

User Experience

in Microsoft Dynamics CRM 2013 and Microsoft Dynamics CRM Online Fall '13

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The CRM User Experience

The #1 obstacle to the success of CRM solutions is User Adoption.

Whether or not we design for an emotional reaction, we are going to get one. As a design team, we intentionally design software to create positive emotions, even love, to our customers. – CRM User Experience Mission

Adoption is a challenge that faces all enterprise business software installations. The continued consumerization of the computer and software market leads to higher expectations as new generations of workers enter the workforce and existing employees begin to realize the opportunities presented by software. Taking advantage of these trends, Microsoft Dynamics CRM is building software that business people love to use and help them love their jobs. It's time for us to stop talking and thinking about the technology and start focusing on the emotion and effects our work has on the end users of Microsoft Dynamics CRM.

What does User Experience mean to an Information Technology Professional?

Adoption, happy customers, happy executives

What does User Experience mean to a Business Decision Maker?

Employee retention, increased sales

What does User Experience mean to an end user?

Life balance, loving their work and success

The following paper takes a look at the User Experience that we have created for Microsoft Dynamics CRM 2013 and Microsoft Dynamics CRM Online Fall '13 from both a reasoned perspective (Why did we make the design decision that we did?) and a data perspective (What were the overall numerical and quantifiable gains observed with the new experience?).

Quotes from our customers

CRM 2013

"The product is modern looking and each screen is not overcrowded. It does all seem to flow in the sales process from step to step and I like the sale process steps at the top because it reminds me what I need to cover."

- *Competitor Client User: Telecommunications Sales*

"The product is clean looking in that it has just the information I need when I need it. It does not overwhelm me. Everything I need is laid out and easily available on each page."

- *Competitor Client User: Telecommunications Sales*

CRM for phones

"I really liked the way you laid out the smartphone application using the menu structure compared to Salesforce which uses a bunch of 16 tiles. You have really thought about what a mobile user needs and selected the top tasks rather than like Salesforce which throws everything at us."

- *Competitor Mobile/Client User: Dental Equipment Sales*

CRM for tablets

"This is pretty self-explanatory and easy. The information is organized and you can really dive into the information if you need too."

- *Competitor Mobile/Client User: Computer Hardware Sales*

"Salesforce took me a couple of weeks to learn and I think I could learn this much quicker."

- *Competitor Mobile/Client User: Computer Sales*

"User interface is very pretty. Fresh a new way of looking business. The screens are clean."

- *Competitor /Seibel Mobile/Client User: Technology Sales*

"The application is clean. That is one of my pet peeves with Salesforce there is a lot of links and ways to open stuff that is not relevant to what I am doing. This is clean and simple and easy to use. It's very intuitive and straightforward. All the information is there and it is easy to find what you are looking for."

- *Competitor Client User: Automotive Sales*

User Experience Principles

While designing and building the newest version CRM 2013 and CRM Online Fall '13, the Engineering and Design teams focused the design on these principles:

Simple

Focus on the essential tasks with a clear, consistent purpose that matches user intention

Usable

Measure usability iteratively, incorporate feedback into designs

Modern

Apply principles of modern user interface design inspired by Windows 8 to create delightful, engaging, and process-centric experiences

Fast

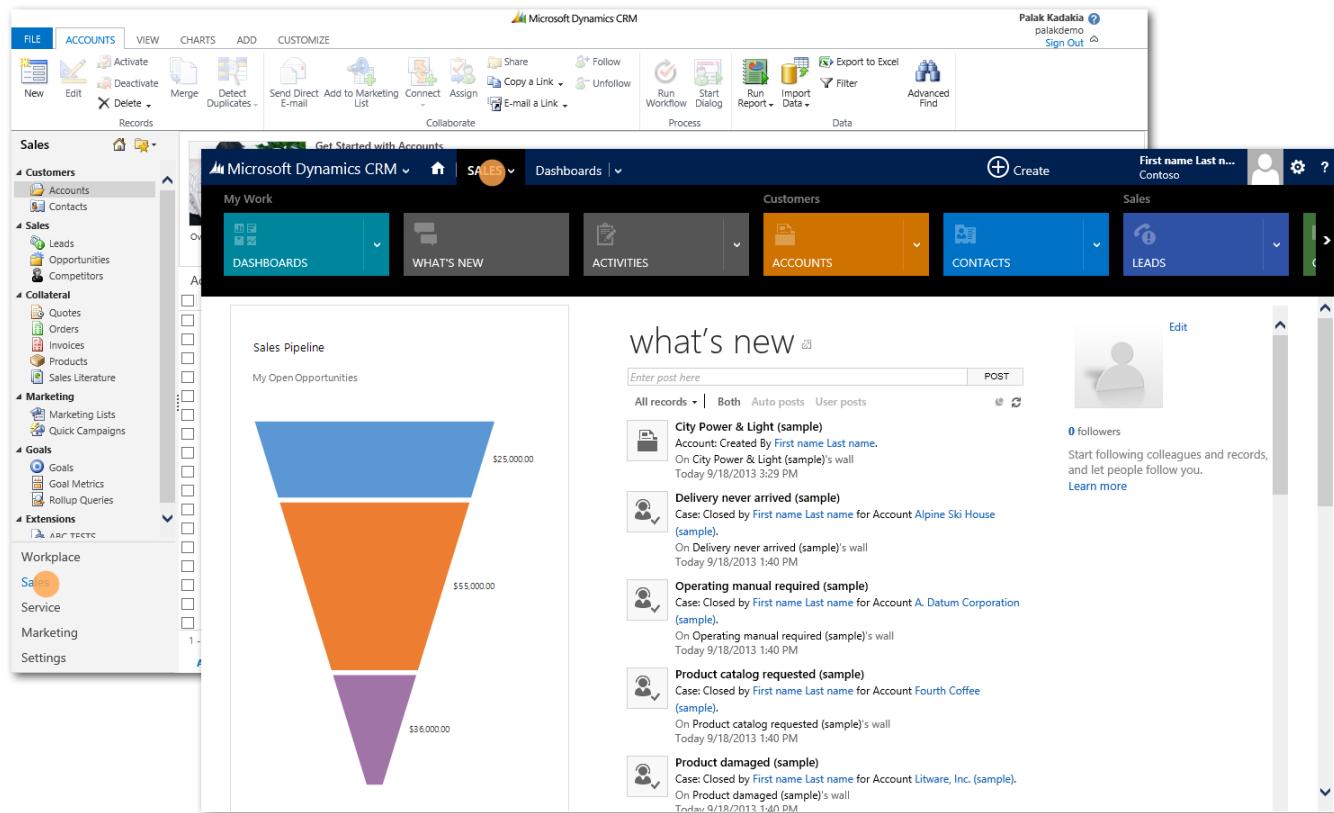
Design and deliver great perceived productivity and performance

The Reimagined User Experience

The new User Experience introduced with CRM Online December 2012 Service Update and expanded upon in CRM 2013 and CRM Online Fall '13 has been created to make completing every task within CRM easier and faster for our core Sales, Service and Marketing users. We have streamlined our designs and optimized the interface explicitly for information display and productivity. We have worked to remove popups and dialog boxes from all of our experiences. And we have enabled all input for touch.

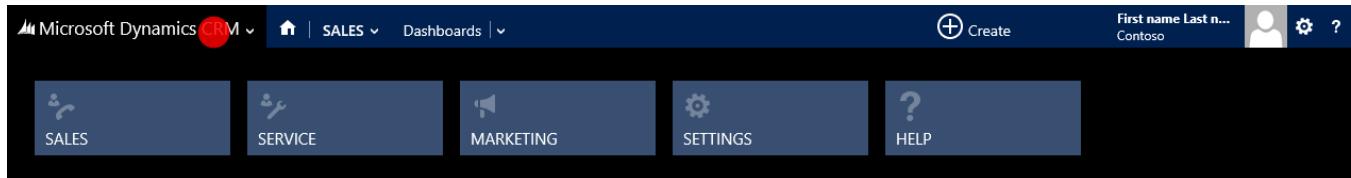
Navigation

The sitemap navigation pane from CRM 2011 has been changed to a "breadcrumb" navigation model with a navigation bar that slides in when you need it. This helps keep your focus on the content that you care about. The navigation bar introduces touch friendly tiles to quickly and effortlessly navigate you through CRM.



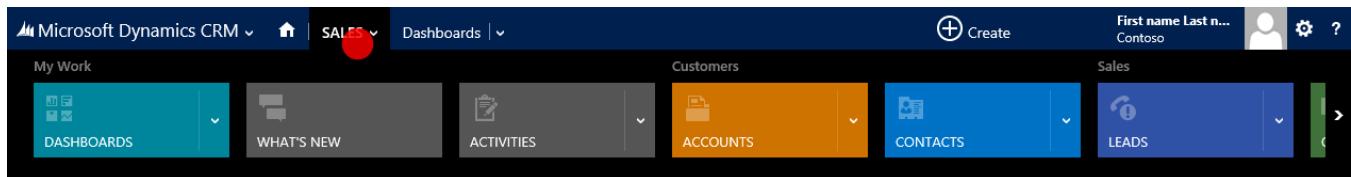
Selecting the functional area

At the top level of navigation are the Sales, Service, Marketing and Settings areas.



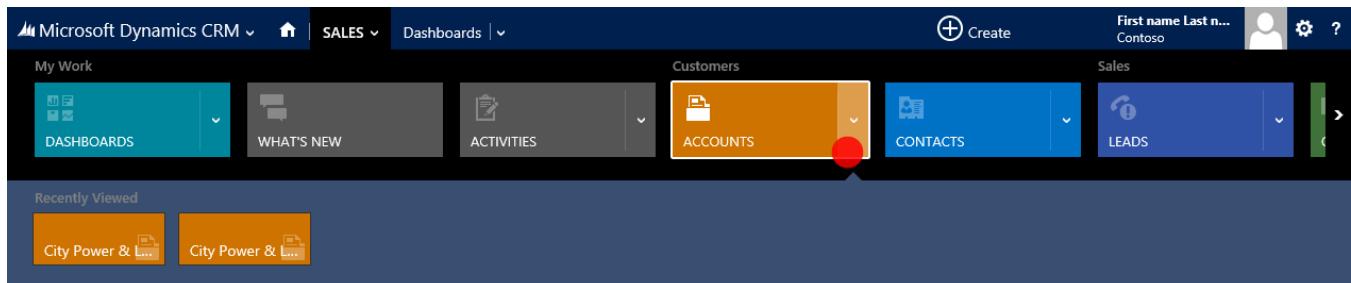
Selecting entities within the functional area

The next level will navigate you to all your CRM entities (i.e. Accounts, Contacts and Leads)



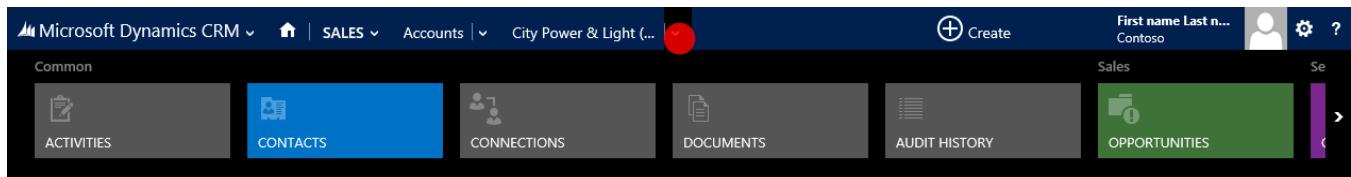
Most Recently Used Records

The split button on each entity will navigate you to your most recently used records.



Related Record List

The split button on an entity record in the breadcrumb will navigate to related record lists.



In the prior version of CRM, the navigation pane occupied 190x760 pixels, which represents 11% of the available screen real estate at 1280x1024 resolutions. In CRM 2013, this screen real estate has been entirely recaptured since the navigation has been moved into the previously existing header.

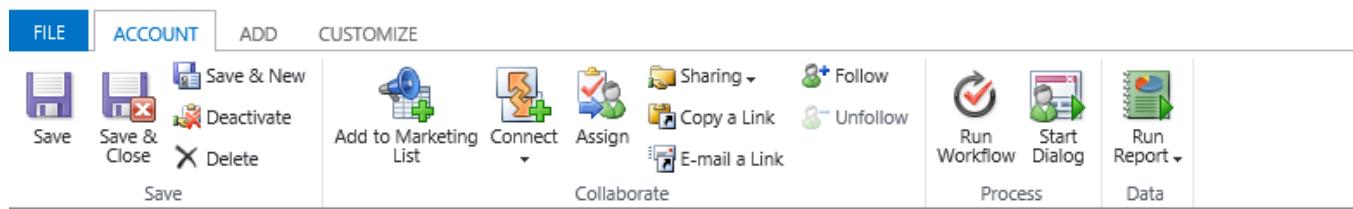
Though hidden, when using a mouse, the number of clicks for selecting the first 7 items has not been increased from the original navigation design, it still only takes a single click to get to these most common end user targets and these are customizable.

We have increased the touchable surface by 83%, making navigation while using modern devices much easier.

Commands

Commands have been visually deemphasized by moving away from the ribbon presentation to a lighter weight command bar. Commands have for the most part been integrated directly into the product. Most commands such as "Add Activity" or other add and data entry tasks have been built directly into the form surface for substantially increased effectiveness. The UI helps focus users' attention on the most important commands, but they have extensibility with grouping to help organize and surface the commands they need.

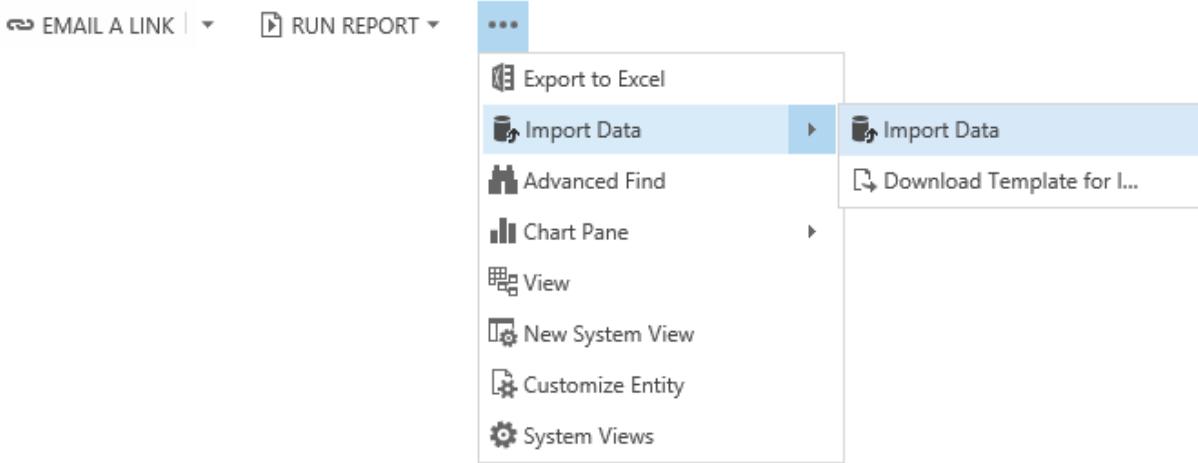
CRM 2011



CRM 2013



Overall the number of commonly used commands in the Sales and Service experiences are between 5 and 10. Commands outside of that set have been included in a "more commands" overflow menu. This allows for a simpler user experience focused on optimizing long term efficiency over discoverability. It also provides a command design that is adaptable to different form factors, such as tablets.



Overall cognitive load¹ is substantially reduced during initial exposure to the system. For example in "Quotes" the number of commands on a new quote has been reduced to 5 from 21 top level commands. This is an improvement of 75% for initial learning. The total command set has been reduced from 34 to 10 a 60% reduction in overall complexity.

The ribbon in prior versions of CRM occupied 9.6% of the available screen real estate at a resolution of 1280x1024. The new command bar in CRM 2013 recaptures 5% of that and integrates the record navigation control as well.

Quick Create

Studies showed that the act of creating a new entry in CRM represented a substantial usability issue – they simply took too long to create. We have made a substantial investment in streamlining the new record create process for CRM 2013.

"Quick Create" allows the end user to focus on only those fields that are required or common when creating a new record, improving overall productivity. By improving access and allowing the user to focus on only those fields that are required or common when creating a new record, productivity has improved by 80% for creating new records with these changes.

¹ Miller, G.A. (1956). "The magic number seven plus or minus two: some limits on our capacity to process information". *Psychological Review* **63** (2): 81–97.

Sweller, J., Van Merriënboer, J., & Paas, F. (1998). "Cognitive architecture and instructional design". *Educational Psychology Review* **10** (3): 251–296.

Microsoft Dynamics CRM | SALES | Quotes | New Phone Call

Opportunity

Details

Topic * Budget Amount --

Contact -- Est. Revenue --

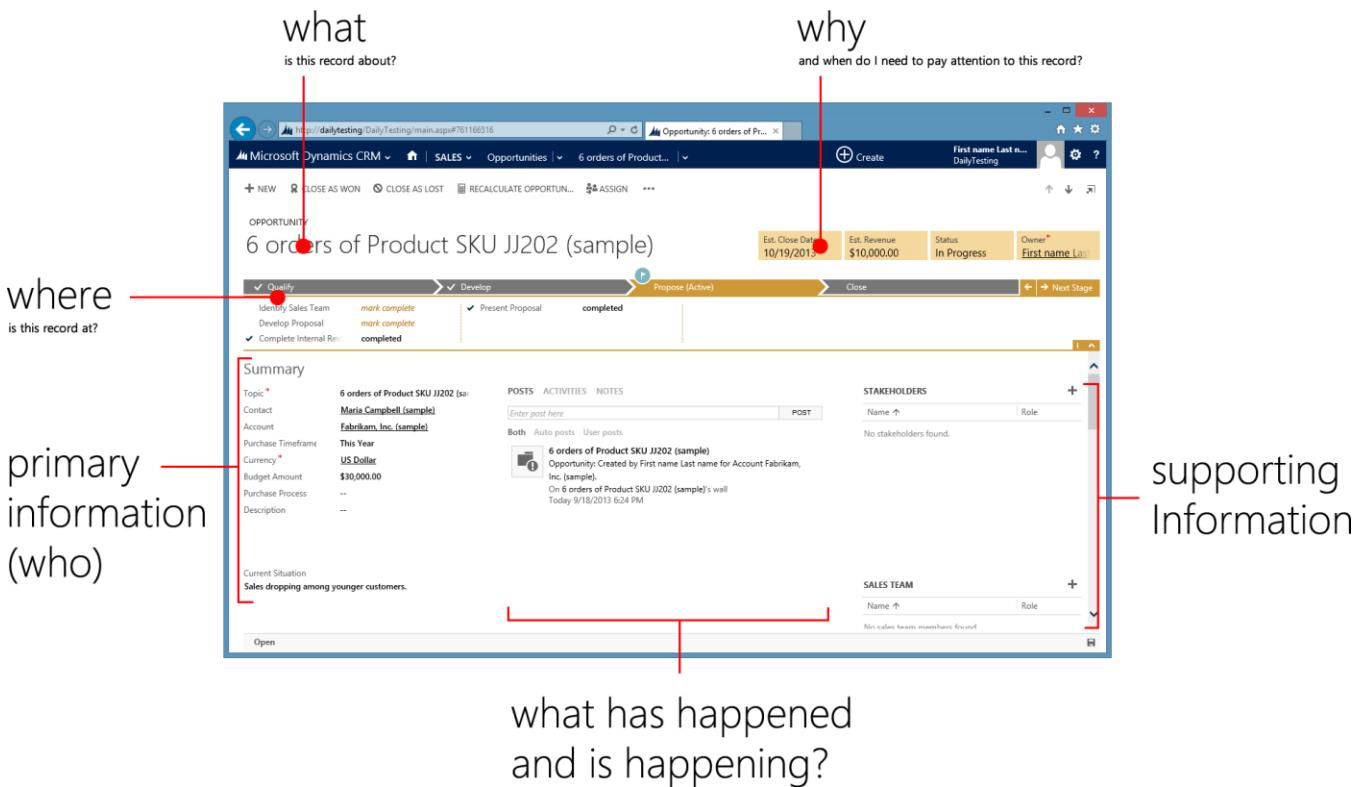
Account -- Est. Close Date --

Customer Need

Budget Amount --
Est. Revenue --
Est. Close Date --

Save Cancel

Form Structure



Who, what, where, and why are the questions we are trying to answer for the user in our basic form design.

Who does the salesperson need to talk to about this record, and what is it they are interested in? Why do they care about this deal and when do they need to close it? Where in the process is the record at?

With the new design of CRM 2013, we have attempted to ensure only the most important details are at the user's fingertips as they view a record, without scrolling.

Depending on the form, usable real estate is increased by up to 60%. Typically we find that all of the fields previously available on a "standard" CRM 2011 form fit in the first column and header. Additional space is used by the center "hero" section - the process control - which deeply exposes fundamental sales processes to the users of the CRM system as well as the secondary information previously only

available below the fold as sub-grids, or on secondary pages. This provides core experiences for some of the most important activities around an entity, including, for example the products grid on a quote object.

Overall the streamlined user interface provides for significantly higher data density with a reduction in apparent visual complexity. This is achieved through a process called chunking² where information is combined into small groups of similar elements in close proximity.

Form Scaling

The CRM 2013 user experience was created for more than just laptops and desktops running Internet Explorer. The CRM 2013 user experience was designed to work on nearly any device. This was done through a design model called Responsive User Interface. Where in CRM 2011 and in the CRM Online December 2012 Service Update forms would only scale down to a resolution of 1024 before becoming unusable, the new user experience supports the ability to scale useably down to 480 pixels wide. This creates an experience that flows smoothly across devices.

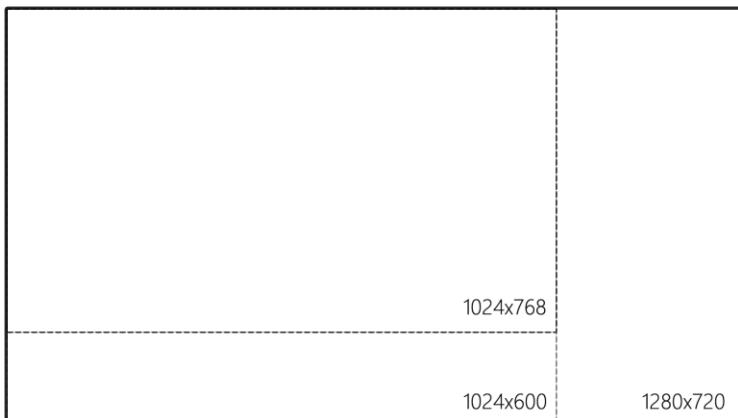
In our form designer we have created new layouts that when used will help to ensure good scaling behaviors for many different devices that CRM could run on the following shows the form-factors that we designed for:

Desktop resolutions

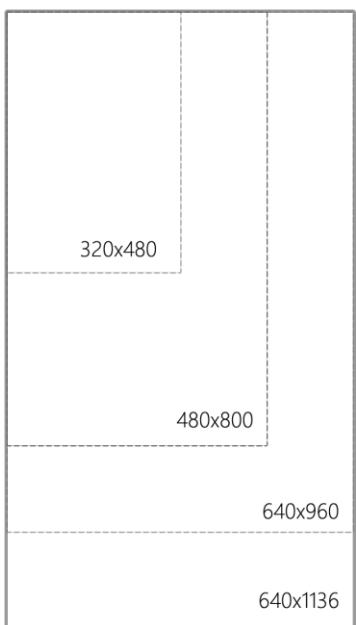
1024x768	1280x720	1920x1200

² Chase, W.G. & Simon, H.A. (1973). "Perception in chess". *Cognitive Psychology* 4 (1): 55–81.
Wertheimer, Max (1923). "Laws of Organization in Perceptual Forms". *A Source Book of Gestalt Psychology* (1999): 71-88

Tablet resolutions

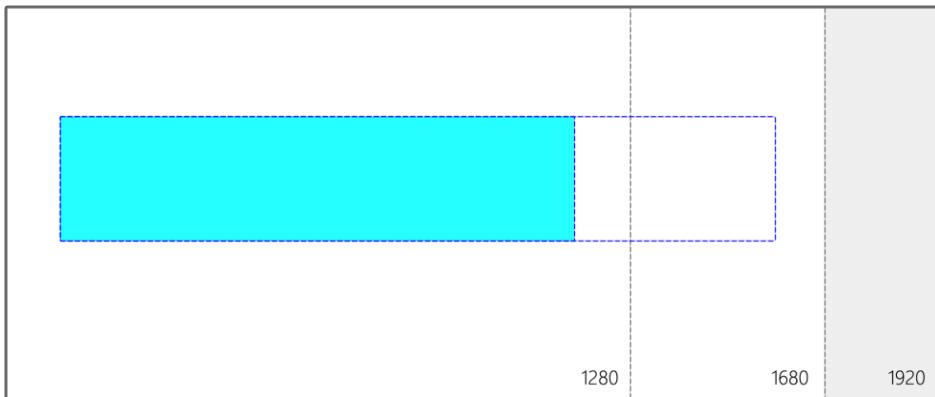


Phone resolutions

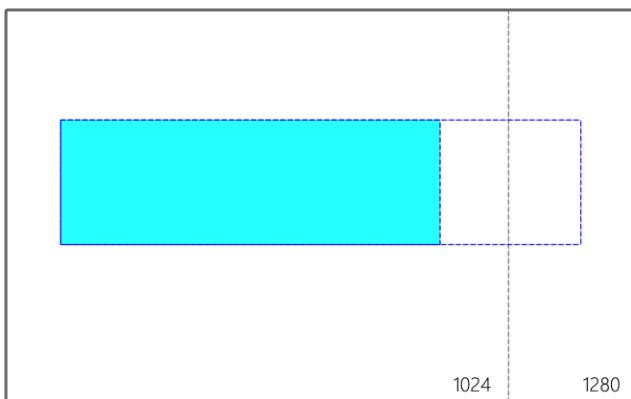


Resolution Support for Forms

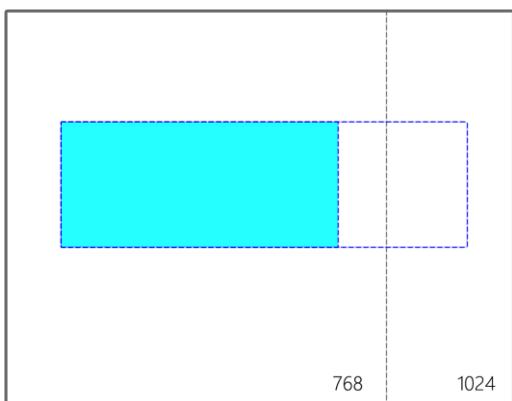
Layout 1: objects scale from 1280 to 1680. Resolution greater than 1680 would leave white space to the right.



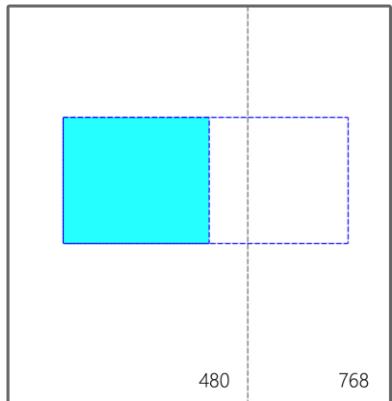
Layout 2: objects scale from 1024 to 1280



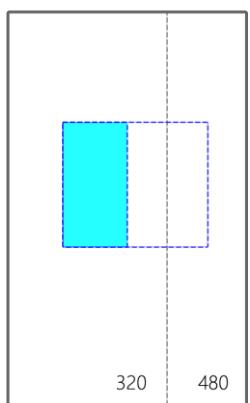
Layout 3: objects scale from 768 to 1024



Layout 4: objects scale from 481 to 768



Layout 5: objects scale from 480 to 768



Usability and Productivity

Click and Screen efficiency

Though not a complete metric of productivity, a good picture of the improvement in CRM 2013 can be visualized simply by evaluating the reduction in the number of windows and clicks required to accomplish specific tasks. In the case below, we illustrate the Lead to Cash scenario. This scenario starts with an existing lead already entered into the system and processes it in a straightforward manner until the opportunity is closed. For this exercise, we did not count clicking into fields for data entry, but did count clicking on buttons like search buttons, and clicking on selections. This will cause the CRM 2011 counts to be low as the focus point on text fields have been optimized in CRM Online December 2012 Service Update and then further in CRM 2013, and that optimization is not as obvious as when you are not counting clicks into the data entry fields.

Screen counts are also highly optimized for CRM 2011 favorability as we assume that all entities needed to complete the data entry tasks are already in the system. If these entities needed to be created, the counts would be substantially higher in CRM Online December 2012 Service Update and slightly higher in other versions. In other words, the older version is actually worse than indicated by the numbers, and the improvement substantially better.

	Clicks	% Improvement	Screens	% Improvement
CRM 2011 Update Rollup 12	43	--	19	--
CRM December 2012 Service Update	17	60.4	2	89.5
CRM 2013	16	6	1	50

For this scenario, you can see that there are substantial improvements in overall efficiency in CRM Online December 2012 Service Update. This specific scenario was targeted and worked on with a few other scenarios using Accounts, Contacts and Cases.

In CRM 2013 we didn't do a directed improvement in the same mainline scenario. What we did do is take the improvements we made through the CRM Online December 2012 Service Update and extended them to all other sales scenarios. So while in CRM 2013, if you tried to do competitors and

quotes work, for example, you would end up in the old fashioned “pop-up” and “click driven” user experience where the experience was terrible. Those experiences received dramatic overhauls in CRM 2013, achieving an overall improvement between 60-90% for data entry efficiency in all updated forms when calculated by screens and click counts.

	Improved/Converted Entities	Improvement
CRM December 2012 Service Update	5	--
CRM 2013	28	5.6

Time to Complete Tasks

The time to complete a task is a key measure of overall productivity improvement. This measures the time it takes a sales user to complete a task. These measures are taken in a focused lab environment for each CRM version that we've created.

Task	Average Time (seconds)		
	Before CRM 2013	CRM 2013	% Improvement
Create opportunity	214%	184%	14%
Create activity	226%	180%	20%
Make call, Add note	251%	159%	37%
Create lead	317%	267%	16%
Close opportunity	260%	195%	25%
Add information to record	170%	161%	5%
Qualify lead	317%	254%	20%
Average Task Time	251%	200%	20%

System Usability Scale

The System Usability Scale (SUS) is a standardized 10-question survey designed to quickly and easily assess the usability of a system in terms of:

1. Effectiveness (can users successfully achieve their objectives?)
2. Efficiency (how much effort and resource is expended in achieving those objectives?)
3. Satisfaction (was the experience satisfactory?)

Each survey is scored for an individual evaluation score from 0 to 100. We are constantly evaluating our designs and looking to improve our overall satisfaction scores. These scores are important indicators for whether or not we are successful in our efforts to improve overall usability in the product.

As we design our product we are constantly evaluating our designs and looking to improve our overall system usability scores. These scores are important indicators for whether or not we are successful in our efforts to improve overall usability in the product. As illustrated in the chart below we have made significant perceived usability improvement from CRM 2011 to CRM 2013, Mobile Table Applications, and Windows 8 Phone Applications. Each major release has increased the SUS scores by 10% or more with a 20% increase over CRM 2011 by CRM 2013. This means that people find the Microsoft Dynamics CRM 2013 release easier to use, they expect to need far less technical support to achieve their goals, and perhaps most important they actually find the product desirable and want to use it!

