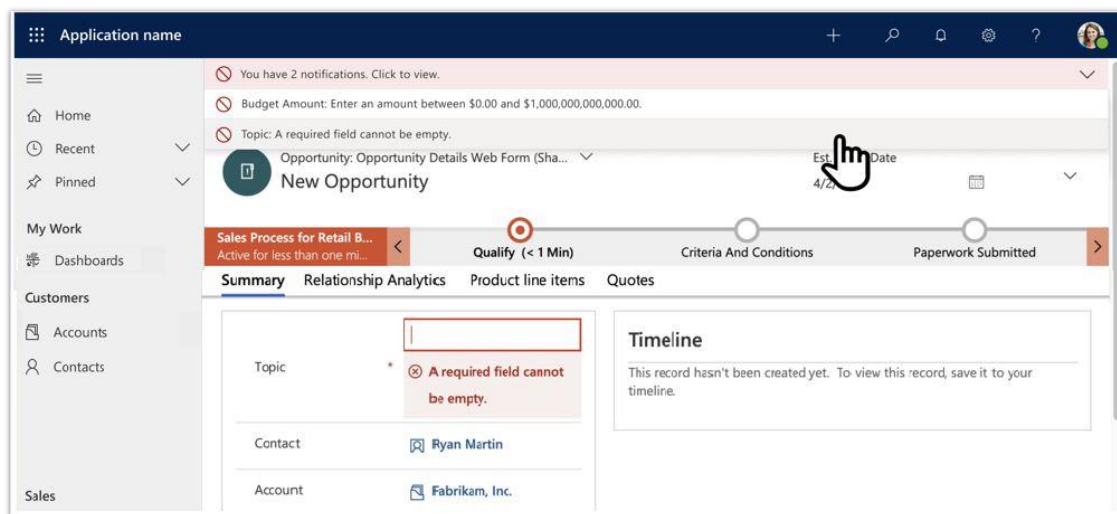
[Quick Create Save and Create New](#) (blog)

## Anchoring error notifications in Unified Interface

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Feature details

Users will be able to quickly navigate to a field on a form that has an error from a notification by simply clicking on the error message. The focus will be set on the error field, reducing clicks and improving productivity when there is an error on a form.



### Error notification

### See also

[Feature exploration](#) (video)

[Error Notification Navigation](#) (blog)

## Connection role enabled in the Unified Interface

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

### Business value

Closes feature gaps between the legacy web client and the Unified Interface, reducing issues or friction for customers updating from v9.x web client to the Unified Interface. Also allows for new users to easily add a connection role to a connection in the Unified Interface.

### Feature details

Users will be able to add or delete connection roles with the August 2019 preview and October 2019 general availability release of the Unified Interface. This entity was previously available only when relating a connection role to a connection, with no ability to manage a connection role. This will close a feature gap between the legacy web client and the Unified Interface.

## See also

[Connection Role](#) (docs)

## Form header usability improvements

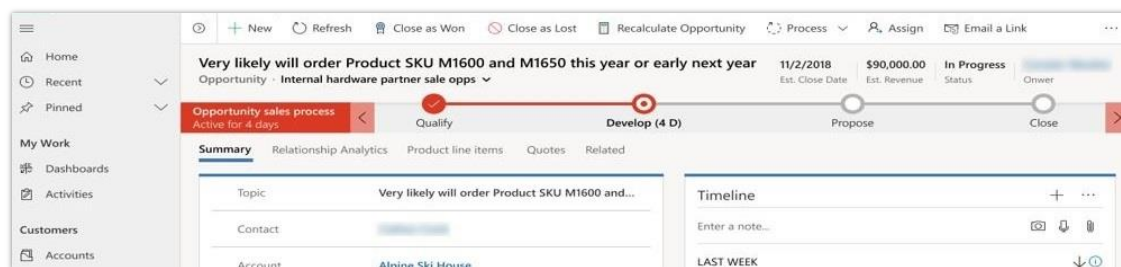
Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Feature details

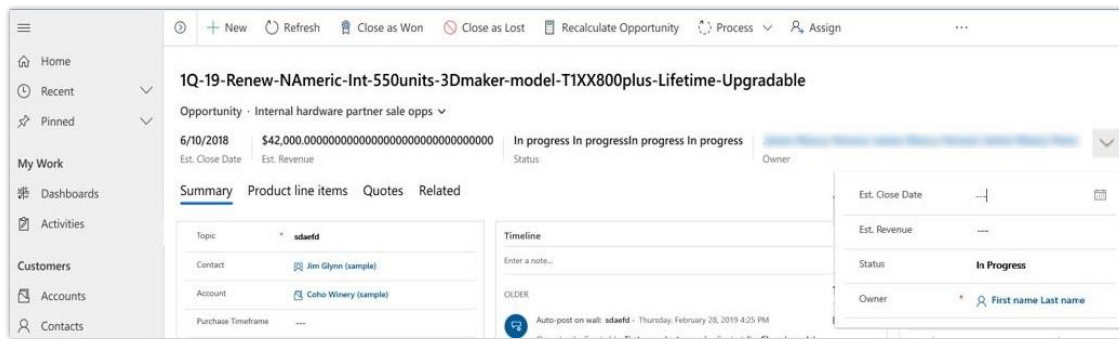
Customers will have an improved experience when they open and read information for a record in the Unified Interface with increased data density and usability with the form header.

Enhancements to the header include:

- Information will always be available in the header with four read-only fields, reducing clicks and improving productivity.
- The title of the record will never truncate.
- Current forms will support editable fields with a simple click of a chevron to enter data.
- A read-only form will have an enhanced notification with details on why a form is read-only.



*Header density*



*Legacy form header*

## See also

[Feature exploration](#) (video)

[Show information in header](#) (blog)

## Improved usability, density, and filtering capabilities for the Unified Interface grid

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Feature details

The Unified Interface grid now includes several updates focused on improved usability and navigation. The grid layout and styling have been optimized to improve density, allowing users to see more records on a single screen without it feeling cluttered. In this update we have removed unused and redundant space in the grid that has been highlighted in user feedback as impacting efficiency and making the grid harder to navigate.

In addition to the density changes, updates have been made to improve the filtering and navigation behavior. Now as users filter records in the view page, navigate to a record, and return to the grid, the filters on the grid remembered. This allows users to navigate back and forth between the grid and filtered records without reapplying the filter, search, or view selection each time. Improvements have also been made to the advanced grid column filtering options to find their records quickly. This includes filtering on the activity type field and alignment of date field filtering for existing operators.

Account Name	Main Phone	Address 1: City	Primary Contact	Email (Primary Contact)	Status
A. Datum	+86-23-4444-0100	Guangzhou	Vincent Lauriant	vincent@adatum.com	Active
Adventure Works	+27-264-234567	Johannesburg	Adrian Dumitrascu	Adrian@adventure-works.c...	Active
Alpine Ski House	+43-1-12345-0	Vienna	Cathan Cook	Cathan@alpineskihouse.com	Active
Blue Yonder Airlines	555-0135	Paris	Brian LaMee	brian@blueyonderairlines.c...	Active
City Power & Light	+1-785-555-1333	Los Angeles	---	---	Active
Coho Winery	425-555-0137	Bellvue	Cat Francis	Cat@cohowinery.com	Active
Consolidated Messenger	+09-70-01-90-90	Paris	Forest Chand	Forrest@consolidatedmess...	Active
Fabrikam, Inc.	+1-425-555-0120	Redmond	Eva Corets	evacorets@fabrikam.com	Active
Fourth Coffee	+571-611-0000	Bogota	---	---	Active
Graphic Design Institute	+1-425-555-3499	Redmond	George Sullivan	george@graphicdesigninstit...	Active
Humongous Insurance	+1-343-555-6797	Madison	---	---	Active
Litware	1-425-555-3455	Dallas	---	---	Active
Lucerne Publishing	+64-6-333-0001	Christchurch	Patrick Steiner	psteiner@lucernepublishing...	Active
Margies's Travel	+1-209-555-0755	Newport	---	---	Active
Northwind Traders	+1-614-333-4444	Columbus	---	---	Active
Proseware	+1-098-555-4121	Port Orchard	Yvonne McKay	ymckay@proseware.com	Active

*Improved grid density*

**See also**

[Feature exploration](#) (video)

[Enhanced functionality in Unified Interface grid](#) (blog)

## Manage email on the timeline wall in Unified Interface

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

### Feature details

Users can easily set email messages to show as conversation threads on their timeline wall, significantly reducing scrolling and clicks when they are managing email activities in the Unified Interface.

### TIMELINE

**Timeline**

Enter a note...

**What you missed** (Click To Filter)

Past due (3)

New activities (9)

New notes (1)

FN

Email from First name Last name  
RE: CRM:0001001  
5

5/10/20...

FN

Email from First name Last name  
RE: CRM:0001001  
4

5/10/20...

FN

Email from First name Last name  
RE: CRM:0001001  
2

5/10/20...

FN

Email from First name Last name  
RE: CRM:0001001  
1

5/6/2019

FN

Email from First name Last name  
RE: CRM:0001001  
1

5/6/2019

*Email conversation thread*

#### See also

[View email threads](#) (blog)

[Email Activities](#) (docs)

## Timeline wall filter improvements

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

### Business value

Filtering activities will be faster and easier to use, improving productivity and aligning the experience to similar industry standards that customers are used to like Outlook, Power BI, and SharePoint.

### Feature details

Filtering activities will now be simple and easy to use. It will include multiple filter options, and data and times will be clearer and easy to understand. We are also reducing confusion by removing pie charts to simplify and align to a more modern filtering experience. The experience will be more aligned to what users expect with similar filtering in Outlook, Power BI, and SharePoint.



## TIMELINE

**Timeline**

+

⌵

...

Enter a note...

📎

**Filter By**

×

Record type ⌵

☐ Notes (1)

☐ Posts (3)

☐ Activities (7)

Activity type ⌵

☐ Appointment (6)

☐ Email (1)

Activity status ⌵

☐ Active Activities (4)

☐ Active Overdue Activities (4)

☐ Closed Activities (3)

Modified date ⌵

☐ Last 24 hours (2)

☐ Last 7 days (6)

☐ Last 30 days (11)

*Timeline wall filtering*

## See also

[Activities Timeline Wall](#) (blog)

## Timeline wall improvements in Unified Interface

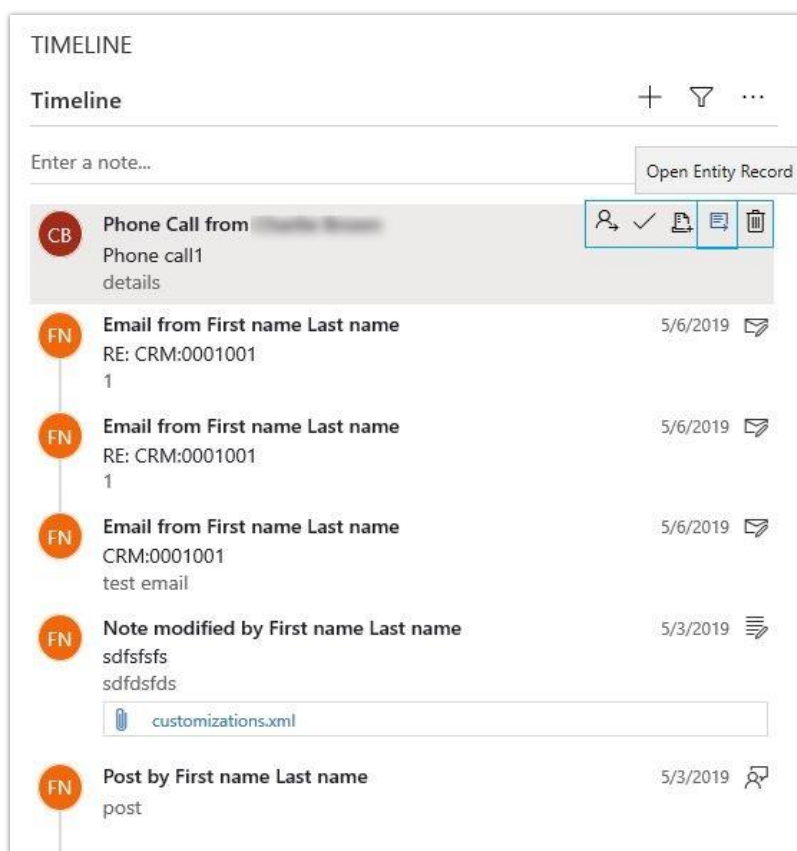
Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Feature details

Managing activities in the timeline wall will be faster and more responsive with improvements to data density and usability.

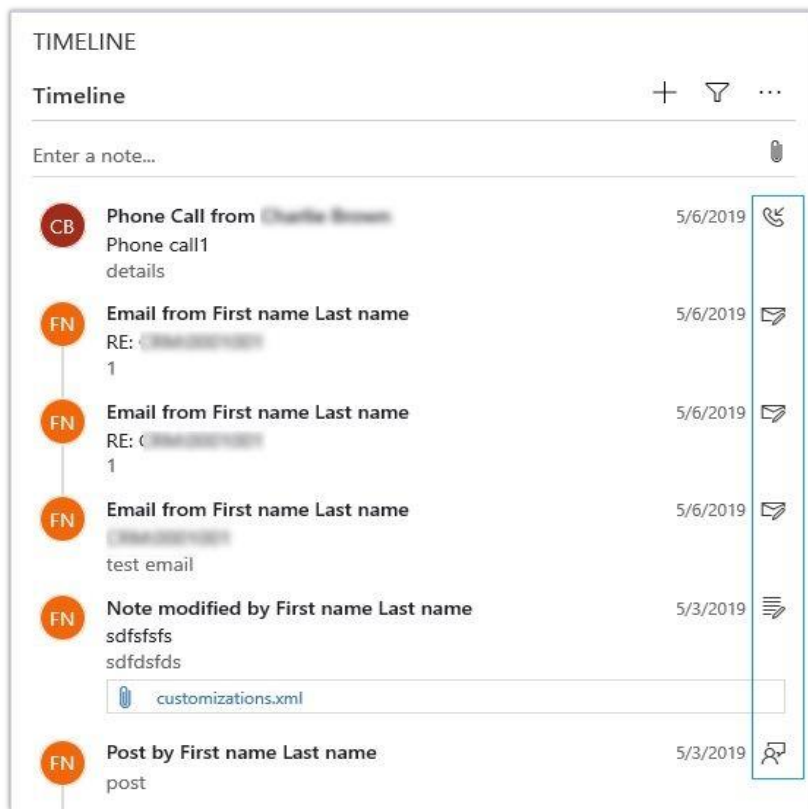
Enhancements include:

- Easily expand and collapse activities in the timeline wall.



*Command bar*

- Simple icons that help users quickly identify key activities.



### Icons

- Quick and easy access to the command bar to perform common actions on an activity.

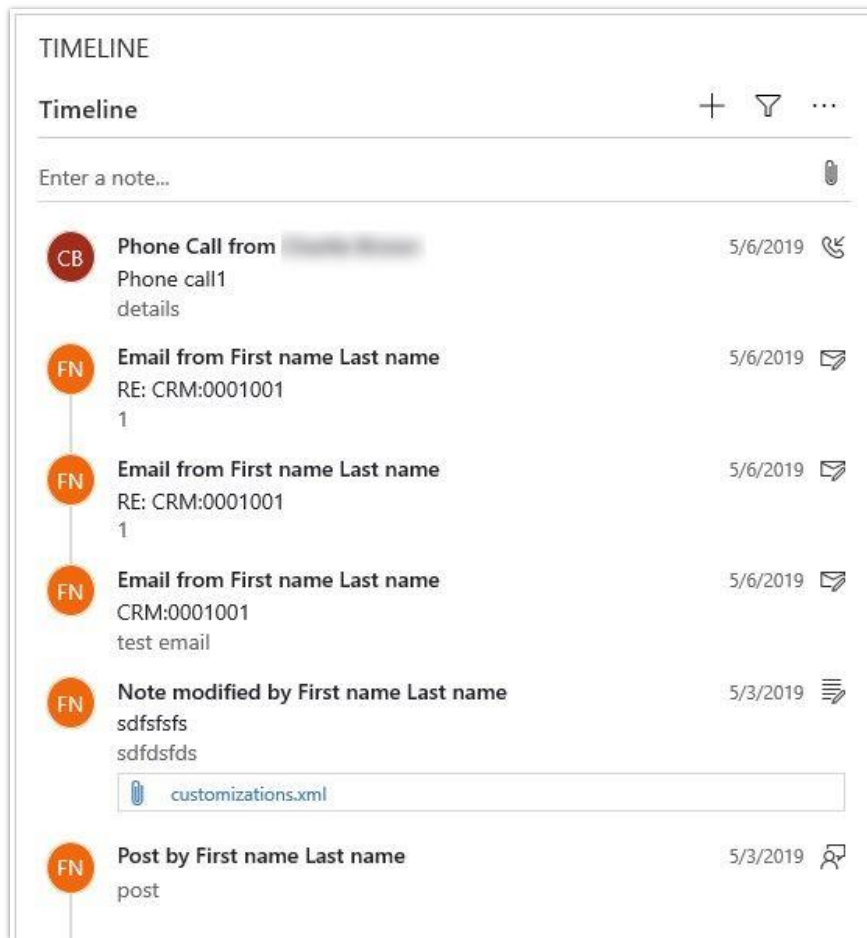
**TIMELINE**

Timeline + ⌵ ...

Enter a note... 📎

- CB** Phone Call from [Redacted] 5/6/2019 📞  
Phone call1  
details
- FN** Email from First name Last name 5/6/2019 ✉️  
RE: CRM:0001001  
1
- FN** Email from First name Last name 5/6/2019 🔍 📎 📧 🗑️  
RE: CRM:0001001  
1  
  
----- Original Message -----  
**From:** First name Last name;  
**Received:** Fri May 03 2019 15:36:36 GMT-0700 (Pacific Daylight Time)  
**To:** [Redacted]  
**Subject:** [Redacted]  
  
test email  
  
5/6/2019 ✉️
- FN** Email from First name Last name 5/6/2019 ✉️  
[Redacted]

*Expanded view*



*Improve density*

## See also

[Feature exploration](#) (video)

[Timeline Improvements](#) (blog)

## Usability enhancements to lookups in Unified Interface

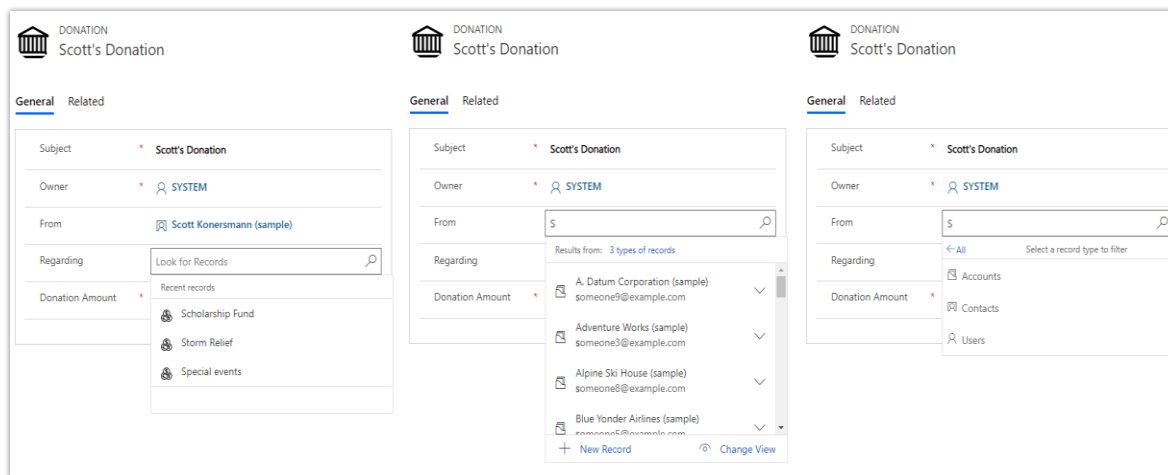
Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Business value

Enhanced lookup functionality will give users improved interactivity and consistency with the drop-down menu.

## Feature details

Enhanced functionality within lookup includes improved entities filter layout, improved interactivity with the search box, and consistency displaying recent and pinned records.



## Lookup enhancements

### See also

[Enhancements to lookups](#) (blog)

## View inline images for emails that are read-only

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 2, 2019	✓ Oct 2, 2019

## Feature details

With the 2019 release wave 2, customers can easily view images inline when they open and read an email. This eliminates the need to open each individual image that is attached in an email. Providing inline image support for read-only emails streamlines the experience and improves usability and user productivity when they manage their email in the Unified Interface.

## See also

[Feature exploration](#) (video)

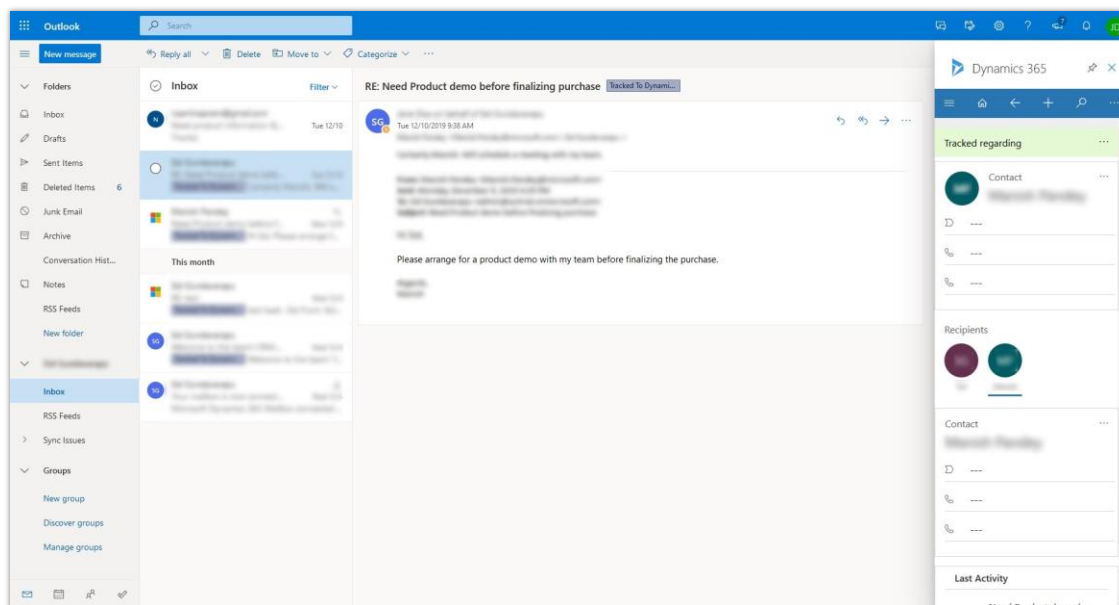
[View inline images in Emails](#) (blog)

## Delegate support in Dynamics 365 App for Outlook

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Feb 10, 2020

## Feature details

Delegate access in Outlook gives users permission to act on the behalf of someone else. For example, a user might have an assistant who sends and responds to email or meeting requests on their behalf. This delegated user is able to track the information in Common Data Service using the Dynamics 365 App for Outlook.



*Delegate support in App for Outlook*

## Thank you for your idea

Thank you for submitting [this idea](#). We listened to your idea, along with comments and votes, to help us decide what to add to our product roadmap.

**See also**

[Use delegate access](#) (docs)



# Power Automate

## Overview of Power Automate 2019 release wave 2

Power Automate is the popular process automation and workflow product from Microsoft. Every month, over a million people automate everything from simple notifications to highly tailored multistep approval processes spanning organizational boundaries. Power Automate exemplifies the future of automation by infusing intelligence and empowering completely non-technical users to automate complex workflows—all without tortuous IT deployments. In the 2019 release wave 2, Power Automate introduces several new features in three key areas.

For **flow makers**, we are providing smarter and more powerful experiences. For example, with the new **AI Builder** capabilities, makers can create flows that parse content from a PDF form or classify the objects in an image.

For the **users** of flows, we are delivering world-class business process capabilities, including working with business processes offline.

For **admins**, there is now richer tooling, such as our PowerShell cmdlets and new Power Platform admin center.

[Watch overview video](#)

## What's new and planned for Power Automate

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

## More intelligent and powerful capabilities for Power Automate makers

The citizen developers of the Microsoft Power Platform now have richer capabilities when they are building out business processes inside of Power Automate.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Flows that use other solution components are generally available</a>	Admins, makers, or analysts, automatically	✓ Nov 2, 2019	-	-
<a href="#">Deactivate actions in flows</a>	Admins, makers, or analysts, automatically	✓ Dec 18, 2019	-	-
<a href="#">Power Automate and Adaptive Cards in Microsoft Teams</a>	Admins, makers, or analysts, automatically	✓ Jan 16, 2020	-	
<a href="#">Share flows as templates</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 4, 2019
<a href="#">Export Visio diagrams to Power Automate is now generally available</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 11, 2019
<a href="#">Add intelligence to Power Automate with AI Builder</a>	Admins, makers, or analysts, automatically	✓ Jun 9, 2019	-	✓ Oct 11, 2019
<a href="#">Automated flows support change sets in Common Data Service</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019
<a href="#">Better connect flows and Power Apps</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019
<a href="#">Call Child Flows</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019
<a href="#">Support gateways in all environments</a>	Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019
<a href="#">Improved Power BI connector</a>	Admins, makers, or analysts, automatically	-	-	✓ Nov 4, 2019

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Support for simplified number formatting</a>	Admins, makers, or analysts, automatically	-	-	✓ Jan 23, 2020
<a href="#">Simplified AI Builder experience in Power Automate</a>	Admins, makers, or analysts, automatically	-	-	✓ Feb 6, 2020

## Rich tooling for administrators

Admin experiences are key to the adoption of any trusted platform.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">New licensing options for Power Automate standalone paid plans</a>	End users by admins, makers, or analysts	-	-	✓ Oct 11, 2019
<a href="#">Power Automate used in SharePoint admin scenarios</a>	Admins, makers, or analysts, automatically	-	-	✓ Jan 23, 2020

## UI automation for applications and websites

Automate repetitive tasks across services and applications using UI flows in Microsoft Power Automate

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Automate web-based applications</a>	Admins, makers, or analysts, automatically	✓ Nov 4, 2019	-	-
<a href="#">Automate Windows applications</a>	Admins, makers, or analysts, automatically	✓ Nov 4, 2019	-	-

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Simple, centralized, integrated management of UI flows</a>	Admins, makers, or analysts, automatically	✓ Nov 4, 2019	-	-
<a href="#">Error handling for UI flows</a>	Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	-
<a href="#">IME support for UI flows</a>	Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	
<a href="#">UI flows run on AAD-joined machines</a>	Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	
<a href="#">Unattended automation</a>	Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	-

## World-class business process capabilities

Power Automate provides world-class business process capabilities for its users that span endpoints and experiences.

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Business process flow immersive experiences</a>	End users by admins, makers, or analysts	-	-	✓ Oct 23, 2019
<a href="#">Fluent experience for flows in Dynamics 365 and SharePoint available</a>	End users, automatically	-	✓ Aug 5, 2019	✓ Oct 25, 2019
<a href="#">Build business process flow stages with custom controls</a>	End users by admins, makers, or analysts	-	-	✓ Nov 16, 2019
<a href="#">Work with business process flows offline</a>	End users by admins, makers, or analysts	-	-	✓ Nov 16, 2019

Feature	Enabled for	Public preview	Early access*	General availability
<a href="#">Attachments for approval flows</a>	Admins, makers, or analysts, automatically	-	-	✓ Nov 22, 2019
<a href="#">Dynamics 365 applications build features on Power Automate</a>	End users by admins, makers, or analysts	✓ Feb 3, 2020	-	✓ Feb 26, 2020

\* Some features are available for you to opt-in as part of early access on August 2, 2019, including all mandatory changes that impact end users. Learn more about [early access](#).

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## More intelligent and powerful capabilities for Power Automate makers

### Overview

The citizen developers of the Microsoft Power Platform now have richer capabilities when they are building out business processes inside of Power Automate. Flow makers can now leverage the **smarter** experiences of AI Builder.

### Flows that use other solution components

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Nov 2, 2019	-	-

## Feature details

The Microsoft Power Platform is continuing to adopt a single packaging mechanism. We're continuing to close gaps so that any solution component has consistent behavior and pre-existing user workflows aren't negatively affected. Combined with enhancements to our developer tooling, you can manage all customization in source control, enabling continuous integration and continuous delivery with fully automated build and release pipelines.

With this release, there are three important updates:

1. Flows can now leverage **Environment Variables**. Environment variables allow you to transport application configuration data with solutions and optionally manipulate the values in your Application Lifecycle Management (ALM) pipeline. They act as configurable input parameters allowing you to reference an environment variable within other solution components. You can update a value without modifying other components directly when using environment variables.
2. You can add **Custom connectors** to solutions. This means if you have additional custom endpoints that you want to connect you, you can store that definition alongside your flows in a solution, and when you export and import your solutions to a different environment the connector definitions will be transported as well.
3. Dependencies are tracked and enforced for new solution components. For example, if a flow uses an entity in the Common Data Service, that will now be known at solution export and import time.

## See also

[Feature exploration](#) (video)

[Power Automate blog](#) (blog)

## Deactivate actions in flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Dec 18, 2019	-	-

## Feature details

As our community has [suggested](#), you may sometimes have an action that's failing in your flow; however, it may not be essential for the flow to perform its core tasks. Thus, instead of spending the time to fix that particular action, you can specify **static results** for that action. This allows you to continue building out and testing the rest of your flow. If any other action in your flow

needs data from that action it will use the **static results** you've defined instead of calling the connector that's failing.

## Power Automate and Adaptive Cards in Microsoft Teams

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Jan 16, 2020	-	-

### Feature details

There are a number of new actions in the **Microsoft Teams** connector that provide rich, contextual automation for Microsoft Teams users. [Adaptive Cards](#) are offering new experiences in sharing and collecting information on Microsoft Teams. They offer a simple way to display information, build forms, and integrate relevant data from other places.

You can use the new actions in Microsoft Teams to post adaptive cards to teams, users, or channels. You can also collect input from users by using the *wait for a response* actions.

The approvals actions in Power Automate produce pre-built adaptive cards, meaning you can build approval processes that happen entirely from inside of Microsoft Teams.

Here are the actions we are introducing.

Description	Actions
With these actions, you can post adaptive cards to Microsoft Teams member activity feeds and chats.	<ul style="list-style-type: none"> <li>Post your own adaptive card as a flow bot to the user.</li> <li>Post your own adaptive card as a flow bot to the user and wait for a response.</li> </ul>
Use these actions to post adaptive cards to Microsoft Teams channels.	<ul style="list-style-type: none"> <li>Post our own adaptive card as a flow bot to a channel.</li> <li>Post our own adaptive card as a flow bot to a channel and wait for a response.</li> </ul>

We have outlined [everything you need to know](#) to help you to get started with Adaptive Cards in Power Automate.

### See also

[Power Automate + Adaptive Cards introduces business form scenarios on Microsoft Teams](#) (blog)

## Share flows as templates

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 4, 2019

### Feature details

Earlier this year, we previewed the ability for users to share copies of their flows with their co-workers. When you send a copy of a flow, recipients can create their own copies of the original flow. These recipients own their copies, and their copies use the recipient's connections (not the original owner's connections). Recipients can make any changes they want after they create their own copy.

We're now making this feature generally available for everyone to use. You can use this feature to create an organization-specific gallery of templates for your users, for example.

## Export Visio diagrams to Power Automate is now generally available

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 11, 2019

### Feature details

Earlier this year, we released Export to Power Automate for public preview. Export to Power Automate is a new, efficient way for you to design business workflows in Microsoft Visio and then export them to Power Automate. We are announcing that Export to Power Automate is generally available to all Visio Plan 2 users through the Visio desktop app.

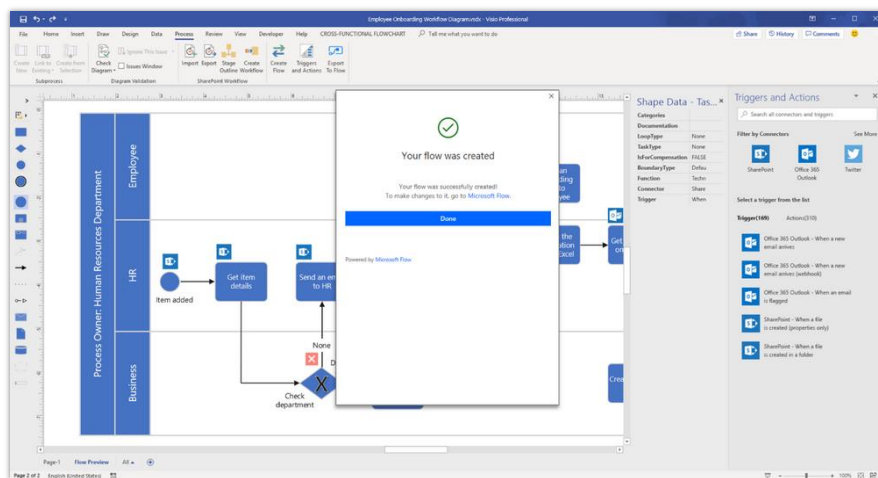
The [public preview announcement blog](#) has all the details about this feature, but as a quick recap, you can easily export new or existing business process diagrams from Visio to Power Automate. Use built-in Business Process Model and Notation (BPMN) stencils to create your diagram, modify it with out-of-the-box Visio shapes that conform to Power Automate parameters, and input Power Automate triggers, actions, and connectors to finalize your diagram.

You can use Visio's sharing and commenting capabilities to collaborate with multiple stakeholders and arrive at a complete workflow in little time. With a single click, you can export your diagram to Power Automate, then supply parameters to activate it.



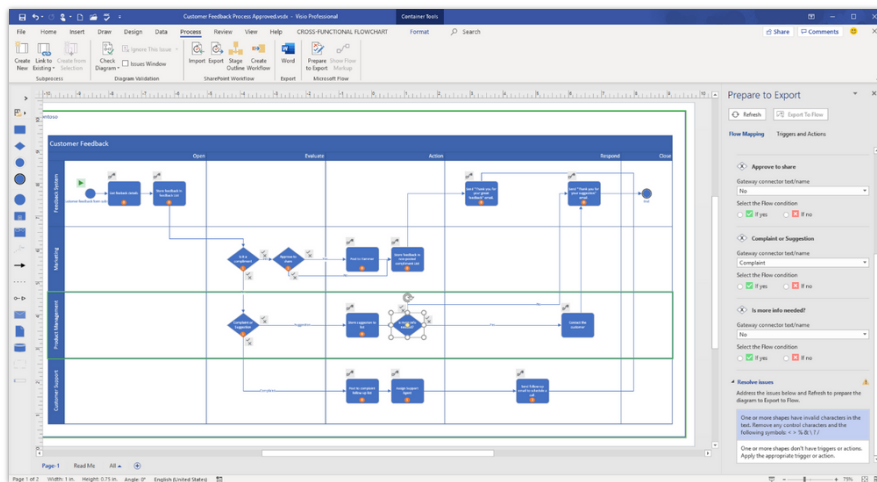
Our [support page](#) gives you even more specifics on Export to Power Automate, including detailed steps for using it. Export to Power Automate can help users in a variety of roles across industries. Here are just a few use cases to spark ideas for your company.

**Automate employee onboarding tasks:** An HR manager uses Visio to create a workflow for new employee onboarding. The manager selects an existing business process diagram and quickly modifies it using BPMN basic shapes. With a familiar and intuitive experience in Visio, he's able to easily map the shapes to the right Power Automate connectors and choose from hundreds of triggers and actions for each process step. The manager adds a trigger for when a new employee is added to the main onboarding list in SharePoint, then adds two actions: update the company's organization data in Excel and schedule a meet-and-greet call on the team's Outlook calendar. The manager exports the resulting diagram to Power Automate, which seamlessly connects the different apps and automates the added actions.



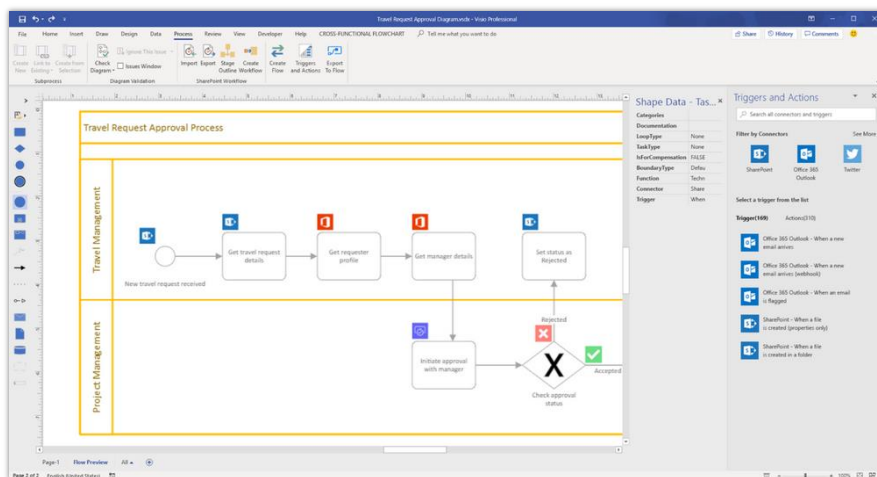
### *Export to Power Automate*

**Visualize complex customer feedback processes:** The new director of customer success at a national healthcare organization uses Visio to sketch a workflow that automates tasks associated with the organization's customer feedback/complaint process. This is a complex process involving multiple steps and stakeholders. The process includes gathering information from patients submitted in Microsoft Forms, adding suggestions to a list in SharePoint, assigning a provider via Dynamics 365, and scheduling time on that provider's calendar to follow up with the patient. The director designs the diagram of the workflow by using the built-in BPMN stencils for Power Automate, then inputs the necessary triggers, actions, and connectors to automate the steps. She receives a notification that a couple shapes in Visio have invalid text characters that would break the resulting Power Automate workflow and quickly resolves the issue. When she's done, she shares the diagram with all stakeholders for review, who can provide feedback directly within Visio.



### Design in Visio

**Collaborate on approval process workflows in real-time:** The finance director for a multinational professional services firm is tasked with transforming the organization's travel request workflow so that employees can easily send and see status updates on travel requests. She uses Visio to design a new workflow from an available BPMN diagram template, then modifies it using the BPMN basic shapes. The workflow is designed so that every new travel request submitted for approval is automatically sent to the requester's manager and the next level manager for international travel. The status of the request is updated automatically in SharePoint. The director needs to get buy-in on the workflow from a geographically dispersed team in Seattle, London, and Sydney, so she relies on Visio's built-in collaboration capabilities. With the ability for users to easily share and add comments, she's able to review the workflow with executive members and managers to ensure everyone's feedback is properly captured before the workflow executes in Power Automate.



### Collaborate in real-time



## Add intelligence to Power Automate with AI Builder

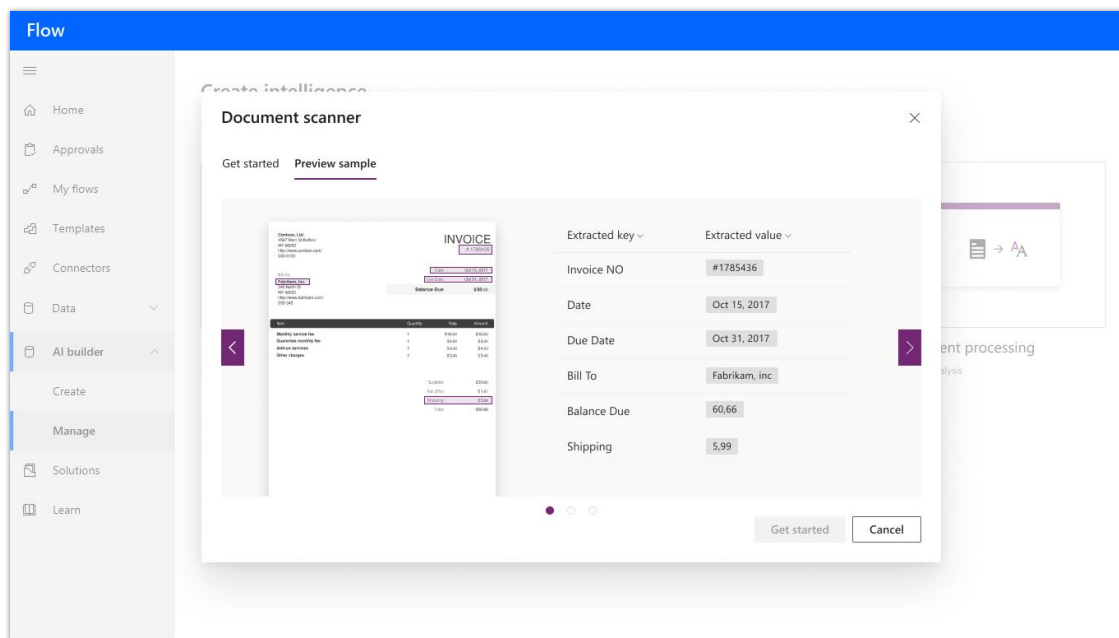
Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Jun 9, 2019	-	✓ Oct 11, 2019

### Feature details

AI Builder is a new Microsoft Power Platform capability for teams to easily automate processes and predict outcomes to improve business performance. AI Builder is a turnkey solution that brings the power of Microsoft AI through a point-and-click experience. You can now add artificial intelligence (AI) to your apps and flows even if you don't have programming or data science skills. Using AI is made even easier with integration directly into Power Apps and Power Automate.

To start using AI Builder from Power Automate:

1. Sign in to [Power Automate](#).
2. Select **Build** under **AI Builder** from the menu on the left side of the screen.
3. Select one of the templates.
4. Get started creating AI models for your organization.



AI Builder image

## Geographic areas

This feature will be released into the following Microsoft Azure geographic areas:

- United States
- Europe

For more information about geographic areas, data centers (regions), data storage, and replication, click **expand all** on the [Where your data is located page](#) and find the Microsoft cloud service for this feature.

## See also

[Feature exploration](#) (video)

[Introducing AI Builder](#) (blog)

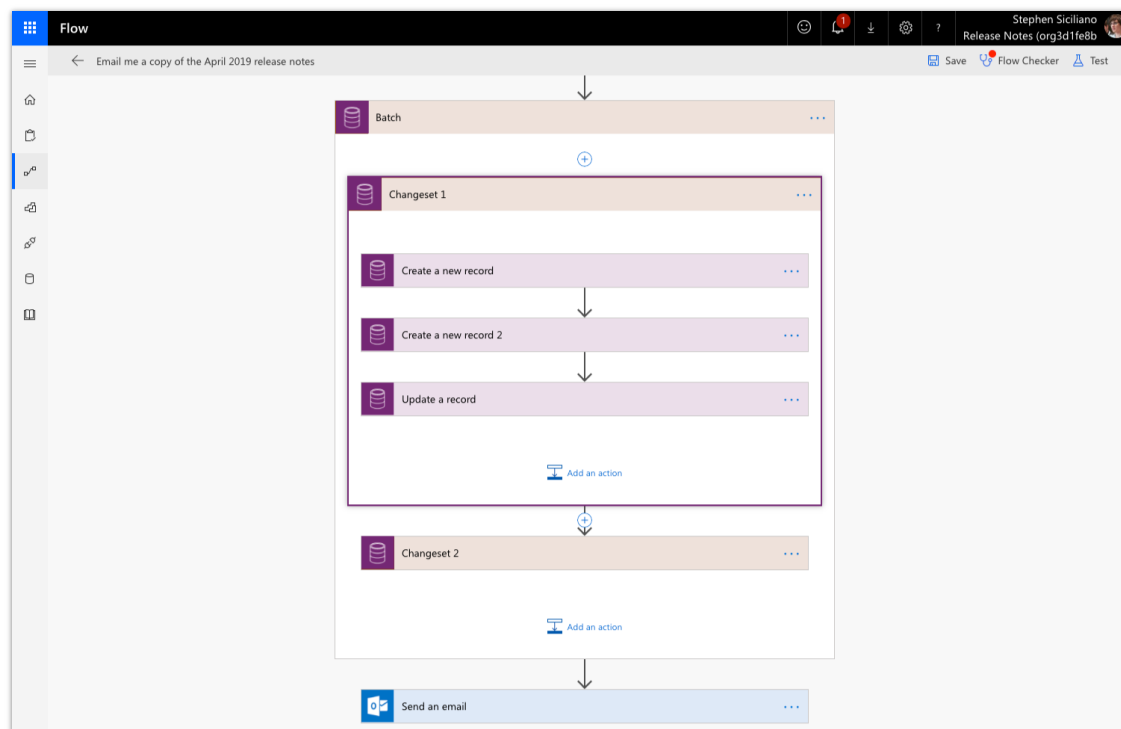
## Automated flows support change sets in Common Data Service

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019

## Feature details

Change sets are an important part of working with Common Data Service because all operations are considered atomic, which means that if any one of the operations fails, any completed operations will be rolled back. This is often referred to as a *transaction*.

We've now added native understanding of change set scopes to the Power Automate designer so that users can replace classic Common Data Service workflows that previously needed atomic transactions.



### Change sets in Power Automate

Change sets can be added inside **Batch** scopes. To use this, search for **change set** under the **Common Data Service** connector. Once you add this scope into the Power Automate designer, you can then add Common Data Service create, update, or delete actions inside of it.

**NOTE** Read operations cannot be in a change set.

**NOTE** You cannot include actions for other services inside a change set scope. Instead, you must perform those other actions before or after the batch.

### Better connect flows and Power Apps

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019

### Feature details

Power Automate is the best way to layout logic for your model-driven and canvas-based Power Apps. Instead of writing code, you can use the point-and-click designer to build out your business logic. You can then easily run flows in your app with buttons, actions, and data inputs. These flows can optionally return data to your app users.

With this release, it's now possible to leverage solutions with your flows and your canvas-based Power Apps.

## Call Child Flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019

### Feature details

Today, people are building flows in Power Automate that need dozens or hundreds of steps; however, if you try to put all of these actions into a *single* flow, it can be difficult to navigate and maintain that flow. Instead, we recommend breaking apart your steps into different, smaller flows and calling back and forth between these flows. Each smaller flow can accomplish a single, discreet task, which is easier to read and identify a problem if something goes wrong. This approach is especially important where you want to reuse that task at multiple places in a flow, or even across multiple flows.

Previously, [we shared](#) how one flow could call another with the HTTP trigger and action. This is somewhat cumbersome because it requires copying and pasting the flow's HTTP URL. More problematically, with the introduction of **solutions** for flows, the HTTP approach no longer works if you export and import because when you copy a flow from one environment to another, it still points at the flow's HTTP URL in the old environment.

In October, we introduced a new built-in action called **Run a Child Flow** that automatically handles these problems. To get started with this action, select **Solutions** in the left side navigation and then pick an existing solution, or create a solution. Next, create (or edit) two flows:

1. The **parent** flow: This flow can have any type of trigger and will call into the other flow.
2. The **child** flow: This is the flow that is nested inside the other flow and contains the smaller tasks you want to run.

Let's look at an example where you have a child flow that you want to create or update a contact in Common Data Service based on that contact's name.

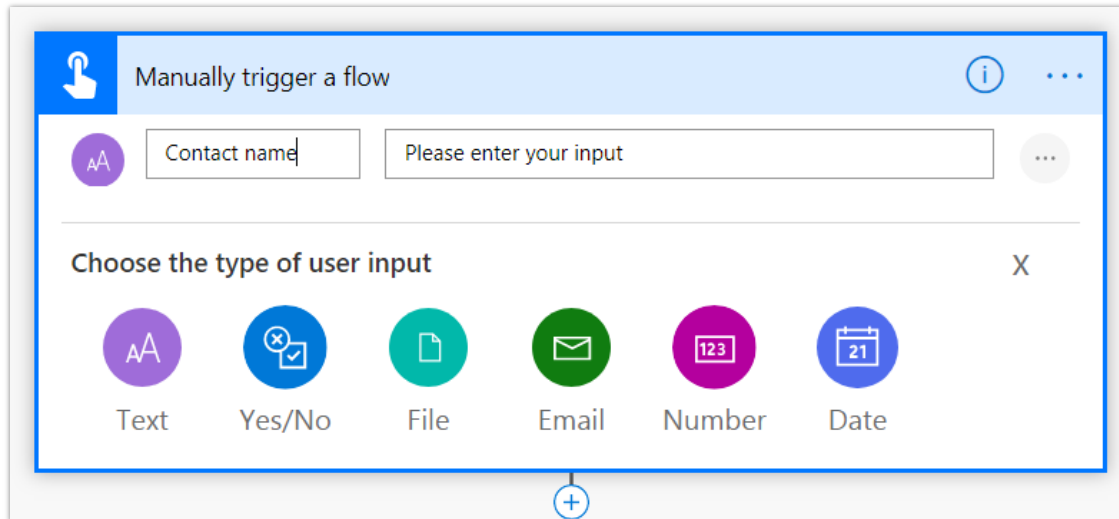
### Building the child flow

You'll first need to create the child flow. Today, there are three different triggers you can use for child flows:

1. **Manually trigger a flow** (under the Flow button for mobile).

2. **Power Apps.**
3. **When an HTTP request is received** (available only on the premium HTTP request/response connector).

When you select the first trigger you can define *inputs* that you want the child flow to receive from the parent flow. For example, if the child flow is going to be creating a contact, it will need the **Contact name** and **Contact email**. Select **Add an input** and provide the details.



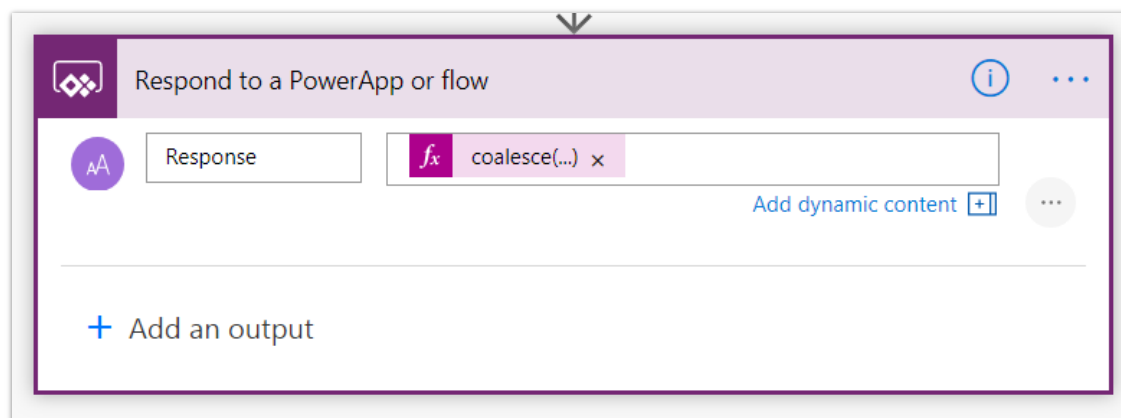
The screenshot shows a 'Manually trigger a flow' dialog box. At the top, there's a title bar with a hand icon and the text 'Manually trigger a flow'. Below this, there's a section for 'Choose the type of user input'. This section contains six circular icons representing different input types: Text (purple with 'AA'), Yes/No (blue with a checkmark and 'X'), File (teal with a document icon), Email (green with an envelope icon), Number (pink with '123'), and Date (blue with a calendar icon). The 'Text' option is selected. Below the icons, there's a text input field with the placeholder 'Please enter your input' and a plus icon at the bottom right. The dialog also has a close button (X) in the top right corner.

#### *Input for child flow*

Next, you'll build the logic that you want the child flow to run. This logic can contain as many steps as you need. After your steps, you need to return data to the parent flow. In this case you can use one of two actions:

1. **Respond to a Power App or flow** (under the Power Apps connector).
2. **Response** (on the premium HTTP request/response connector).

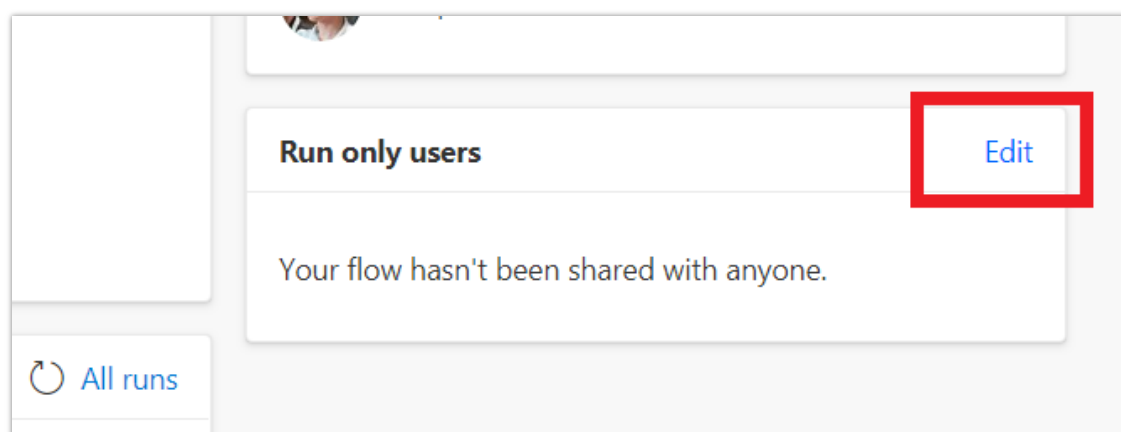
As with the trigger, you can define as many outputs as you want to be returned from the child flow. In this example, we can respond with the ID of the contact.



### Child flow response

Give your flow a descriptive name and save it. You need to then test your child flow. Because you can manually trigger this flow, it's very easy to test right inside of the designer. Try it out with a couple different inputs, and verify that the outputs are what you expect.

Lastly, if your flow uses anything other than built-in actions or the Common Data Service (current environment) connector, you will need to update the flow to use the connections **embedded** in the flow. To do this, select the back button to get to the child flow's properties page and then select **Edit** in the **Run only users** tile.




### Edit flow

In the pane that appears, for each connection used in the flow, you will need to select **Use this connection (<connection name>)** instead of **Provided by run-only user**.



**Connections Used**

These connections will provide the users listed here to have run-only access to this flow. Unless providing their own connection, run-only users will not have access to these connections outside this flow.

**Notifications**

Run-only users will be asked to provide their own connection to this connector.

Use this connection (Notifications) ▼

Provided by run-only user

Use this connection (Notifications)

*Select the connection to use*

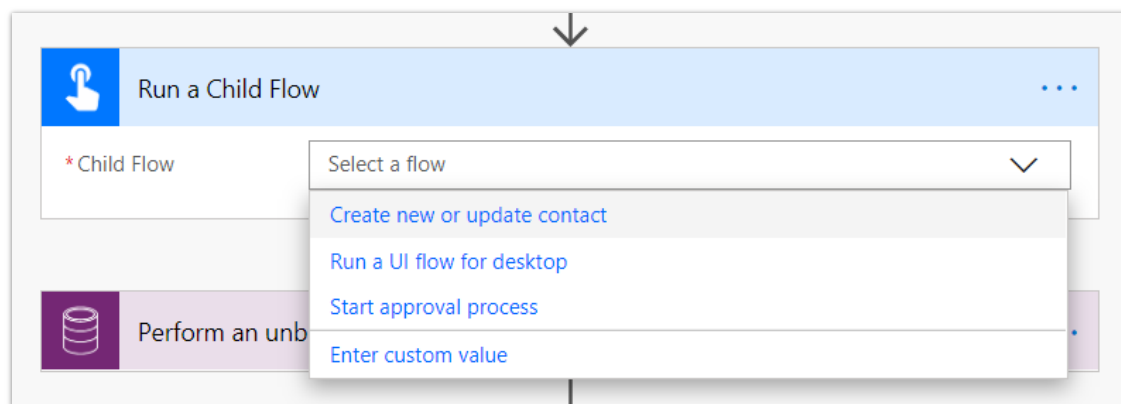
Then, you can select **Save**. At this time, you cannot pass connections from the parent flow to the child flow. If you do not do this, you will receive an error stating that the name cannot be used as a child workflow because child workflows only support embedded connections.

### Building the parent flow

Now you can build the parent flow in the same solution in which you created the child flow. Simply create a new flow. Alternatively, you can bring an existing flow into that solution. This parent flow can have any type of trigger.

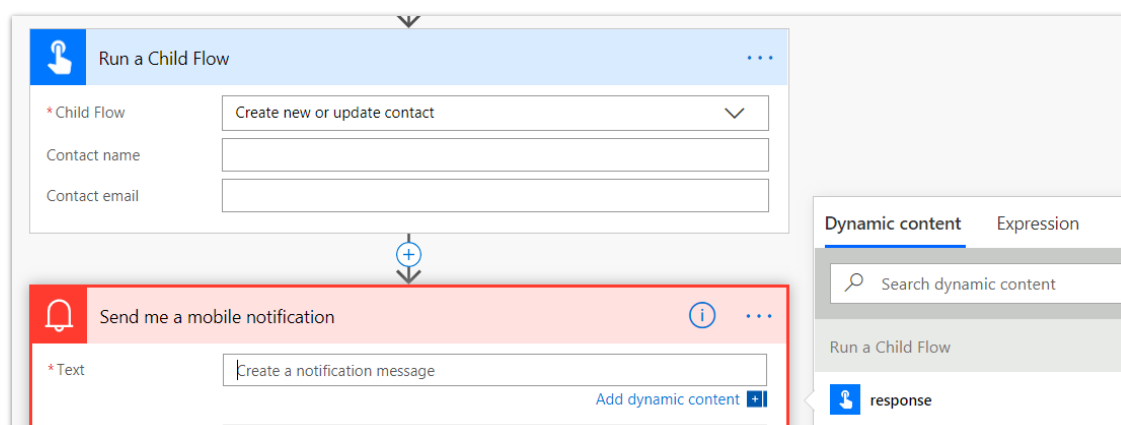
Find the place in your flow from which you want to call the child flow and add the **Run a Child Flow** action that's located under the **Flows** connector on the **Built-in** tab.

Next, you need to pick the child flow that you created earlier. As a reminder, you will only see the flows you have access to that are in solutions and that have one of the three triggers mentioned earlier.



### Select the child flow to run

After selecting your child flow, you will see the *inputs* that you defined. After the child flow action, you will be able to use any of the *outputs* from that child flow.



### Inputs

When the parent flow runs, it waits for the child flow to complete for the lifetime of the flow (one year for flows that use built-in connections and Common Data Service or 30 days for all other flows).

Finally, you can save and test this flow. When you export the solution that contains these two flows and import it into another environment, the new parent and child flows will be automatically linked, so there's no need to update URLs.

### Support gateways in all environments

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Oct 23, 2019

## Feature details

We've now added support for on-premises data gateways in non-default environments. Previously, you could only install and connect to a gateway in the Power Automate and Power Apps default environment. After much feedback, you can now view and use gateways in your other environments as well. Additionally, on-premises gateway management [is now available via PowerShell \(preview\)](#).

## Details

**IMPORTANT** The region where the gateway is installed must be the same as your Power Automate and Power Apps environment in order to view, connect to, and manage the gateway in that environment.

Scenarios that cross geographic boundaries are not supported.

For example:

- If you install a gateway in the West US region and your Power Automate environment (default or non-default) is also set up in the United States, the gateway will be visible and usable in this environment.
- If you install a gateway in the West US region and your Power Automate environment (default or non-default) is set up in Canada, the gateway will **not** be visible or usable in this environment.

## Troubleshooting

It's possible this new feature may change whether you could view or manage *existing* gateways in Power Automate and Power Apps. If so, you may be able to troubleshoot based on these scenarios:

### Missing gateways

If you are using Power Automate or Power Apps and you aren't able to see one (or more) of your gateways under the **Gateways** menu or as an option to select in the list when creating a connection, confirm that the region where you installed the gateway matches the region in which your Power Automate or Power Apps environment is located. We do not support cross-geographic region scenarios so if they do not match, you will not be able to view or use that gateway(s) in that environment. You will need to install a new gateway in the region that matches your Power Automate or Power Apps environment region.

[You installed a gateway in a non-default environment with help from Microsoft Support](#)

If you got an exception to install a gateway in a non-default environment before this feature was available, depending on the region that gateway was installed in, you may no longer be able to

view or manage that gateway in Power Automate or Power Apps; however, any existing connections using that gateway in your flows should continue to work. To be able to view and manage the gateway used in your flows and apps, you'll need to install a new gateway in the appropriate region and then update your connection(s) with the new gateway.

### Improved Power BI connector

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Nov 4, 2019

#### Feature details

You can now refresh datasets in Power BI to keep your reports updated when your flow modifies the underlying data sources.

### Support for simplified number formatting

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Jan 23, 2020

#### Feature details

To extend the built-in actions for an improved experience for all flow makers, the Power Automate team is happy to release the new **Format number** action. This new action enables you to perform a variety of number formatting options with little effort, and by leveraging number formatting patterns which exist across Microsoft Power Platform.

Select a format from the list of options:

**123** Format number ⓘ ⋮

**Number \***

123456789

\* Format

Locale

\$1,234.00

1,234.00

-1,234.00

\$1,234.00

Enter custom value

+ New step Save

**123** Format number 0s ✓

**INPUTS**

Number

123456789

Format

C2

Locale

en-US

**OUTPUTS**

Formatted number

\$123,456,789.00

*Built-in format*

You can also create your own custom number format, just like you do in Microsoft Excel using **Enter custom value**:

The image shows two screenshots of the 'Format number' action in Power Automate. The top screenshot shows the configuration interface with the following fields:

- Number \***: 123456789
- \* Format**: ###,###,###.0
- Locale**: English (United States) (en-US)

The bottom screenshot shows the results of the action, with a red box highlighting the 'Formatted number' output:

- INPUTS**
  - Number**: 123456789
  - Format**: ###,###,###.0
  - Locale**: en-US
- OUTPUTS**
  - Formatted number**: 123,456,789.0

### Custom format

This new action is helpful in many scenarios for both citizen and professional developers. Here are some of the value highlights:

- Maintain numeric values as numbers for in-process calculations and format the appearance of the number based on typical patterns such as currency formats.

- Leverage past knowledge with custom formatting patterns you've learned in Excel, Microsoft Power BI, and Power Apps expressions.
- Vary currency formats per the business process requirements, rather than only the maker's locale.
- Includes developer-friendly patterns, such as C2 (currency with two decimal places), and N2 (negative number with two decimal places). [Learn more about these .NET formatting standards](#).

### See also

[Simplified number formatting](#) (blog)

## Simplified AI Builder experience in Power Automate

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Feb 6, 2020

### Feature details

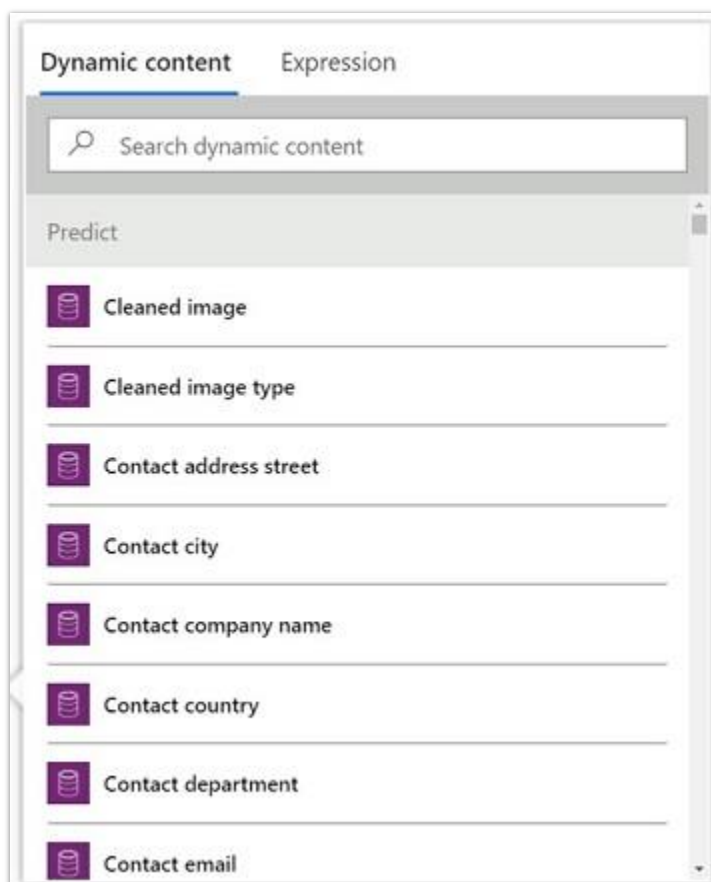
AI Builder has introduced a new and simplified way to use AI Models in Power Automate. It is now easier to provide your data to the AI Model and to use the output without the need to manually transform data.

The data that you need to provide to the AI Model changes based on the type of model that you select.



*Predict action*

The format of the AI Model output also changes based on the type of model and is now available in Power Automate *dynamic content* for you to use like any other data in your flow.



## Outputs

### Form processing example

With AI Builder form processing, you can train an AI model to extract data from forms. In this example, we'll show how you can automatically extract data from invoices that you receive in email, and then save the data to a SharePoint list.

To do this, you first create an AI Builder form processing model for the invoice you want to process. After you train and publish the model, create a [solution-aware flow](#) in Power Automate that's triggered every time you receive an email with an attachment for a certain provider. To leverage the AI Builder model you trained, use the **Predict** action from the Common Data Service connector, and then, select your model and point it to the email attachment.

To save the extracted data to SharePoint, you add an action to the flow that creates a new SharePoint list item. You can easily select the results from the AI Builder model that you want to save to the list.



## Sentiment analysis example

You can also use the [prebuilt AI Builder models](#) without the need to train them. One of these pre-built models is sentiment analysis, which detects positive or negative sentiment in text data.

Let's say that you are organizing an event, and you want to know the audience's sentiment based on the tweets coming out from the event. The first thing you do is create a [solution-aware flow](#) that's triggered every time somebody tweets with the hashtag of your event. Next, add the **Predict** action, select the sentiment analysis model, and then provide the input text from the tweet.

Do you want to be notified by email if somebody posts a tweet with negative sentiment? Just add a condition to check if the result coming from AI Builder is a negative sentiment, and add another condition to send an email with the text and author of the negative tweets.

## Learn more

You can refer to [this documentation](#) if you want to learn more about using AI Builder in Power Automate.

We are always working on improving the AI Builder experience, so feel free to reach us with feedback. We're looking forward to seeing what you build with the improved AI Builder experience in Power Automate!

## See also

[Power Automate](#) (blog)

## Rich tooling for administrators

### Overview

Power Automate makes maintaining and managing business processes across your organization easier than ever. The [Power Platform admin center](#) is now the single admin center for Power Automate admins and partners, offering a more reliable, unified experience for managing storage capacity, environments, and deployments. Powerful analytics empower admins to investigate and diagnose issues with their deployments, and the integrated Help & Support experience allows them to find the help they need and escalate to Microsoft Support when necessary.

## New licensing options for Power Automate standalone paid plans

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 11, 2019

### Feature details

In July we [announced](#) new licensing options for Power Apps and Power Automate. You can purchase these options from the Office admin center. You can also allocate add-ons in the [Power Platform admin center](#) and then use the add-ons in Power Automate.

### New licensing options

New and existing customers can choose Power Automate per user or per flow plans:

- **Power Automate per user plan.** This plan enables individuals to create unlimited workflows and business processes. The existing Flow P1 and P2 plans will become a single, simplified per user plan. The monthly cost of this plan is \$15.00 per user.
- **Power Automate per flow.** With this plan, you can implement critical business processes with enough capacity to serve teams, departments, or the entire organization for an unlimited number of users. Pricing for this plan starts at \$500.00 monthly for up to 5 active flows. There is a \$100.00 monthly fee for each additional active flow.

As part of the changes to Power Automate licensing, there will no longer be plan-based limits on flow trigger frequency nor limits on flow runs. We are moving to a simplified model across Power Apps and Power Automate with a single integrated approach for daily capacity limits to ensure a consistent quality of service. Organizations that require additional capacity for heavy usage scenarios will be able to reserve **add-on** capacity and assign it to specific users or processes.

### Allocating the per flow plan in the admin center

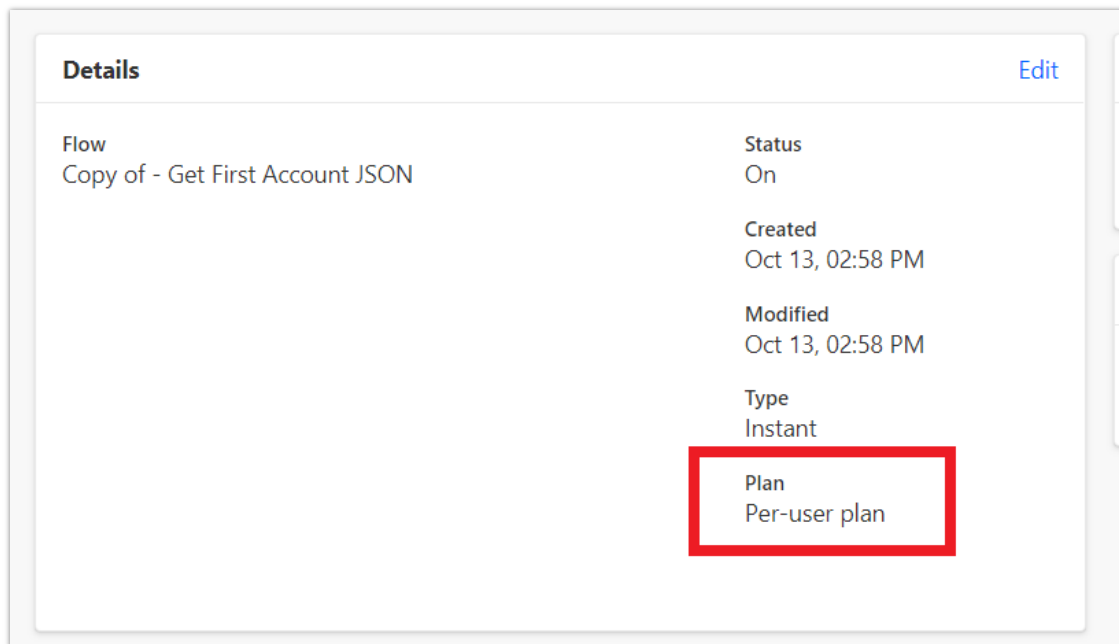
It's easy and scalable to allocate the per flow add-ons you've purchased to the environments that need add-ons. In the Power Platform admin center under capacity, a new section appears if your organization has purchased add-ons.

To allocate add-ons:

1. Select **Manage** in the add-on section.
2. Select an environment.
3. Enter the amount of each add-on you would like to allocate to each environment.

## Power Automate

Once you have allocated a per flow plan add-on to an environment, you can choose which flows will be able to use that add-on. When you select a flow, you'll now see a new section in the details pane that tells you if the flow is assigned to a user, or if it is part of the per-flow plan. The default for a flow is to use the license of the user.



### Flow properties

To have a flow use the per-flow plan, select **Edit** in the details panel. You will then see the **Name**, **Description** and **Plan** that the flow uses. If your environment has the add-on allocated, you can move that flow to use the per flow plan. Otherwise, you'll need to allocate capacity.

**Details** [X]

Flow name

Copy of - Get First Account JSON

Description

Provide a helpful description explaining how your flow works

**Plan \***

- ☒ Per-user plan
- ☐ Per-flow plan (There's no capacity allocated for this environment.)

**Save** **Cancel**

*Set capacity*

Once you update your flow, anyone will be able to use that flow, even if it leverages premium connectors. Additionally, capacity will be dedicated to that flow.

### Learn more

- Step-by-Step instructions on [allocating add-ons](#)
- Power Apps and Power Automate [licensing FAQs](#)
- Microsoft Power Apps and Power Automate [licensing guide](#)
- Power Automate [pricing](#)
- [AI Builder information](#)

### Power Automate used in SharePoint admin scenarios

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Jan 23, 2020

### Feature details

As covered by [this idea](#), site owners will be prompted to create and run an approval process whenever they want to join a hub site in their tenant. Further, in organizations that have turned off self-site creation, users can now request a site to be provisioned, which will initiate a request to SharePoint administrators before being provisioned.

## UI automation for applications and websites

### Overview

We are introducing UI flows, a new feature that helps you automate applications that can only be automated from their front end and do not have APIs. With this release, we are supporting UI automation across services and applications, running on-premises and in the cloud.

With UI flows in Power Automate, you can record mouse clicks, keyboard use, and data entry to automate manual, repetitive, and time-consuming tasks and improve workplace productivity. UI flows enable you to create, manage, and execute UI automation scripts in a secure, centralized environment.

## Automate web-based applications

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Nov 4, 2019	-	-

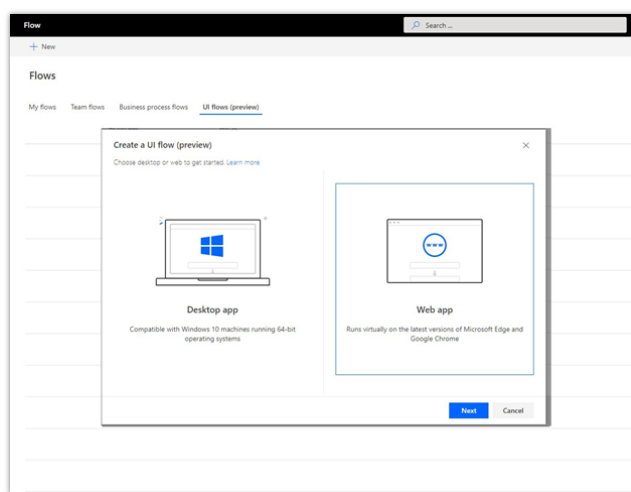
### Feature details

Power Automate customers can use the Selenium Integrated Development Environment (IDE) to automate web-based applications.

**NOTE** UI flows for web apps supports the latest version of Google Chrome and the beta release of Microsoft Edge (Chromium) browsers.

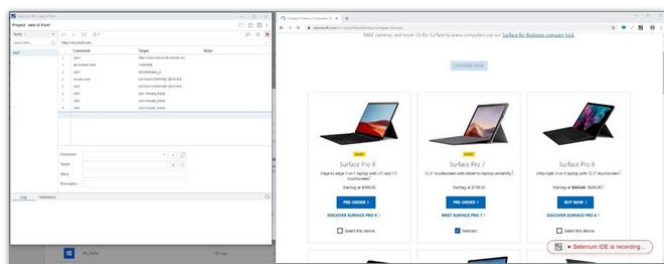
Follow these steps to create a web app:

1. Select the **UI flows (preview)** tab.
2. Select **Web app**.



### *UI flows web app step 1*

3. Use the recorder within Selenium IDE to record the steps you want to automate.



*UI flows web app step 2*

## See also

[Create and test your web UI flows](#) (docs)

## Automate Windows applications

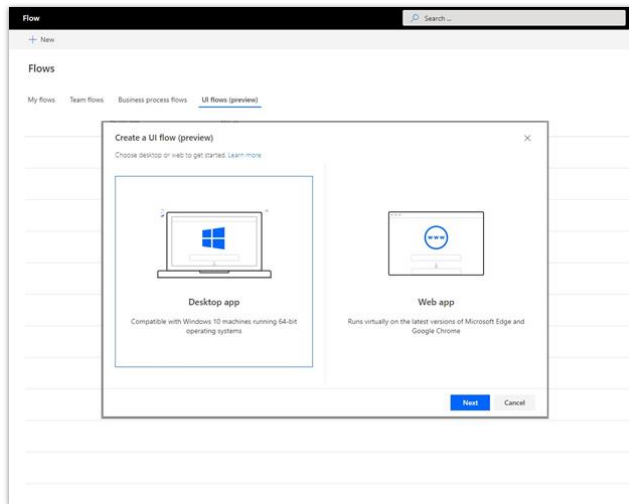
Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Nov 4, 2019	-	-

## Feature details

Users can automate many Windows desktop applications with a no-code, point-and-click approach. Users can easily record actions on a Windows desktop and then turn manual, repetitive steps into automated workflows.

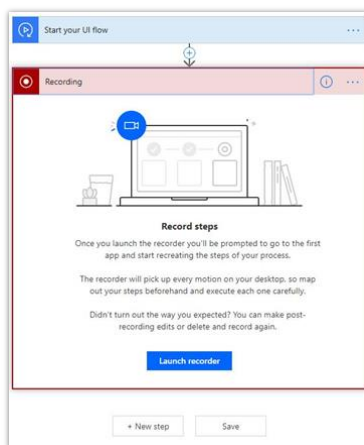
Follow these steps to automate a Windows desktop application:

1. Select **My flows**.
2. Select the **UI flows (preview)** tab.
3. Select **New > Desktop app > Next**.



### *Select Desktop app*

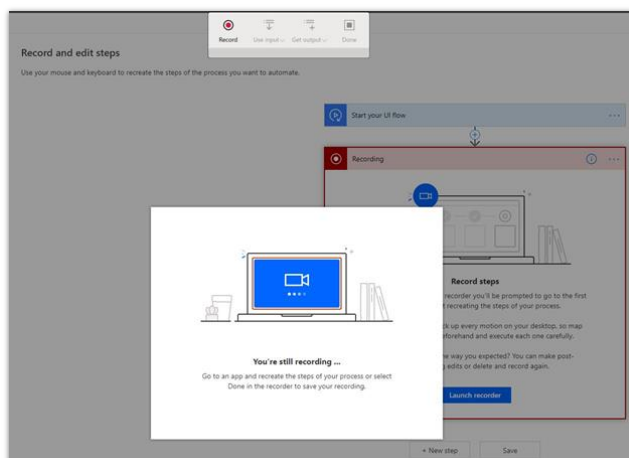
4. Give your app a name and then select **Next**.
5. Select the **Recording** card and then select **Launch recorder**.
6. Select **Record** and then perform the steps you want to automate.



### *Record the steps to automate*

7. Select **Done**.





### *Complete the recording*

The UI flows recorder captures mouse clicks and the keyboard input you enter while the recorder runs.

You can then test your UI flow and use it instead of performing the recorded steps manually.

### See also

[Create and test desktop UI flows](#) (docs)

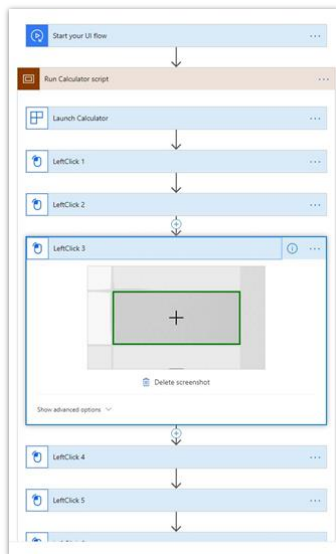
## Simple, centralized, integrated management of UI flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Nov 4, 2019	-	-

### Feature details

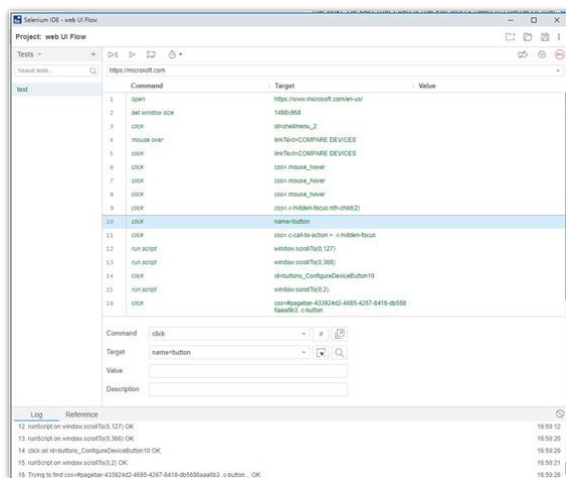
Users can perform different types of management operations like edit, delete, and view flow run history on both Windows and web-based UI flows from the **My flows** tab within Power Automate.

For Windows apps, use a no-code interface to edit and test the scripts to ensure your UI flow executes the automation as intended. Users can view details of the elements captured and the screenshot of each recorded action.



## UI flows management step 1

For web-based UI flows, use the Selenium IDE to edit and test different steps of your web-based flow. Use the Selenium IDE to manage UX elements recorded in the script.



## UI flows management step 2

## See also

[Manage UI flows](#) (docs)

## Error handling for UI flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	-

### Feature details

Users can enable error handling capabilities within UI automation scripts to prevent the flow run from failing if a particular step fails. The editor will have the capability to handle such expected errors and let the automation finish its execution. This can be done by selecting the **Configure Run After** option.

## IME support for UI flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	-

### Feature details

UI flows will support recording and playback actions that use Input Method Editors (IMEs). A **Set text** mode is added into the UI flows recorder. When users need to record an action that contains strings in any language, they select the **Set text** button, and then enter their string values into the box. The string values will be recorded and played back accordingly, independent of the keyboard layout or IME used during recording time.

Learn more about [how to use IMEs in UI flows](#).

### See also

[Power Automate](#) (blog)

## UI flows run on AAD-joined machines

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	-

## Feature details

Power Automate already supports on-premises Active Directory (AD)-joined machines to run UI flows. With this release, we are adding support for [Azure Active Directory \(AAD\)-joined machines](#). This will allow businesses with on-premises, cloud or hybrid identity, and access management services to seamlessly use UI flows.

## See also

[Power Automate](#) (blog)

## Unattended automation

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	✓ Mar 2, 2020	-	-

## Feature details

Unattended UI flows can run without human supervision. These flows are best for scenarios such as processing invoices and entering them into a legacy application automatically, or scheduled financial reconciliation across multiple systems that can only be automated by clicking user interfaces.

When running unattended, Power Automate will securely sign into the device on your behalf, execute the UI flow actions on the target applications, and then sign out of the device.

You can [get started now](#) with UI flows and learn more about [how to run them attended or unattended](#).

If you are already using UI flows, please read how to [upgrade from previous releases](#).

## See also

[Power Automate](#) (blog)

## World-class business process capabilities

### Overview

Power Automate provides world-class business process capabilities for its users that span endpoints and experiences. These include significant experience improvements for users so that they can now accomplish basic scenarios with business processes offline.

## Business process flow immersive experiences

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Oct 23, 2019

### Feature details

Organizations are increasingly using business process flows to model their key processes. There is now much more flexibility in how business processes are built and used. For example, business process flows can now be built in a standalone fashion so that they don't need to rely on other records in Common Data Service. Moreover, you can now use the new form designer to fully customize the appearance of business process flows, including using custom controls with the Power Apps Control Framework.

**PROPERTY SERVICE PROCESS**  
Olivia Gill

Started on: 7/26/2019 11:29 AM

**Perform Work (< 1 Min)** | Payment | Close

**Budget Tracker**

All budgets	Budgeted	Spent	Remaining
<b>Total</b>	<b>\$55,000</b>	<b>\$20,382</b>	<b>\$24,618</b>
Team events at Contoso	Budgeted \$10,000 Spent \$0 Remaining \$0		
Spring customer visits	Budgeted \$5,000 Spent \$3,175 Remaining \$1,825		
Meta Conference XVI	Budgeted \$10,000 Spent \$8,732 Remaining \$1,268		
Litware team event	Budgeted \$5,000		

**Total spent: \$1,950**

**Attached receipts:** No receipts

**Expenses:**

- Cake: \$300
- Movie: \$500
- Extra: \$1,000
- Cleaning: \$150

**Task Items (Perform Work Stage):**

- ✓ Schedule start date: 7/15/2019
- ✓ Schedule completion date: 8/16/2019
- ✓ Schedule weekly budget update with client: ☒ Done
- Log labor costs: ☐ To-do
- Log material costs: ☐ To-do
- Confirm work to client satisfaction: ☐ Required
- Attach receipts: ☐ To-do

Next Stage >

*Immersive business process flow with side pane*

Additionally, now that we have a single, immersive experience for a full business process flow, a separate type of business process flow for task flows is no longer required. Thus, task flows are now deprecated.

### See also

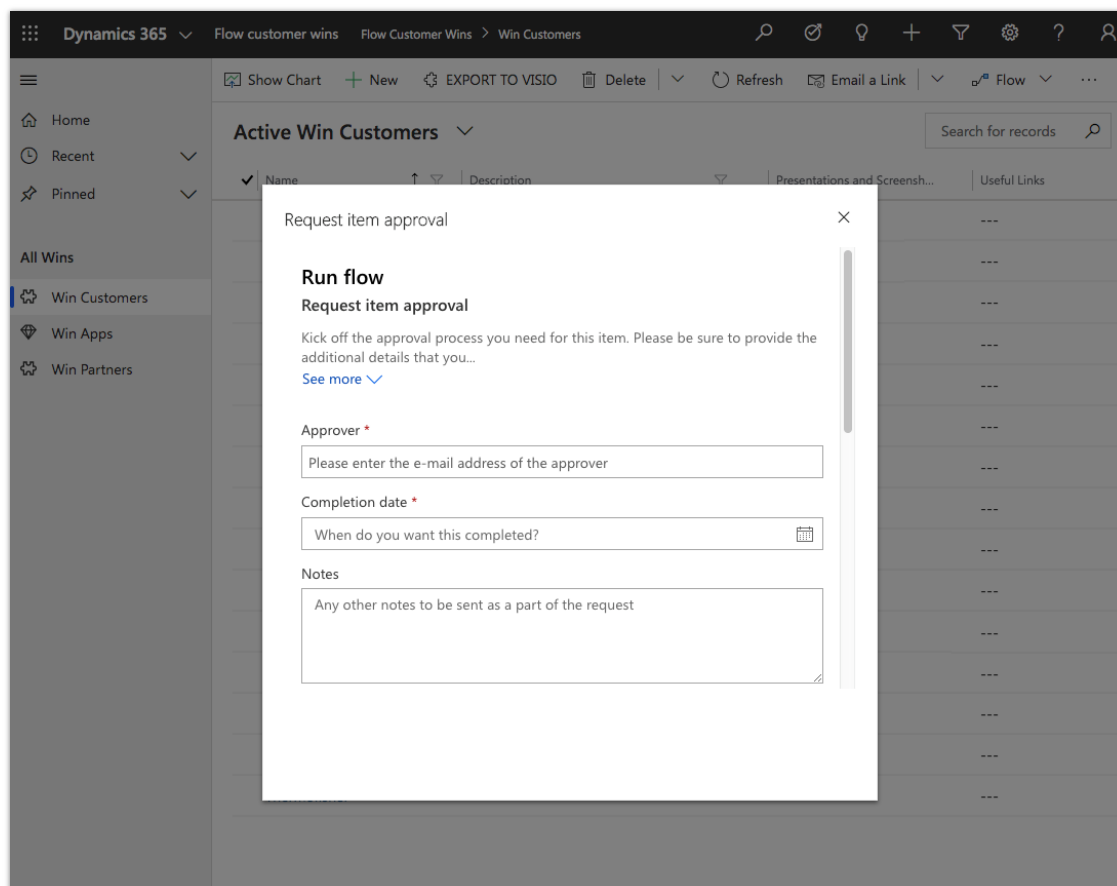
[Feature exploration](#) (video)

### Fluent experience for flows in Dynamics 365 and SharePoint available

Enabled for	Public preview	Early access	General availability
End users, automatically	-	✓ Aug 5, 2019	✓ Oct 25, 2019

### Feature details

The experience for triggering button flows in SharePoint, OneDrive, and Dynamics 365 now matches the latest Fluent Design System—the same design system that's used across all Microsoft 365 and Dynamics 365 applications.



### Flow run in Fluent

Users can see the details of a flow and more easily edit the connections that a flow uses now. With this release, it is no longer possible to disable the **Flow** button in Dynamics 365 applications.

### See also

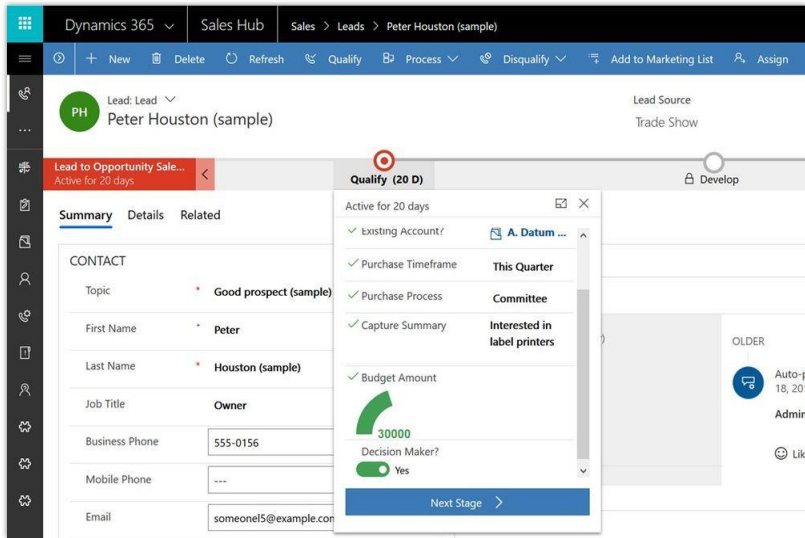
[Power Automate blog](#) (blog)

### Build business process flow stages with custom controls

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Nov 16, 2019

Feature details

Business process flows provide a guided way to get work done in the form of stages and steps. Stages tell you where you are in the process, whereas steps are action items that lead to a desired outcome. Steps in a business process are bound to fields in Common Data Service and, until now, only allowed default visualizations of the field type (text boxes, drop-down lists, and so on).



Custom controls in a business process flow

With this release, we're making it possible to use the new Form designer to add these custom controls to your flow. This makes it possible to use custom controls to add rich visualizations (such as sliders, radial knobs, the LinkedIn control, and more) to business process flow steps and then deliver engaging experiences to those who use your business process flows.

Work with business process flows offline

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	-	-	✓ Nov 16, 2019



## Feature details

You can now use business process flows offline if the following conditions are met:

- The business process flow is used from a Power Apps app.
- The Power Apps app is enabled for offline use.
- The business process flow has a single entity.

Specifically, the three commands that are available for a business process flow when the Power Apps app is offline are:

- Next stage
- Previous stage
- Set Active stage

## Attachments for approval flows

Enabled for	Public preview	Early access	General availability
Admins, makers, or analysts, automatically	-	-	✓ Nov 22, 2019

## Feature details

If you've wanted to attach files to an approval flow, perhaps you wanted to share a copy of a document without having to share a link, or you simply preferred file attachments, this feature is useful.

We are releasing a feature that passes files from a connector action to the approvals action step, so that you can share just enough information that's needed.

Follow these steps to use this feature:

1. Get an attachment via any connector that supports attachments.
2. Use the attachment via *dynamic content* in any action that starts an approval.
3. Run the flow.
4. Go to the *action center* or your Microsoft Outlook inbox to see the approval request with the attachment.
5. Download the attachment to review it.

## From the Action Center in Power Automate portal

The screenshot shows the Power Automate portal interface. On the left is a navigation pane with options like Home, Action items, Approvals, Business process flows, My flows, Create, Templates, Connectors, Data, AI Builder, Solutions, and Learn. The main area is titled 'Approvals' and has tabs for 'Received', 'Sent', and 'History'. The 'Received' tab is active, showing a table of approval requests.

Request	Received	Details
Attachments! Finally!	Feb 6, 02:36 PM (14 h ago)	Can you please sign off on t
Attachments! Finally!	Feb 6, 02:36 PM (14 h ago)	Can you please sign off on t
(Testing   [redacted] ADO work item approval - 1683445	Jan 16, 05:58 PM (3 wk ago)	Please approve https://dyna
(Testing   [redacted] ADO work item approval - 1683432	Jan 16, 05:40 PM (3 wk ago)	Please approve https://dyna
(Testing   [redacted] ADO work item approval - 1683428	Jan 16, 05:36 PM (3 wk ago)	Please approve https://dyna

The 'Respond' pane on the right shows the 'Overview' section for the selected request 'Attachments! Finally!'. It lists the requester, the received time, and a list of attachments: Financial Sample.xlsx, DemoPowerPoint.pptx, UpcomingApprovalFeatures.docx, and magic.gif. The 'Details' section at the bottom contains the text: 'Can you please sign off on these files below? Thanks!'.


### *Approvals center*

Let us take a closer look:

Respond


Overview


Approval  
Attachments! Finally!


Requester  
PS 


Received  
Feb 6, 02:36 PM (14 h ago)

Attachments  

 Financial Sample.xlsx


 DemoPowerPoint.pptx

 UpcomingApprovalFeatures.docx

 magic.gif

Details

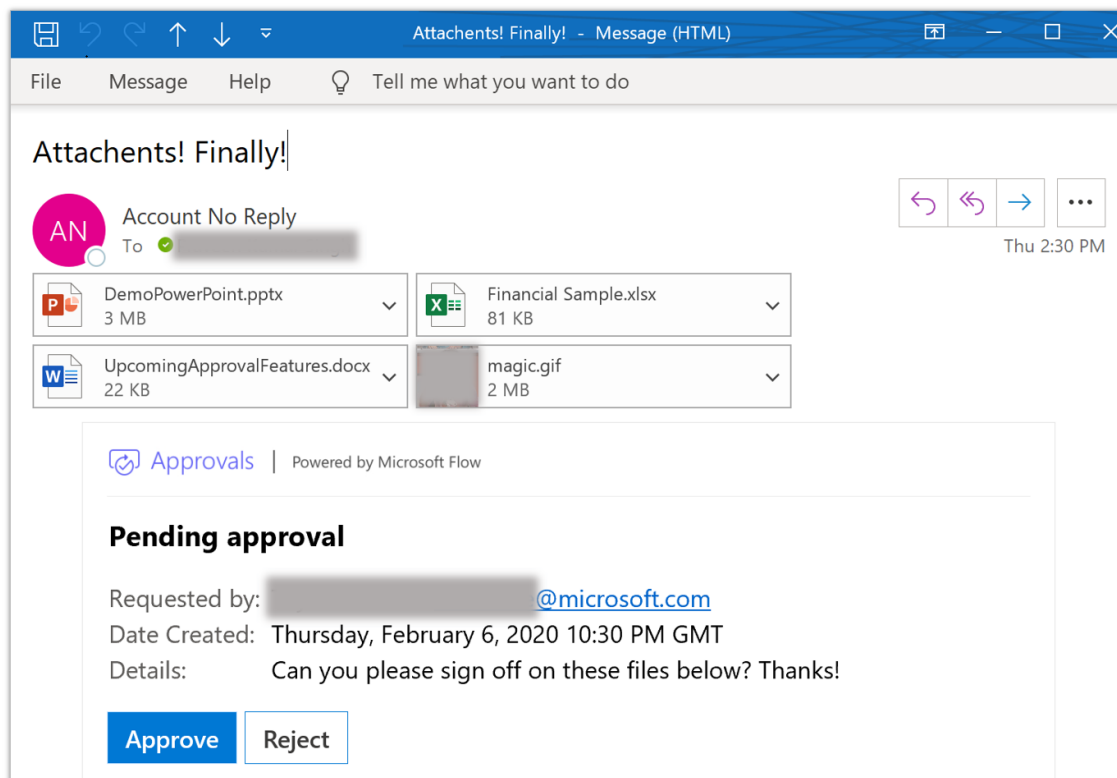
Can you please sign off on these files below? Thanks!

Choose your response 

Add a comment (optional)

*Respond*

## From your Outlook inbox



### Email

In addition, we have added a setting that lets you configure if an approval can be reassigned. You can learn more about [how to use attachments](#).

### See also

[File attachments in Approval Flows](#) (blog)

## Dynamics 365 applications build features on Power Automate

Enabled for	Public preview	Early access	General availability
End users by admins, makers, or analysts	✓ Feb 3, 2020	-	✓ Feb 26, 2020

### Feature details

Dynamics 365 applications now build many of its features directly on Power Automate. One example includes how the service application helps organizations to track their SLAs. These SLAs

were previously built on classic Common Data Service workflows, which meant they had limited connectivity. Now, you can configure SLA actions with any of the more than 300 services to which Power Automate connects.

# Power Virtual Agents

## Overview of Power Virtual Agents 2019 release wave 2

Power Virtual Agents enables anyone in your organization to create AI-powered bots that can chat with users about specific topics. They can answer routine questions, resolve common issues, or automate tasks that take up valuable customer or employee time.

Creating a bot is typically a complex and time-intensive process, requiring long content update cycles and a team of experts. Power Virtual Agents gives anyone in your organization the ability to create powerful custom bots using an easy, code-free graphical interface, without the need for AI experts, data scientists, or teams of developers. A bot can interact with users, ask for clarifying information, and ultimately answer a user's questions.

With deep integration with Power Automate and the Microsoft Bot Framework, authors can extend their bots to integrate with API back ends, which will enable the bots to handle additional topics, limited only by the author's imagination. You can deploy bots to many channels including websites, Microsoft Teams, and Facebook. As users interact with a bot, the author can see which topics are performing well, and which need improvement.

**NOTE** As of November 2019, Dynamics 365 Virtual Agent for Customer Service is known as Power Virtual Agents.

## What's new and planned for Power Virtual Agents

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

## Analytics dashboards

See at a glance how your bot is performing and identify which topics need further improvement.

Feature	Enabled for	Public preview	General availability
<a href="#">Customer satisfaction (CSAT) dashboards</a>	Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019

## Bot configuration

Configure the bot to suit your business needs.

Feature	Enabled for	Public preview	General availability
<a href="#">Connect to channels</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019
<a href="#">User authentication</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019
<a href="#">Publish to web channels</a>	Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019
<a href="#">Microsoft Bot Framework skills support</a>	Admins, makers, or analysts, automatically	✓ Dec 2, 2019	✓ Jan 20, 2020

## Core authoring

Use the Power Virtual Agents conversational editor to construct your dialogs, add variables or synonyms, and incorporate Power Automate to enable you to connect to other systems.

Feature	Enabled for	Public preview	General availability
<a href="#">Customize the canvas themes</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

Feature	Enabled for	Public preview	General availability
<a href="#">Enable actions or access data from back-end systems with Power Automate</a>	Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019
<a href="#">Enhanced conversation testing and debugging</a>	Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019
<a href="#">Variable capabilities</a>	Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019
<a href="#">Use the Power Virtual Agents connector to create Power Automate flows</a>	Admins, makers, or analysts, automatically	-	✓ Feb 13, 2020

## Enhanced natural language capabilities

AI and natural language capabilities enable the system to understand and parse complex user language.

Feature	Enabled for	Public preview	General availability
<a href="#">AI-assisted authoring - Topic suggestions from websites</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019
<a href="#">Entity extraction with custom entities</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019
<a href="#">Entity extraction with system entities</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019
<a href="#">Integration with Dynamics 365 Customer Service Insights</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019
<a href="#">Slot-filling capabilities</a>	Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019



## Handoff to a human agent

Gracefully hand off customer conversation from the bot to a human agent.

Feature	Enabled for	Public preview	General availability
<a href="#">Hand off to Omnichannel for Dynamics 365 Customer Service</a>	Admins, makers, or analysts, automatically	✓ Oct 31, 2019	✓ Dec 2, 2019
<a href="#">Hand off to a generic live-chat provider</a>	Admins, makers, or analysts, automatically	-	✓ Mar 31, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Analytics dashboards

### Overview

To effectively resolve customer problems, customer service managers need to have a clear view of the performance of their bot in terms of resolutions, escalations to human agents, abandons, and customer satisfaction. Power Virtual Agents provides intuitive and actionable dashboards with recommendations on which topics to focus on and how to continuously improve a bot's performance.

In the 2019 release wave 2, we are including features that will further amplify these analytics.

## Customer satisfaction (CSAT) dashboards

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019

### Feature details

A customer service manager is interested in the topics that are having the most impact on customer satisfaction and topics that are not addressing customer problems. Through a detailed customer satisfaction dashboard, the customer service manager can get a view into the overall customer satisfaction (CSAT) score and the bot topics that drive that score.

The CSAT drivers display topics in order of their impact on customer satisfaction over the specified time. These actionable insights can inform the customer service managers about managing topics to drive the overall customer experience.

### See also

[Analyze customer satisfaction for Power Virtual Agents bots](#) (docs)

## Bot configuration

### Overview

The bot can be configured to suit the individual needs of an organization and to provide further extensibility with other services and features. This includes authentication provider support, the use of Microsoft Bot Framework Skills to augment the bot's capabilities, integration with Microsoft Teams and Facebook channels, and the direct embedding of a bot in web-based mobile apps.

### Connect to channels

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

### Feature details

A channel is the method your customers use to contact you, such as via email, your call center, or your website. With this release, authors can configure their bots to connect to Facebook and

Microsoft Teams channels, as well as embed their bot on a website or in a web-based mobile app.

Additionally, an admin can share their channel configurations with a system integrator or partner, who can then use the configuration via a programming interface with sample code provided by Microsoft to connect their native mobile app and other channels to the bot.

### See also

[Key concepts - Publish your bot](#) (docs)

### User authentication

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

### Feature details

End-user authentication can be enabled by configuring an Identity Provider for business(\*). This capability allows a user to sign in directly to the provided service from within a chat, which means the bot can access a customer's information and take actions on their behalf, streamlining the experience.

The experience can be further augmented by using Microsoft Power Automate flows to call in to other applications with the customer's authentication information.

\* OAuth2.0 is supported in the 2019 release wave 2 of Power Virtual Agents.

### See also

[Add end-user authentication to a Power Virtual Agents bot](#) (docs)

### Publish to web channels

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019

### Feature details

Bot authors can deploy their bot to a demo website and share it internally within the organization. The demo website lets team members try out the bot and provide feedback without the need to create their own website.

### See also

[Deploy your bot](#) (docs)

### Microsoft Bot Framework skills support

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Dec 2, 2019	✓ Jan 20, 2020

### Feature details

Skills are reusable conversational capabilities built on the Microsoft Bot Framework. With this release, skills can be used to author scenarios using complex capabilities.

After registering a new skill, bot authors can use the bot building experience to seamlessly trigger actions embedded in a skill. Additionally, organizations with existing Microsoft Bot Framework bots can convert their bots into skills.

### See also

[Use Azure Bot Framework Skills in Power Virtual Agents](#) (docs)

## Core authoring

### Overview

Use the authoring canvas in Power Virtual Agents to create and edit topics and add trigger phrases and variables. Extend your bot's conversational capabilities with Power Automate.

### Customize the canvas themes

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

### Feature details

Organizations look to create differentiated experiences that reflect the personality of their brands through customized bots.

Off-the-shelf bots lack the personality and the custom look and feel that organizations want their bots to personify.

Power Virtual Agents offers the ability to personalize canvas elements like the avatar, background colors, chat bubble, and colors.

### See also

[Customize the look and feel of your bot chat canvas](#) (docs)

### Enable actions or access data from back-end systems with Power Automate

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019

### Feature details

There are situations where solutions require a bot to trigger a back-end workflow or business process, for example, when a user asks a question about upcoming deals to be sent to an email address.

Power Virtual Agents integrates with Power Automate and can trigger existing flows or create new ones that call back-end systems without requiring code.

Power Automate has hundreds of connectors to common services that can be used to automate existing internal workflows. These connectors can then be called directly from dialogs authored in the Power Virtual Agents.

Custom code and connections to legacy systems can also be supported through custom connectors, providing opportunities to extend the Power Virtual Agents as your business needs change and grow.

### See also

[Add actions using Power Automate](#) (docs)

## Enhanced conversation testing and debugging

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019

### Feature details

Power Virtual Agents provides a test bot to help authors verify functionality before deploying a bot broadly. The test bot allows authors to trace conversations through dialog trees by highlighting the current place in the conversation path. The conversation editor displays highlighted nodes in green with check marks.

With this feature, interactive chat bubbles allow quick navigation to a specific node within a dialog, making it simple and effective for a bot author to identify and fix problems in the conversations they build.

### See also

[Work with the Test bot pane](#) (docs)

## Variable capabilities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ May 30, 2019	✓ Dec 2, 2019

### Feature details

Variables are used to store customer information that can be referenced later in a conversation, saving the bot author time when creating complex interactions and communicating with other systems.

The system can parse a user's natural language response, extracting the appropriate customer information and assigning it to a variable for use in the conversation. Variables enable complex and rich conversations with a customer and are powerful tools in helping the bot to resolve a customer's inquiry or problem.

### Key capabilities for variables:

- Use variables in conversations
- Use variables for Power Automate inputs and outputs

- Debug variables with powerful tools
- Custom variable types and synonyms
- System-supplied variable types

### See also

[Work with variables](#) (docs)

## Use the Power Virtual Agents connector to create Power Automate flows

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Feb 13, 2020

### Feature details

Bot authors can use the Power Virtual Agents connector to create Power Automate flows for bots. This new connector provides trigger and response action nodes with a user-friendly interface to specify the input and output parameters passed between a Power Virtual Agents bot and the flow with no JSON coding required.

### See also

[Add actions to a bot using Power Automate](#) (docs)

## Enhanced natural language capabilities

### Overview

Power Virtual Agents is powered by conversational AI and natural language capabilities, which enable the system to understand complex language, parse it for the appropriate information, and ask for clarification when needed.

## AI-assisted authoring - Topic suggestions from websites

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

## Feature details

Bot authors often already have website content and assets that they'd like to leverage when they build bots.

To get started quickly, authors can extract topic suggestions from their organization's website and then add the suggested topics to their bot. This capability works especially well with FAQ or support pages that already contain valuable content that can be leveraged in bots.

## See also

[Create topics from existing support content on the web](#) (docs)

## Entity extraction with custom entities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

## Feature details

In addition to prebuilt system entities, an author can create custom entities to recognize and use in conversations.

For example, an author can define a list of supported payment types as: *"Visa, Mastercard, Discover, American Express, PayPal"*

The bot will be able to recognize responses, such as "I have an American Express card" and will be able to route the conversation correctly.

## See also

[Use entities and slot filling in Power Virtual Agents bots](#) (docs)

## Entity extraction with system entities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019



## Feature details

Power Virtual Agents can recognize, extract, and act on dozens of common entities in a user's responses. For example, colors, currencies, ages, dates and times, names, telephone numbers, durations, cities, states, addresses, ZIP codes, email addresses, languages, weights, speeds, temperatures, organizations, percentages, points of interests, and links can all be recognized.

The system uses natural language capabilities to match a user's responses to recognized entities. For example, if a bot asks a user to provide a city entity, it understands that the response, "I live in the emerald city" maps to the city of Seattle.

Moreover, the system validates these entities. For example, when the bot asks the user for a color, and the user gives an unexpected answer, the bot will repeat this question.

## See also

[Use entities and slot filling in Power Virtual Agents bots](#) (docs)

## Integration with Dynamics 365 Customer Service Insights

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

## Feature details

Dynamics 365 Customer Service Insights gives you an actionable view into critical performance metrics, operational data, and emerging trends for your customer service organization.

Built-in dashboards, interactive charts, and visual filters provide insights into support operations across channels, automatically highlighting areas for improvement with the greatest impact on customer satisfaction levels.

With the 2019 release wave 2 of Power Virtual Agents, a customer service manager using Customer Service Insights can select topics to automate from within Customer Service Insights, and click through seamlessly to the Power Virtual Agents conversation editor to build and deploy them.

## See also

[Create bot topics from Customer Service Insights](#) (docs)

## Slot-filling capabilities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Dec 2, 2019

### Feature details

Every time a user says something to interact with a bot, the response might contain useful information that helps guide the conversation. The system continuously parses the user's responses for information that it uses to guide the conversation.

This means the bot can recognize information that the user has already provided or that is missing, ask clarifying questions if needed, and continue with the dialog. This capability is called slot filling.

For example, to ask about the weather, the user might naturally include the topic (weather forecast), the location (Redmond), and the time (Thursday). For example:

**User:** *What's the weather in Redmond on Thursday?*

**Bot:** *The weather forecast for Thursday in Redmond Washington is sunny with a chance of rain...*

Sometimes, however, a user's response is more ambiguous and less scripted, and the user might not give all the information needed to perform a task. With slot filling, the bot can have a short conversation with the user to find out the missing information required to complete the task.

For example, to ask about the weather, here's what the conversation with slot filling might look like:

**User:** *What's the weather like Thursday?*

**Bot:** *I can look up the weather for you. Where should I check?*

**User:** *Redmond Washington*

**Bot:** *The weather forecast for Thursday in Redmond Washington is sunny with a chance of rain...*

### See also

[Use entities and slot filling in Power Virtual Agents bots](#) (docs)

## Handoff to a human agent

### Overview

When a bot can't handle the user's requests or the user asks to talk to an agent at any point in the conversation, it's important to gracefully bring in a human agent. In Power Virtual Agents, we are providing customer service managers with the ability to configure and connect to multiple live chat engagement hubs.

### Hand off to Omnichannel for Dynamics 365 Customer Service

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 31, 2019	✓ Dec 2, 2019

### Feature details

Power Virtual Agents comes integrated out of the box with Omnichannel for Dynamics 365 Customer Service.

The bot hands off seamlessly to agents using Omnichannel for Customer Service for the agent-facing experience, providing the human agent with the full context of its conversation with the user, and helping the human agent avoid questions the bot has already asked.

### See also

[Configure seamless and contextual hand-off to Omnichannel for Customer Service](#) (docs)

### Hand off to a generic live-chat provider

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 31, 2020

### Feature details

In the 2019 release wave 2, IT admins can configure a hand-off from Power Virtual Agents to other live chat engagement hubs using an interface and sample code.

### See also

[Configure hand-off to any generic engagement hub](#) (docs)

# Common Data Model and data integration

## Overview of Common Data Model and data integration 2019 release wave 2

Our vision is to democratize data (integration) for business users, so that it is seamless to extract, transform, and load data into Common Data Service and Azure Data Lake Storage from any data source, and to provide structure and meaning to that data through the Common Data Model. To achieve this vision, we are investing in three key pillars:

- **Common Data Model:** Establishes industry-wide structure and semantics of underlying data so that customers can then reason about that data through various business application solutions, analytics, and machine learning (ML) algorithms. In this milestone, we will extend the reach of the Common Data Model through SDKs and object models to support developers and partners, better in-product experiences, and more.
- **Power Platform Dataflows:** Power Query is the industry-leading smart data preparation tool and evolves by infusing AI and ML into data transformations, and by extending dataflows to all of the Microsoft Power Platform.
- **Enable analytics on Common Data Service data:** Enhanced data integration through Office data integration, new and enhanced connectors, improvements to the connectivity platform, extending Dual Write, improving the data export service, and enhancing on-premises gateways for enterprises.

Here are the themes and guiding principles for our investments in this milestone:

- Improved fundamentals and engineering excellence
- Security, reliability, performance, compliance, supportability, and efficiency
- Remove enterprise blockers
- Services are deployed to every geography with a Hero or Hub region.
- Enterprise connectivity asks: For example, guest access, Excel data, and SAP
- Improved and intelligent data integration
- Power Platform Dataflows
- Enable analytics on Common Data Service data

- Smart data preparation
- Common Data Model and the Open Data Initiative
- Make our partners successful

## What's new and planned for Common Data Model and data integration

This topic lists features that are planned to release from October 2019 through March 2020. Because this topic lists features that may not have released yet, **delivery timelines may change and projected functionality may not be released** (see [Microsoft policy](#)).

In the **General availability** column, the feature will be delivered within the month listed. The delivery date can be any day within that month. Released features show the full date, including the day of release.

This check mark (✓) shows which features have been released for public preview or early access and for general availability.

### Common Data Model

Features to support use and adoption of Common Data Model.

Feature	Enabled for	Public preview	General availability
<a href="#">Additional capabilities in Common Data Model folders</a>	Admins, makers, or analysts, automatically	✓ Mar 30, 2020	
<a href="#">New Dynamics 365 Industry Accelerator solutions</a>	Admins, makers, or analysts, automatically	✓ Mar 30, 2020	
<a href="#">Public documentation for Common Data Model object model libraries</a>	Admins, makers, or analysts, automatically	✓ Mar 30, 2020	
<a href="#">New scenarios added to the higher education accelerator</a>	End users by admins, makers, or analysts	-	✓ Jan 17, 2020
<a href="#">New Common Data Model standard entity definitions</a>	Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

## Data Integrator and Dual Write

Feature	Enabled for	Public preview	General availability
<a href="#">Actionable and user friendly error messages</a>	Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020
<a href="#">Copy Finance and Operations data into Common Data Service</a>	Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020
<a href="#">Ensure the Dual Write service meets accessibility standards</a>	Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020
<a href="#">Improved error management with an ability to retry failed records</a>	Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020
<a href="#">Show failed records for initial and catch-up writes</a>	Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020
<a href="#">Write existing data before turning on Dual Write</a>	Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020
<a href="#">Back up and restore Dual Write artifacts</a>	Admins, makers, or analysts, automatically	✓ Nov 25, 2019	✓ Mar 27, 2020
<a href="#">Making Dual Write resilient to planned or unplanned maintenance</a>	Admins, makers, or analysts, automatically	✓ Nov 25, 2019	✓ Mar 27, 2020
<a href="#">Supporting multiple legal entities</a>	Admins, makers, or analysts, automatically	✓ Nov 25, 2019	✓ Mar 27, 2020
<a href="#">Enabling sales order flow to Finance and Operations</a>	Admins, makers, or analysts, automatically	✓ Mar 27, 2020	✓ Mar 27, 2020

## Export to data lake

Feature	Enabled for	Public preview	General availability
<a href="#">Ensure the export to data lake service meets accessibility standards</a>	Admins, makers, or analysts, automatically	-	✓ Jan 31, 2020
<a href="#">Optimize performance for large data sets</a>	Admins, makers, or analysts, automatically	-	✓ Jan 31, 2020
<a href="#">Ability to link the Common Data Service environment to an Azure data lake</a>	Admins, makers, or analysts, automatically	✓ Oct 31, 2019	✓ Jan 31, 2020
<a href="#">Hydrate Azure Data Lake with Common Data Service data</a>	End users by admins, makers, or analysts	✓ Oct 31, 2019	✓ Jan 31, 2020
<a href="#">Support for initial and incremental data writes to Azure Data Lake</a>	End users by admins, makers, or analysts	✓ Oct 31, 2019	✓ Jan 31, 2020
<a href="#">Support for initial and incremental metadata changes in Azure Data Lake</a>	End users by admins, makers, or analysts	✓ Oct 31, 2019	✓ Jan 31, 2020

## Gateway

Feature	Enabled for	Public preview	General availability
<a href="#">Performance monitoring and diagnostics for gateways</a>	Admins, makers, or analysts, automatically	✓ Oct 1, 2019	
<a href="#">Add intelligence to gateway load balancing</a>	Admins, makers, or analysts, automatically	✓ Oct 31, 2019	
<a href="#">Manage gateways outside the default Power BI region</a>	Admins, makers, or analysts, automatically	✓ Oct 31, 2019	-

Feature	Enabled for	Public preview	General availability
<a href="#">Power BI refresh using the dataset owner's UPN</a>	Admins, makers, or analysts, automatically	✓ Feb 24, 2020	
<a href="#">Gateway management enhancements</a>	Admins, makers, or analysts, automatically	✓ Mar 23, 2020	
<a href="#">Gateways now scale based on the CPU</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Enhanced security</a>	Admins, makers, or analysts, automatically	-	✓ Nov 30, 2019

## Power Apps and Power Automate Connector Platform

Feature	Enabled for	Public preview	General availability
<a href="#">Improved command-line interface for connector developers</a>	Admins, makers, or analysts, automatically	✓ Oct 1, 2019	
<a href="#">New and enhanced connectors in Power Apps and Power Automate</a>	Admins, makers, or analysts, automatically	✓ Mar 20, 2020	-
<a href="#">More open-source connectors are available on GitHub</a>	Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019
<a href="#">Support for Azure API Management policies in custom connectors</a>	Admins, makers, or analysts, automatically	✓ May 1, 2019	✓ Oct 28, 2019
<a href="#">Better enterprise connectivity to SQL Server</a>	Admins, makers, or analysts, automatically	✓ Oct 21, 2019	✓ Dec 19, 2019



## Power Platform dataflows

Feature	Enabled for	Public preview	General availability
<a href="#">Author dataflows in the Power Apps Maker Portal</a>	Admins, makers, or analysts, automatically	✓ Sep 10, 2019	✓ Nov 15, 2019
<a href="#">Consume data from entities stored in Common Data Model folders</a>	Admins, makers, or analysts, automatically	✓ Sep 11, 2019	✓ Nov 15, 2019

## Power Query Desktop

Feature	Enabled for	Public preview	General availability
<a href="#">Support for new AI Insights including Cognitive Services and custom Azure Machine Learning models</a>	Admins, makers, or analysts, automatically	✓ Nov 30, 2019	
<a href="#">New and enhanced connectors</a>	Admins, makers, or analysts, automatically	✓ Jan 13, 2020	
<a href="#">Data Profiling enhancements including better visualizations and more enhanced capabilities</a>	Admins, makers, or analysts, automatically	-	✓ Oct 14, 2019
<a href="#">Enhancements to Data Profiling</a>	Admins, makers, or analysts, automatically	-	✓ Oct 14, 2019
<a href="#">Custom connector and extensibility support</a>	Admins, makers, or analysts, automatically	-	✓ Nov 11, 2019
<a href="#">New and enhanced connectors in Power BI</a>	Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020
<a href="#">Query Diagnostics enhancements</a>	Admins, makers, or analysts, automatically	✓ Oct 14, 2019	✓ Mar 30, 2020

## Power Query Online

Feature	Enabled for	Public preview	General availability
<a href="#">Parity with Power Query Desktop</a>	Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019
<a href="#">Smart data preparation</a>	Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019
<a href="#">New and enhanced connectors in Power Query Online</a>	Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

Description of **Enabled for** column values:

- **End users, automatically:** These features include change(s) to the user experience for end users and are enabled automatically.
- **Admins, makers, or analysts, automatically:** These features are meant to be used by administrators, makers, or business analysts and are enabled automatically.
- **End users by admins, makers, or analysts:** These features must be enabled or configured by the administrators, makers, or business analysts to be available for their end users.

For a list of the countries or regions where Dynamics 365 business applications are available, see the [International availability guide](#). For more information about geographic areas and data centers (regions), go to the [Dynamics 365 and Power Platform availability page](#).

## Common Data Model

### Overview

The Common Data Model is the shared data language used by applications to enable consistency of the meaning of data across applications. It provides modular and extensible business entities (account, lead, opportunity, and so on) and also observational data concepts (such as Link clicks and Email opens). It unifies data in a well-known schema across data silos, applications, and deployments. Although the Common Data Model started in Common Data Service and Dynamics 365, it is bringing the same semantic consistency to Azure Data Lake Storage with Common Data Model folders, allowing an organization to take advantage of AI and machine learning on a scale that wasn't previously possible. The Common Data Model enables business and analytics applications to interoperate over a variety of areas, including sales, service, healthcare, higher education, and more. The span of products, platforms, and services

that implement, produce, and consume data in Common Data Model form continues to grow, both inside and outside of Microsoft.

### Additional capabilities in Common Data Model folders

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 30, 2020	-

#### Feature details

Common Data Model folders and the metadata file (model.json) support describing data that's stored within Azure Data Lake. After the initial release of Common Data Model object model and libraries, several partners provided feedback, feature requests, and more, through forums like GitHub Issues. Based on feedback regarding the [data types, file formats, and partition structures](#) specification, we're extending the capabilities in the Common Data Model folder specification to include data types such as *date*.

Although the libraries provide capabilities for reading and writing metadata files, one clear area of feedback from partners is to add and expand the validation capabilities to ensure that the metadata files are compliant with the specification.

### New Dynamics 365 Industry Accelerator solutions

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 30, 2020	-

#### Feature details

Industry accelerators are basic components within the Microsoft Power Platform and Dynamics 365 that enable ISVs and other solution providers to quickly build industry vertical solutions. The accelerators extend the Common Data Model so that it includes new entities to support a data schema for concepts within specific industries.

### Public documentation for Common Data Model object model libraries

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 30, 2020	-

## Feature details

Partners who want to take advantage of Common Data Model libraries will now have additional content and guidance to given them a better understanding of the purpose and capabilities of the libraries. This content will include best practices and scenario-based examples to make it even easier for partners to produce and consume data in Common Data Model form.

### New scenarios added to the higher education accelerator

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	-	✓ Jan 17, 2020

## Feature details

The initial release of the [higher education accelerator](#) focused on improving student and faculty engagement and on enhancing the effectiveness of higher education institutions. The data model supports common entities related to students, faculty, courses, test scores, and more.

We've now added new business partner management scenarios in the areas of internships, scholarships and grants.

## See also

[Higher Education Accelerator](#) (docs)

### New Common Data Model standard entity definitions

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

## Feature details

The set of Common Data Model standard entities that is published and open sourced on GitHub continues to grow as more applications and data producers contribute to the standard. New concepts submitted by subject matter experts are diligently reviewed before being publicly released. Similarly, extensions to existing concepts (like Account and Contact) are done with a careful review of the current semantics, ensuring alignment. With an increased focus on analytics, Common Data Model standard definitions are being extended to include observation and perception models and traits that can be used in analytical applications.

## Data Integrator and Dual Write

### Overview

The Common Data Service Data Integrator (for Admins) is a point-to-point integration service used to integrate data into Common Data Service. It supports process-based integrations, like Prospect to Cash, that provide direct writes between apps for Finance and Operations and Dynamics 365 Sales. It also supports integrating data from multiple sources into Common Data Service.

Whereas Data Integrator is a highly customizable batch-based integration service, Dual Write is a near-real-time integration service that allows Finance and Operations customers to natively get their data in Common Data Service. Customers should be able to adopt business applications from Microsoft and expect that they will speak the same language and seamlessly work together. Dual Write allows our customers not to think about these apps as different systems that must be written to independently. Instead, the underlying infrastructure makes it seamless for these apps to write simultaneously.

With this release, we continue to make Data Integrator the data integration tool of choice for enterprises and ISVs by making investments in lightweight ALM along with the ability to ship templates as part of solutions. Additionally, we are making big investments in making Dual Write setup a frictionless experience where, in a few clicks, Finance and Operations customers can natively get their data in Common Data Service. The primary goal of Dual Write is to enable seamless writes between Finance and Operations and Common Data Service. When you make a change in one app, it is seamlessly reflected in the other in near-real time.

In the GA release of this feature, Finance and Operations customers will be able to natively get their data into Common Data Service. For customers who want to customize their setup, we will provide an advanced and intuitive UI with step-by-step instructions that will guide them through the setup process. As Finance and Operations expands globally and includes the China sovereign cloud, we are making Data Integrator compliant with Azure China cloud so that our customers in China who want to keep their data within the China region can comply with government regulations.

### Actionable and user friendly error messages

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020

### Feature details

We are making additional investments in Dual Write to improve usability through intuitive, actionable, and user friendly-error messages.

### Copy Finance and Operations data into Common Data Service

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020

### Feature details

Dual Write enables seamless writes between apps for Finance and Operations and Common Data Service. Changes that you make in one app seamlessly replicate to the other app in near-real time.

This feature provides a frictionless experience by automatically connecting to or creating a Dual Write-enabled Common Data Service environment. Finance and Operations customers can now natively put their data in Common Data Service.

Every business is different. Customers who want to customize their setup can use the advanced and intuitive user interface (UI) with step-by-step instructions.

### Ensure the Dual Write service meets accessibility standards

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020

### Feature details

We are making investments to ensure that the Dual Write service meets the accessibility standards.

### Improved error management with an ability to retry failed records

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020

### Feature details

During initial writes using Dual Write, you will see the failed records and the option to retry the failed writes if you encounter failures while writing to apps.

#### Show failed records for initial and catch-up writes

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020

### Feature details

In this release, for Dual Write, we are making investments to improve usability by showing detailed failure logs if there are errors during the initial or catch-up writes.

#### Write existing data before turning on Dual Write

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 27, 2020

### Feature details

With this feature, we will write existing data before turning on Dual Write. This feature also keeps that data updated.

#### Back up and restore Dual Write artifacts

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 25, 2019	✓ Mar 27, 2020

### Feature details

Protecting your data and ensuring continuous availability of services are important. As more ISVs and enterprises adopt our services, it is increasingly important to support their requirements—not only from a functionality and scalability standpoint but also from a lifecycle management and software redistribution standpoint.

With this feature, admins can use on-demand backup and restore for Data Integrator and Dual Write artifacts, including projects and templates, and package them in solutions.

### See also

[Dual Write Preview](#) (blog)

## Making Dual Write resilient to planned or unplanned maintenance

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 25, 2019	✓ Mar 27, 2020

### Feature details

In the unfortunate event that data writes to an app fail because of planned or unplanned maintenance, admins want to be notified and to be empowered to take immediate action. This new feature provides additional ability for admins to define experiences that are suitable for their business needs. Admins can now define rules that provide email notifications or take actions on their behalf for specific error types and thresholds.

### See also

[Dual Write Preview](#) (blog)

## Supporting multiple legal entities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 25, 2019	✓ Mar 27, 2020

### Feature details

Finance and Operations allows certain data to be striped by legal entity. Each legal entity has its own customers. Products might be released per company, whereas prices might be defined per legal entity. While integrating data, the appropriate products and prices need to be sent to Common Data Service, but visibility to the right users also needs to be ensured. Similarly, opportunities in Common Data Service need to be created in the appropriate legal entity. Although workarounds exist, there is a need to provide out-of-box support for multiple legal entities. This new feature enables you to use the same project across multiple legal entities.



**See also**

[Dual Write Preview](#) (blog)

**Enabling sales order flow to Finance and Operations**

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 27, 2020	✓ Mar 27, 2020

**Feature details**

Pricing is one of the key features for Prospect to Cash scenarios. With this feature, for Dual Write, you will be able to write sales orders between apps for Finance and Operations and Dynamics 365 Sales.

**Export to data lake****Overview**

The export to data lake service is a pipeline to continuously export data from Common Data Service to Azure data lake gen 2. This service is designed for enterprise big data analytics. Data is stored in the Common Data Model, which provides semantic consistency across apps and deployments.

Export to data lake simplifies the technical and administrative complexity of operationalizing entities for analytics and managing schema and data. Within a few clicks, customers can link Common Data Service to a data lake in their Azure subscription, select standard or customer entities, and export to data lake. All data or metadata changes (initial and incremental) in Common Data Service are automatically pushed to the Azure data lake gen 2 without any additional actions.

**Ensure the export to data lake service meets accessibility standards**

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 31, 2020

**Feature details**

In this release, we are making investments to ensure that the export to data lake service meets accessibility standards.

## Optimize performance for large data sets

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Jan 31, 2020

### Feature details

In this release, we are making investments that optimize the performance for larger data sets. This feature would be beneficial to enterprises that work with large datasets.

## Ability to link the Common Data Service environment to an Azure data lake

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 31, 2019	✓ Jan 31, 2020

### Feature details

To export your entity data to a data lake, you need to first link your Common Data Service environment to a data lake in your Azure subscription. You'll be able to walk through wizard that links a Common Data Service environment to a data lake in your Azure subscription.

### See also

[Exporting CDS data to Azure data lake](#) (blog)

## Hydrate Azure Data Lake with Common Data Service data

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 31, 2019	✓ Jan 31, 2020

### Feature details

Using a wizard, you can select Common Data Service entities (standard or custom) that support change tracking to hydrate your Azure data lake in just a few steps. Data is stored in the Common Data Model format. The wizard also lets you manage (add/remove) entities as part of your ongoing administration.

### See also

[Exporting CDS data to Azure data lake](#) (blog)

## Support for initial and incremental data writes to Azure Data Lake

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 31, 2019	✓ Jan 31, 2020

### Feature details

Any changes in data (initial and incremental) in Common Data Service is automatically pushed to your data lake without any additional setup.

### See also

[Exporting CDS data to Azure data lake](#) (blog)

## Support for initial and incremental metadata changes in Azure Data Lake

Enabled for	Public preview	General availability
End users by admins, makers, or analysts	✓ Oct 31, 2019	✓ Jan 31, 2020

### Feature details

Any changes in metadata (initial and incremental) in Common Data Service is automatically pushed to the data lake without any additional setup.

### See also

[Exporting CDS data to Azure data lake](#) (blog)

## Gateway

### Overview

The on-premises data gateway is a well-established product that is widely used by enterprises to access on-premises data sources and transfer petabytes of data weekly. Today, gateways are used with either one or a combination of services and applications, like Power BI, Power Apps, Power Automate, Logic Apps, and others. Based on enterprise requests, the focus for this

milestone is to improve the management of gateways, improve scale and performance (as enterprises access more and more on-premises data through gateways and depend on them), improve monitoring and diagnostic capabilities for issues (refresh errors, slow-running queries, and so on), and offer a lot of new functionality (like gateway installation automation) to improve the overall enterprise experience.

### Performance monitoring and diagnostics for gateways

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 1, 2019	-

#### Feature details

Today, gateway admins use the Windows Performance Monitor tool to troubleshoot gateways. This new feature enables gateway admins to analyze system performance counters and query execution details for the gateway device so they can identify bottlenecks and optimize the performance of the gateway.

#### See also

[On-premises data gateway May 2019 update is now available](#) (blog)

### Add intelligence to gateway load balancing

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 31, 2019	-

#### Feature details

Currently, gateway clusters distribute traffic between gateway members by using a round-robin approach. We plan to enable Admins to define additional criteria for CPU and memory. This criteria will determine the next gateway member available to process requests for the best cluster performance.

#### See also

[Load balance based on CPU and Memory throttling](#) (docs)

## Manage gateways outside the default Power BI region

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 31, 2019	-

### Feature details

Gateway admins can only manage gateways within the default Power BI region today, using the gateway management user interface or PowerShell/REST APIs.

Going forward, using the Power Platform admin center, gateway admins will be able to administer and perform all standard management operations for all gateways installed in or outside the default Power BI region for their tenant.

### See also

[Manage gateways by region](#) (docs)

## Power BI refresh using the dataset owner's UPN

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Feb 24, 2020	-

### Feature details

Currently, dataset owners must either provide credentials for Power BI cloud refreshes or use the credentials that the gateway admin defined on the on-premises data gateway. With this new feature, dataset owners can use their own UPN to schedule Power BI refreshes.

### See also

[Use Dataset owner's security context\(UPN\) for Refresh-based Reports \(Public Preview\)](#) (blog)

[Manage data sources](#) (docs)

## Gateway management enhancements

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 23, 2020	-

### Feature details

Centralized gateway management will help gateway admins have a standard experience for managing gateways across all products on the Microsoft Power Platform including Power BI, Power Apps, and Power Automate. Gateway admins managing multiple gateways have a less than ideal experience today. We plan to offer the management of high-availability clusters from the gateway management portal. This includes visibility into gateway members and their versions.

Currently, tenant-level gateway administration is available for Office 365 or global tenant admins. We plan to make this feature available for application and service admins too, so that they can:

- Get visibility into all gateways within a tenant.
- View gateway members.
- Manage administrators.

Additionally, we plan to enhance the public REST APIs and Windows PowerShell cmdlets.

## Gateways now scale based on the CPU

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

Currently, the gateway application utilizes resources on gateway machines based on preset configurations. When you use this feature, the gateway application automatically scales up or down depending on the CPU.

## Enhanced security

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Nov 30, 2019

### Feature details

Currently, the recovery key provided by the gateway admin during installation of the gateway cannot be changed. This recovery key is used to encrypt/decrypt credentials for on-premises data sources. Many enterprises have requirements for key rotation. This feature enables gateway admins to rotate the recovery key. This rotation also updates the symmetric key that's used to encrypt/decrypt credentials for on-premises data sources.

## Power Apps and Power Automate Connector Platform

### Overview

A critical part of data integration and the suite of products it supports—Power Apps, Power Automate, Power BI, and Power Query—is connectivity to external data sources. Although we built the initial set of connectors ourselves, most of the connectors over the past few semesters have been built directly by our ISV partners.

During this semester, we plan to further bolster our connector platform ecosystem to make it easier for our ISV partners to create their own connectors and enable them on our applications. A few examples of our investment include providing CLI tools to ISV partners so that they can update, manage, and deploy their own connectors, and providing sample connector source code by open-sourcing a limited set of existing connectors. We also plan to invest in providing policy templates, providing more comprehensive documentation, and creating a dedicated discussion forum. Finally, we will launch a fully automated certification portal that will enable our ISV partners to submit their connectors for [certification](#) and deployment.

Along with strengthening the ISV community's ability to create their own connectors, we plan to continue to invest in enterprise-grade data connectors like SQL Server, Oracle Database, Outlook, and more. More specifically, our investments in enterprise connectivity will include support for Azure Active Directory authentication in SQL Server, support for Excel Online in Power Apps, and enhanced connectivity to Oracle databases.

## Improved command-line interface for connector developers

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 1, 2019	-

### Feature details

The command-line interface (CLI) provides a useful tool for developers who want to take advantage of source control systems for their connectors. Use the tool to update, deploy, and manage connectors to from source control systems.

This release includes improvements to the CLI for Power Automate and Power Apps custom connectors, and now supports the following functionalities:

- Login
- Download a custom connector
- Create a new custom connector
- Update a custom connector
- Validate a custom connector

You can read more about the [Power Platform Connectors CLI tool](#).

### See also

[Microsoft Power Platform Connectors CLI](#) (docs)

## New and enhanced connectors in Power Apps and Power Automate

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Mar 20, 2020	-

### Feature details

We continuously add new connectors for Power Apps and Power Automate as we engage partners and ISVs to build them. As the ecosystem grows, we expect more partners and ISVs to build and certify connectors. We will also continue to add features to existing connectors.



#### Connectors released in March 2020

- WorkPoint
- OptiAPI
- JotForm Enterprise
- Cloudmersive PDF
- DBF2XML
- Slascone

#### Connectors released in February 2020

- SignRequest
- Short URL
- Rencore Governance

#### Connectors released in January 2020

- emfluence Marketing Platform

#### Connectors released in December 2019

- EXPOCAD
- Telephony Xtended Serv Interf
- D7SMS
- }exghts gen. Document & more
- Cloudmersive Image Processing
- Priority Matrix
- Robolytix
- Partner Center Events
- Cisco Webex Meetings
- Partner Center Referrals
- Egnyte
- Witivio

#### Connectors released in November 2019

- KnowledgeLake

- Objective Connect
- Cloudmersive Data Validation

#### [Connectors released in October 2019](#)

- Smarp
- Scrive eSign
- HotProfile
- Envoy
- JungleMail 365
- Elfsquad Product Configurator
- Pushcut
- Seismic
- Huddle
- Easyvista Self Help
- UI flows
- Vantage365 Imaging
- SigningHub
- Mitto
- zReports
- SFTP - SSH
- FireText

#### [Connectors released in September 2019](#)

- Cloudmersive Document Conversion
- Company Connect
- GoFileRoom
- Integrable PDF
- ModuleQ
- Azure Monitor Logs
- SerwerSMS

#### Connectors released in August 2019

- TallyFy
- Form Recognizer
- ShareEffect Managed Metadata
- airSlate
- MTarget SMS

#### Connectors released in July 2019

- Agilite
- Cloudmersive Virus Scan
- Projectum Present It
- LiveTiles Bot
- Serverless360 BAM & Tracking

#### Connectors released in June 2019

- Aquaforest PDF
- Regolink for Clarity PPM
- LeadDesk

#### Connectors released in May 2019

- Way We Do Integration API
- Trustual
- Invoicing and IPN by [www.eintegrations.io](http://www.eintegrations.io)
- Vena ETLs
- SeekTable
- LinkedIn V2

#### Connectors released in April 2019

- Xooa Blockchain Database
- EasyVista Service Manager
- Casper365 for Education
- Microsoft Translator V2

- Pdf4Me
- Ethereum Blockchain
- Dynamics 365 Sales Insights
- CommercientCPQ
- Cloud PKI Management
- Data8 Data Enrichment
- Azure Key Vault
- MobilityWS

### More open-source connectors are available on GitHub

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 1, 2019

### Feature details

With the launch of the open-source connector repository on GitHub, Microsoft encourages the community to contribute to the maintenance of these connectors. Microsoft also encourages partners to adopt an open-source connector development model so that they can gain the benefits of the developer ecosystem to maintain their connectors. You can check out the [Power Platform connector repository on GitHub](#) for details.

Some of the certified connectors we open sourced are:

- Azure AD
- Cognitive Services Text Analytics
- Office 365 Users
- Planner
- and more than 50 connectors from partners

The open sourced custom connectors include:

- Azure Key Vault
- UK Company Search
- UK Address Lookup
- Facebook

- Office 365 Groups
- SAP ODATA

### Support for Azure API Management policies in custom connectors

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ May 1, 2019	✓ Oct 28, 2019

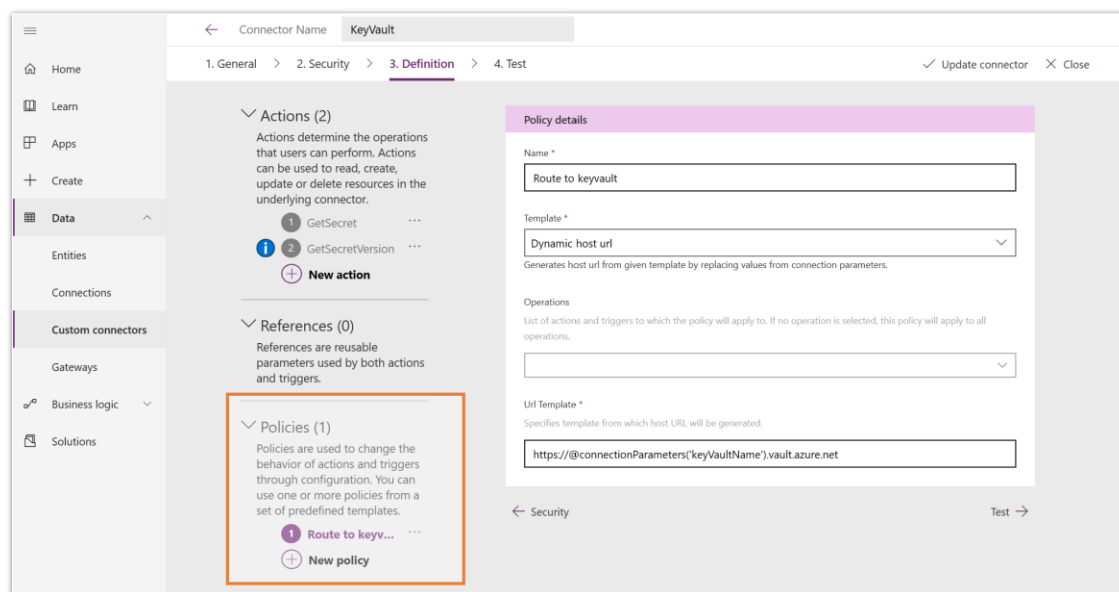
#### Feature details

While building connectors for Power Apps and Power Automate, developers might need to modify behaviors for the underlying API. For example, in cases where a service provides custom domain or sub-domain endpoints, connectors might need to dynamically route the requests to endpoints based on the connection parameters.

In other cases, connectors might add extra headers or query parameters, or enforce throttling limits for their operations. Today, you can manage these behavioral modifications with Azure API Management (APIM) policies for any of the standard built-in connectors.

Until now, APIM policies weren't available for custom connectors. This has meant that any modification to custom connectors must be done in-house. Partners who build these custom connectors rely on Microsoft for any modification to their connectors, even to try out and test them. This leads to a high-touch development model, which isn't ideal.

With this release, you can enable APIM policies on your custom connectors for your apps (Power Apps) and flows, and then use APIM policies to modify the behaviors of your connectors. For example, APIM policies allow you to limit the number of calls from a connection on one or more operations in your connector. You can use other APIM policies to fix headers or query parameters, or even modify a field or a parameter. You can also use policies to improve the overall user experience of your connectors.



### Policy in custom connector

### See also

[Open source connectors](#) (blog)

[Policy templates overview](#) (docs)

## Better enterprise connectivity to SQL Server

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 21, 2019	Mar 2020

### Feature details

As enterprises move their workloads to the cloud, they depend more on Azure AD–based authentication to manage access to their Azure SQL Database. Azure AD provides better security because access control is enforced at the data source. You no longer must manage separate user accounts and authentication for SQL Server.

In this release, we've added support for Azure AD authentication for SQL Server from Power Apps and Power Automate. There's no impact on existing users. Enterprises benefit from using an enhanced security model for their data sources, apps, and flows. Makers can now seamlessly connect their apps and flows to Azure SQL Database and rely on Azure AD to secure the underlying database.

When you share apps, each user authenticates directly with the database by using their own identity.

Other improvements in the SQL Server connector include enhanced support for date types (date, datetime, datetime2, and smalldatetime). When you use these [data types](#) from Power Apps, they participate and will delegate the processing to SQL Server.

### See also

[Azure Active Directory authentication in the SQL Server connector](#) (blog)

## Power Platform dataflows

### Overview

Data preparation is considered the most difficult, expensive, and time-consuming task of enterprise analytics and app projects. Moreover, data is often fragmented and dispersed across data sources, lacks structural or semantic consistency, and requires complex system integrations to bring it together.

The new dataflows capability in the Microsoft Power Platform aims to reduce the time, cost, and expertise required to prepare and aggregate data for analytics. Power Platform dataflows allow any Power Platform customer to easily define ETL pipelines (dataflows) to ingest data into their company's Business data lake (Azure Data Lake Storage). Dataflows can be configured to use an existing Azure Data Lake Storage account, or they can also use an Azure Data Lake Storage data lake that is auto-provisioned and auto-managed by the Microsoft Power Platform, enabling a friction-free setup experience for customers who do not yet have a Data Lake implementation.

Power Platform dataflows increase the momentum of Power BI dataflows, which were launched into Public Preview in November 2018 and hit General Availability within Power BI in March 2019. Power BI dataflows received extremely positive feedback from customers and market analysts because of their innovative approach to democratizing data ingestion into a company's data lake for data analysts and other non-technical users.

Power Platform dataflows are one of the building blocks that allow Microsoft to provide out-of-box analytics and AI insights to its users, such as the analytic and insights provided by AI Builder or Dynamics 365 Customer Insights, making them a huge differentiator for the company's Dynamics 365 offerings.

In addition to Power Platform dataflows, Microsoft is also investing in making Dynamics 365 data automatically available in Azure Data Lake Storage, to make it even easier for Dynamics 365 customers to derive analytics and insights from their existing Dynamics 365 data.

## Author dataflows in the Power Apps Maker Portal

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Sep 10, 2019	✓ Nov 15, 2019

### Feature details

Power Platform dataflows are familiar and simple to author. The authoring experience is based on Power Query, which millions of customers use in several Microsoft products, including Power BI, Microsoft Excel, Analysis Services, Power Automate, and Common Data Service.

Power Platform dataflows are a no-code experience for connecting, reshaping, and combining data from hundreds of data sources. They support both cloud and on-premises data sources via the on-premises data gateway. The breadth of data connectivity options is one of the strongest differentiators that Microsoft has in this space.

Power Platform dataflows are easily composable, meaning that users can define dataflows that load one or more entities into their data lake and keep them refreshed on a schedule.

Users can also reference other Azure Data Lake entities (their own or those that other users create) in multiple dataflows to compose new entities.

When you refresh the root entities, Power Platform dataflows refresh all dependent entities without any additional configuration. This allows users to easily build multiple ETL pipelines that are automatically synchronized, without having to deal with advanced configurations. Traditionally, this task needed professional ETL developers. This feature gives millions of data analysts a frictionless experience without requiring additional skills.

### See also

[Create and use dataflows in the Power Platform](#) (docs)

## Consume data from entities stored in Common Data Model folders

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Sep 11, 2019	✓ Nov 15, 2019



## Feature details

Power Platform dataflows use the Common Data Model to provide semantic meaning alongside the data, making it easier for other systems and applications to understand and use data stored in a data lake.

Power Platform dataflows create Common Data Model folders within the data lake and can also consume Common Data Model folders created by other applications and data producers.

Additionally, the dataflow experience allows users to create data and easily map data of any shape and size to Common Data Model standard entities. These entities, starting with key concepts used within Microsoft Dynamics 365, have been extended with the help of subject matter experts across many verticals, including healthcare, non-profit, education, retail, and marketing.

## See also

[Create and use Power Platform Dataflows](#) (docs)

## Power Query Desktop

### Overview

Power Query provides a no-code experience for non-technical users to seamlessly connect, transform, and combine data from hundreds of data sources. Power Query is natively integrated into several Microsoft offerings, both in the desktop experience and through a web-based experience built on Microsoft Azure.

### Support for new AI Insights including Cognitive Services and custom Azure Machine Learning models

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Nov 30, 2019	-

## Feature details

Power Query is adding support for new Artificial Intelligence (AI) Insights, including Cognitive Services and Azure Machine Learning models:

- **Cognitive Services:** Power BI provides access to a variety of pretrained models that you can use to transform data in the Power Query editor. The initial set of models consists of language detection, sentiment scoring, key phrase extraction, entity recognition, and image tagging.

- **Azure Machine Learning:** In the AI Insights browser in the Power Query editor, analysts can automatically see all the Azure Machine Learning models that have been shared with them. When they select a model, Power BI automatically maps columns from their data to the parameters of the model, when the name and data type match. By applying the model to their query, they add the score from the machine learning model as a new column in their dataset.

### See also

[Power BI Desktop November 2019 Feature Summary](#) (blog)

## New and enhanced connectors

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Jan 13, 2020	-

### Feature details

We plan to improve the Power Query connector library by enhancing some existing connectors and adding new connectors.

### Enhancements to existing connectors

The enhancements to existing connectors include:

- Support for the Snowflake connector in Power BI without using an on-premises data gateway. The Snowflake connector will also be enhanced to support Azure Active Directory–based single sign-on delegation for DirectQuery datasets.
- Support for Oracle Kerberos–based single sign-on via the on-premises data gateway.

### See also

[Service Gateway SSO](#) (docs)

## Data Profiling enhancements including better visualizations and more enhanced capabilities

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 14, 2019

## Feature details

Power Query continues to lead innovation in the area of smart data preparation by taking advantage of and creating products based on the strong Microsoft-wide investments in artificial intelligence and other research efforts around data preparation. Over the last 18 months, we've added several Power Query features to enable customers to transform their data in smarter ways, including:

- **Example Data Extraction:** Enables customers to extract data from HTML pages or from any table within the Power Query Editor, simply by entering sample output values that they want to extract, even selecting from a set of suggested values that Power Query automatically detected based on common transformation patterns. Power Query's AI algorithms can then infer the user intent and the optimal combination of data transformations that's needed to go from input data to the desired output specified by the user.
- **Fuzzy Merge:** Merges tables by using fuzzy matching algorithms (the Jaccard index) to determine matching rows across tables. These fuzzy matching algorithms are the result of several years of research at Microsoft, and they have been released in multiple products, including Microsoft Excel and Microsoft SQL Server, in addition to Power Query.
- **Data Profiling:** Supports over 300 different data transformations, allowing users to filter outlier values, remove duplicates, remove or replace errors, and so on; however, recent investments in Data Profiling within the Power Query Editor have made it even easier for customers to realize that their data has such issues, so that they know that they need to apply the necessary data transformations to fix them.
- **Mapping to the Common Data Model entities schema:** Allows Power Query Online customers to map arbitrary tables from any data source to a target entity schema that's defined as part of the Common Data Model specification. After an entity mapping is defined, downstream processing of that data becomes more powerful, because it can operate over this data at the semantic level instead of only the data level.

Going forward, Power Query's investments will further expand these capabilities.

Here is an overview of the next wave of smart data preparation capabilities that will be delivered to Power Query customers:

- Enhancements to Data Profiling
- Support for new AI Insights, including Cognitive Services and Azure Machine Learning models
- Query Diagnostics

## See also

[Power BI Desktop October Release Updates](#) (blog)

## Enhancements to Data Profiling

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 14, 2019

### Feature details

Data Profiling is one of the most acclaimed features by Power Query customers. Based on customer feedback, we're continuing to expand Data Profiling capabilities to include the following:

- **Taking action from within Data Profiling UI controls:** Includes the ability to apply value-based filters (equals, does not equal, starts with, ends with, contains, and more).
- **Enabling richer exploration of data profiles:** Includes the ability to group data by using different criteria based on column data types, such as value length (for text columns), year, quarter, month, day, and so on (for date columns), even, odd, positive, and negative (for number columns), and more.
- **Allowing customers to export data profiling information:** Supports the ability to export to a clipboard or a CSV file, so that the data is easily shared with others within an organization (such as other data analysts or the owners of a problematic data source).

### See also

[Power BI Desktop October updates](#) (blog)

## Custom connector and extensibility support

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Nov 11, 2019

### Feature details

Multiline support for custom connectors in Power BI Desktop will enable a more user-friendly user interface for connectors that passes native queries through to back-end systems. Users will be able to view the contents of queries that they paste, allowing them to more easily confirm that the correct query is used.

**See also**

[Handling Documentation - Multiline Support](#) (docs)

**New and enhanced connectors in Power BI**

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

**Feature details**

We plan to improve the Power Query connector library by enhancing some of the existing connectors and by adding new connectors.

**Enhancements to existing connectors**

The enhancements to existing connectors include:

- Support for SAP BW single sign-on using Common Crypto Library via the on-premises data gateway.
- Support for SAP HANA HDI 2.0 Containers.
- Redshift connector support via the gateway.
- Support for the IBM DB2 Connect Gateway feature in the existing IBM DB2 connector.
- The AtScale connector will become generally available.
- Increasing the number of operations that fold in the OData connector for better performance.

**New connectors**

- Azure Data Lake Gen2 connector with support for physical storage and Common Data Model folders
- Hive LLAP (Preview)

**Query Diagnostics enhancements**

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	✓ Oct 14, 2019	✓ Mar 30, 2020

## Feature details

Another major area of investment going forward is in Query Diagnostics.

Often, customers connect to slow data sources and then create queries with many or complex transformation steps, resulting in slow queries. To debug issues with queries, customers need to look into Power Query traces to understand whether their queries are pushed to the data source (if the data source supports the transformations being used), or whether Power Query compensated and ran those queries locally within the Mashup Engine.

In a few months, a new user experience surface will be added to the Power Query editor, making it easier for customers to gain insights, including:

- Knowledge of what data source queries are being generated to run their M queries.
- Knowledge of what data source queries are being generated to retrieve schema and metadata information.
- The amount of time queries take to run within the data source versus locally in the Mashup Engine.

Query Diagnostics will allow customers to more easily troubleshoot issues with their queries and identify potential optimizations. In addition to all these smart data preparation capabilities that will result in customer-facing features, Power Query will also become smarter about understanding data transformation usage patterns based on telemetry (non-PII), so that these and future capabilities can be further refined.

## See also

[Power BI](#) (blog)

[Power Query: Query Diagnostics](#) (docs)

## Power Query Online

### Overview

Power Query Online will approach parity with many of the features in Power Query Desktop integrations, allowing users to have a more seamless authoring experience against more data sources and providing a seamless authoring experience in the browser.

## Parity with Power Query Desktop

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

### Feature details

Many features that are present in Power Query Desktop are being brought to Power Query Online to significantly improve the query development and management experiences and the interface. These improvements include a significant number of tweaks. The areas of focus include:

- Automatic column type detection.
- Data Transformations, including fill up, fill down, pivot, extract text before/after/between delimiters, keep/remove characters, split by character transition, append queries, combine files, and more.
- Venn diagram icons in merge dialog to represent join types.
- Security and authentication features, including support for privacy levels and encryption warnings.
- Support for query parameters in the user interface.
- Parameters experience and the ability to bind to query parameters from input controls in specific operations. These include connector dialog boxes (for URLs and paths) and the most commonly used transformations (split columns, replace values, filter rows, and so on).
- Function creation and invocation user experience, enabling users to easily convert queries with parameters into functions that are easily invoked from other queries.
- Steps pane improvements to allow advanced authoring capabilities such as reordering steps, support for descriptions for any step, or refactoring base query steps into new queries for easy reusability.
- Query groups improvements, including the ability to move queries between groups and reorder groups.
- Queries pane improvements, including the ability to easily reorder queries and manage other query properties from the queries pane.
- Navigator parity items, including related tables, refresh tree, refresh preview, only selected items, other display options, and more.
- IntelliSense support in the formula bar and advanced editor dialog box.

## Smart data preparation

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Oct 31, 2019

### Feature details

A continuing goal for Power Query and Power Query Online is to make data preparation *smarter*. This enables analysts to have artificial intelligence (AI) capabilities at the touch of a button, enriching and enhancing data. In addition to the AI insight capabilities that are already in Power Query Online for Power BI Dataflows, two new smart data preparation capabilities will be added:

- **Fuzzy Merge:** Allows users to easily combine data from multiple tables by using fuzzy matching algorithms instead of strict matching.
- **Data Profiling:** Helps users easily identify error, empty, and outlier values within their Power Query Editor data previews.

## New and enhanced connectors in Power Query Online

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	✓ Mar 30, 2020

### Feature details

We will improve existing connectors, bringing support for native database queries and other connector advanced options, including time-outs and hierarchical navigation.

Here's a list of the new database, folder, and cube connectors:

### Database connectors

- HDInsight Spark
- Apache Spark
- HDInsight Interactive Query
- Google BigQuery
- Power Platform Dataflows



- Impala
- Snowflake
- Common Data Service Connector

### Folder connectors

- Local Folder
- SharePoint Folder
- SharePoint Online Folder
- Azure Data Lake Storage Gen2

### Cube Connectors

- SAP HANA
- SAP BW
- SQL Server Analysis Services
- Azure Analysis Services
- Google Analytics
- Adobe Analytics

We'll also increase investments in the following categories of connectivity.

Connector	Description
Generic ODBC	This connector, which is widely used in Power BI Desktop, will become available in Power Query Online to enable connectivity to any data source that provides an ODBC interface.
PDF Files	This connector will be available in Power Query Online.

New data preparation capabilities in Power Query Online will bring it closer to parity with Power Query Desktop in these areas:

Transformation	Description
Table	Includes fill up, fill down, pivot, extract text, before, after, or between delimiters, keep or remove characters, split by character transition, append queries, combine files, and more.

Transformation	Description
List	Includes keep or remove, top, bottom or duplicates, alternate, reverse, sort, and statistics, including sum, avg, min, max, std, count, and countD.
Scalar	Includes text transforms (ToList, table, split, and format. Upper, lower/capitalize, trim, clean, prefix, and suffix), extract (length, first, last, range), and parse (JSON/XML).

**See also**

[What's new in Dataflows in Power Apps this month?](#) (blog)

Got feedback?

Share your feedback on a community forum for [Dynamics 365](#) or [Power Platform](#). We'll use your feedback to make improvements. To find out about updates to these release notes, follow us on Twitter @MSFTDynamics365.

