

Custom factor mappings are as easy as 1, 2, 3

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- *Coffee!*



Scenario

The Challenge at Contoso Coffee Roasters

Contoso Coffee Roasters sources various types of coffee beans, such as Arabica and Robusta, from different countries, each with its own environmental impact. The company needs a way to calculate emissions for scope 3 category 1, purchased goods and services, that can pivot on the bean species and the country.



Agenda



What are factor mappings?



Use case: Coffee beans from Brazil and Ethiopia



Step-by-step: Custom Factor Mappings



Troubleshooting tips and Q&A

What are Factor Mappings?

Streamline your calculation efforts

Factor mappings align organization's activity data with the corresponding emission factors.

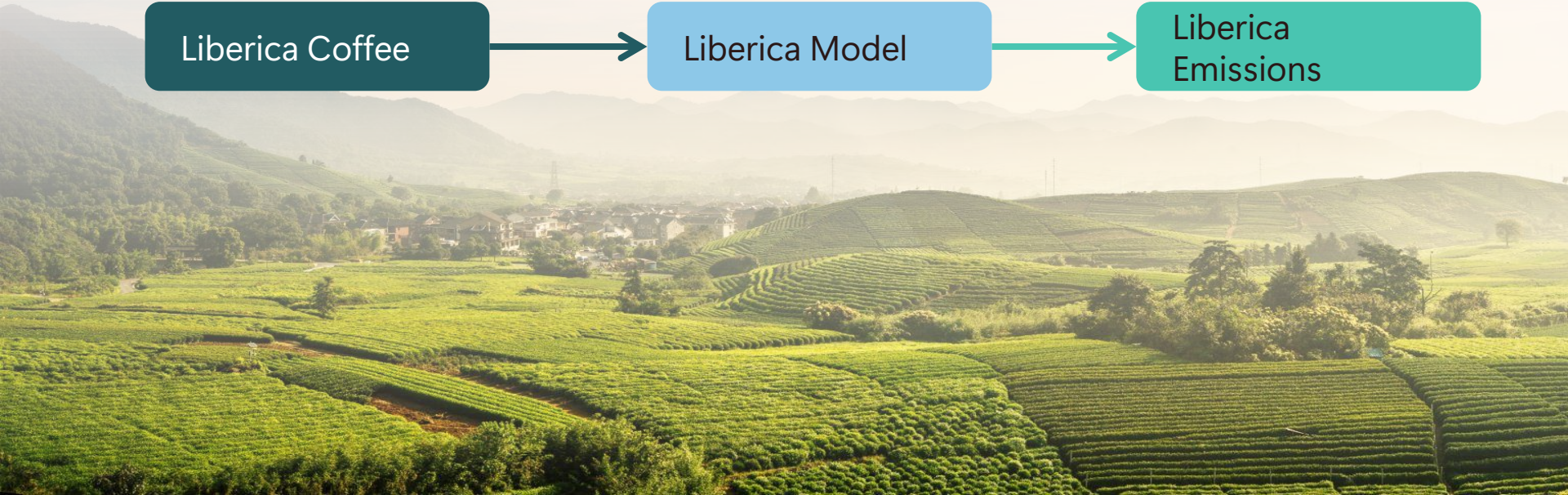
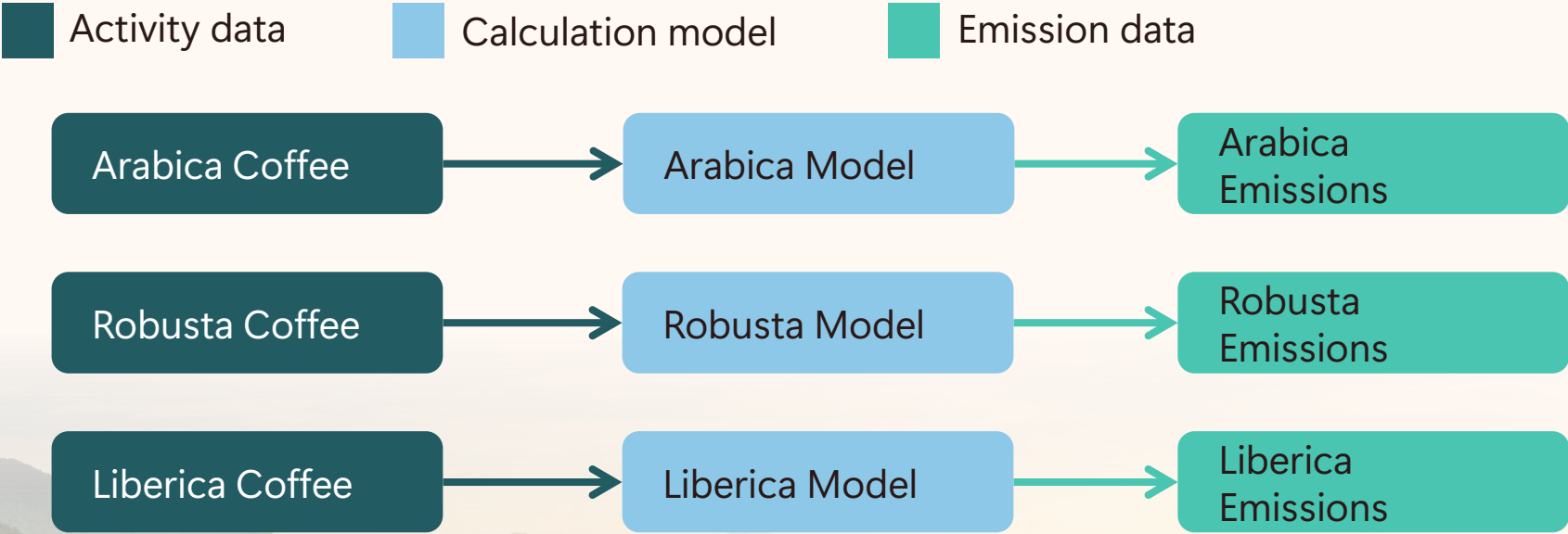
Alignment is based on standardized reference data.

Ensures the emissions calculations are accurate and based on standardized data.

Allows for streamlining emission calculations by avoiding the need for redundant calculation models.

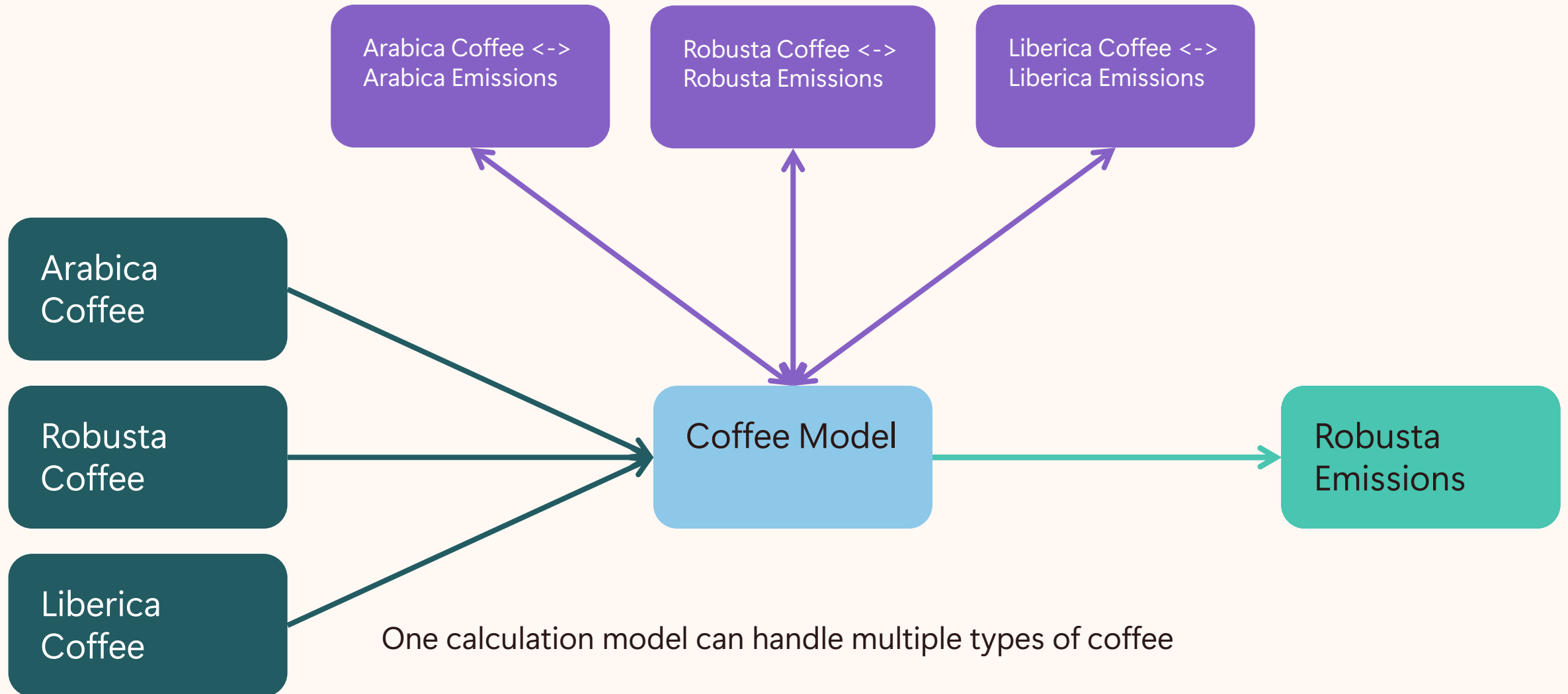
Calculations without Factor Mappings

Requires a new calculation model for each type of coffee



Calculations with Factor Mappings

■ Activity data ■ Calculation model ■ Emission data ■ Factor mapping



Use case

Coffee beans from Brazil and Ethiopia

Let's take Arabica beans from Brazil and Robusta beans from Ethiopia as an example. We'll create a custom factor mapping that considers the specific coffee bean species and country of origin associated with these beans. This mapping will then be applied to all activities related to the purchase of coffee beans from Ethiopia and Brazil.



Step-by-step: Custom Factor Mappings

We'll walk through the process of creating custom factor mappings, starting with extending the data model, linking new table(s) to factor mappings, and authorizing MSM and users to access the new table(s).

Follow along with the documentation:
aka.ms/CustomFactorMappings

1. Extend

Create custom tables for Coffee Species and Country of Origin with a natural key on the Name column, add lookups to Purchased Goods and Services table, and add the new tables to the Sustainability Manager app.

2. Link

Link Coffee Species and Country of Origin to factor mappings table via new relationships added to the polymorphic lookups. Add the tables logical names to the Reference Data table.

3. Authorize

Update the Sustainability Service Application Role – Custom security role to have Read and Append To privileges to the new tables. Provide the same privileges to users at a minimum, users may need additional privileges based on your unique needs.

1. Extend

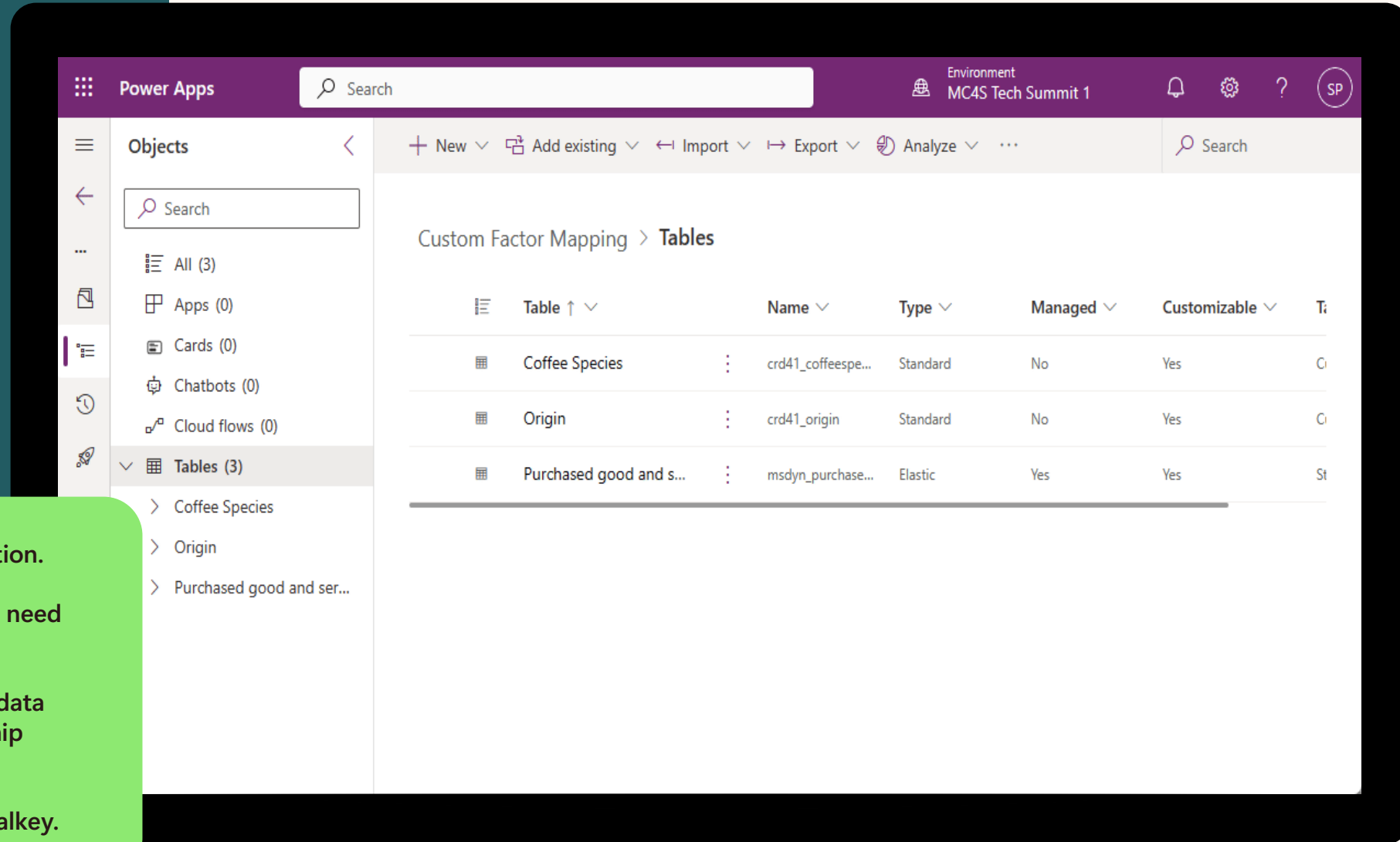
Create custom tables with an alternate key on the Name column, add lookups to the relevant activity data tables, add the new tables to the Sustainability Manager app.

Make your modifications within a solution.

Note your table logical names, you will need that information later.

When adding lookups to your activity data table, create a Many-to-One relationship instead.

The alternate key must be called naturalkey.



Objects

Search

- All (4)
- Apps (1)
- Cards (0)
- Chatbots (0)
- Cloud flows (0)
- Tables (3)
 - Coffee Species
 - Origin
 - Purchased good and ser...

+ New Add existing Import Export Analyze Publish all customizations

XrmToolBox for Microsoft Dataverse and Microsoft Dynamics 365 (v1.2022.2.54)

Connect Windows Configuration Help Open environment Impersonate

Start page Tools Polymorphic Lookup Manag...

Filter poly

Comparison Configuration Customizations Data Development Documentation Migration Plugins Portal Power Automate Power BI Power Pages Processes Reporting Security Solutions Troubleshooting User Interface

Polymorphic Lookup Manager
Version: 1.2022.11.6
Author: MscrmTools
Manage the shiny new polymorphic lookups columns without a line of code

Connected to 'mc4stechsummit1.crm.dynamics.com (MC4S Tech Summit 1)' Connected!

Customizable	Tags
yes	Custom
yes	Custom
yes	Standard

2. Link

Link the new tables to the factor mappings table via new relationships added to the polymorphic lookups. Add the table logical names to the Reference Data table.

XrmToolbox is not required, the relationships can also be added with the Dataverse Web API.

Be sure to use the table logical names, and they are all lower case.

The new relationships can be migrated with the solution.

The Reference Data rows will not be migrated with the solution.

The screenshot shows the Power Apps interface for a Custom Factor Mapping table. The left sidebar shows the navigation menu with 'Tables (4)' expanded to 'Factor mapping'. The 'Relationships' section is selected, displaying a table of relationships.

Display name ↑	Name ↓	Related ta...	Relationshi...	Managed ↓	Customizable ↓
Reference data 1	msdyn_msdyn_emissionlookup_crd41...	Coffee Species	Many-to-one	No	Yes
Reference data 1	msdyn_msdyn_emissionlookup_crd41...	Origin	Many-to-one	No	Yes
Reference data 2	msdyn_msdyn_emissionlookup_crd41...	Coffee Species	Many-to-one	No	Yes
Reference data 2	msdyn_msdyn_emissionlookup_crd41...	Origin	Many-to-one	No	Yes
Reference data 3	msdyn_msdyn_emissionlookup_crd41...	Coffee Species	Many-to-one	No	Yes
Reference data 3	msdyn_msdyn_emissionlookup_crd41...	Origin	Many-to-one	No	Yes
Reference data 4	msdyn_msdyn_emissionlookup_crd41...	Coffee Species	Many-to-one	No	Yes
Reference data 4	msdyn_msdyn_emissionlookup_crd41...	Origin	Many-to-one	No	Yes

3. Authorize

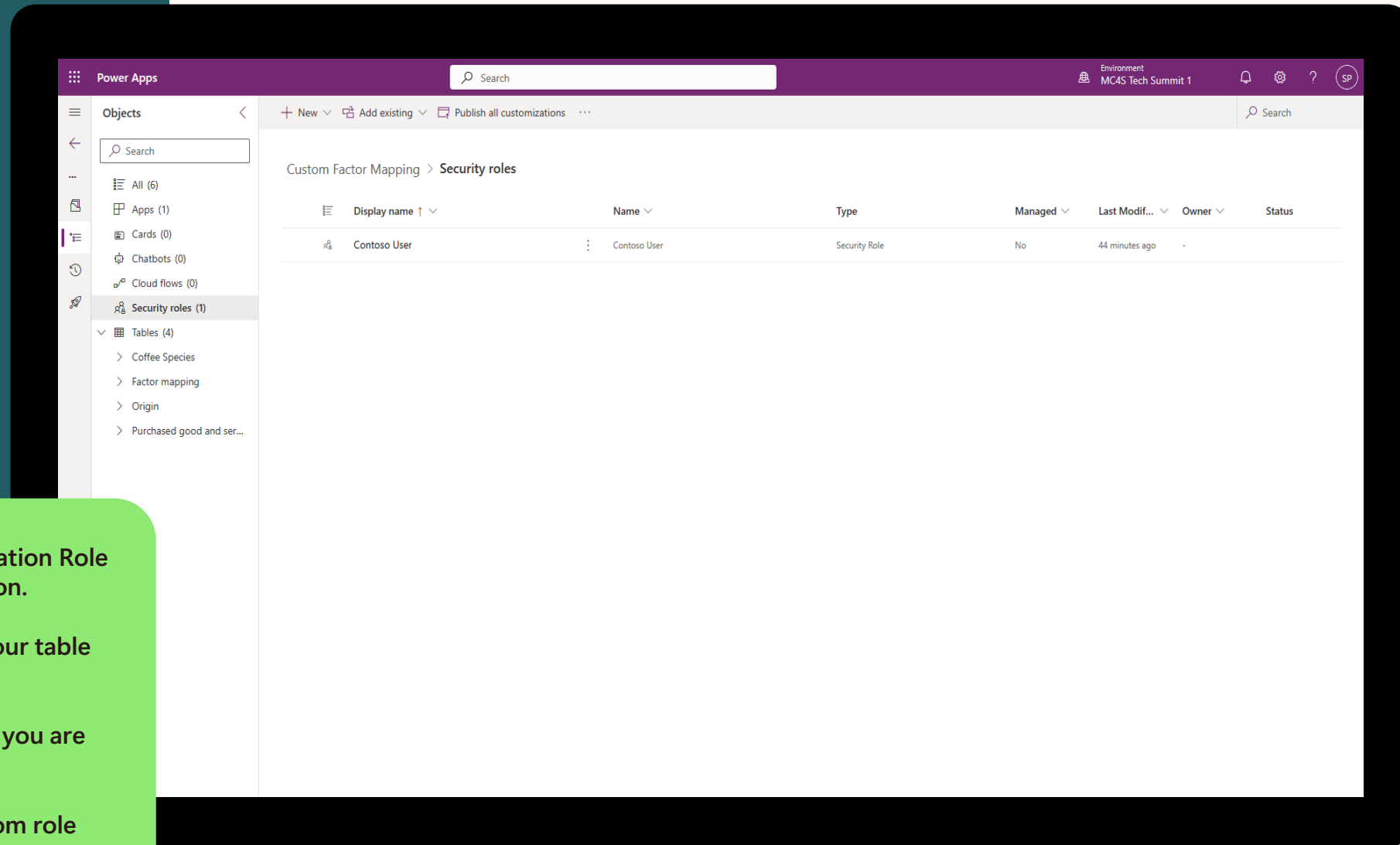
Update the Sustainability Service Application Role – Custom security role to have Read and Append To privileges to the new tables. Provide the same privileges to users at a minimum.

Add the Sustainability Service Application Role – Custom security role to your solution.

Using search (Ctrl+F) can help find your table faster.

Hover over the bubbles to make sure you are on the right privilege and table.

The Sustainability Application - Custom role must be granted Organizational level access



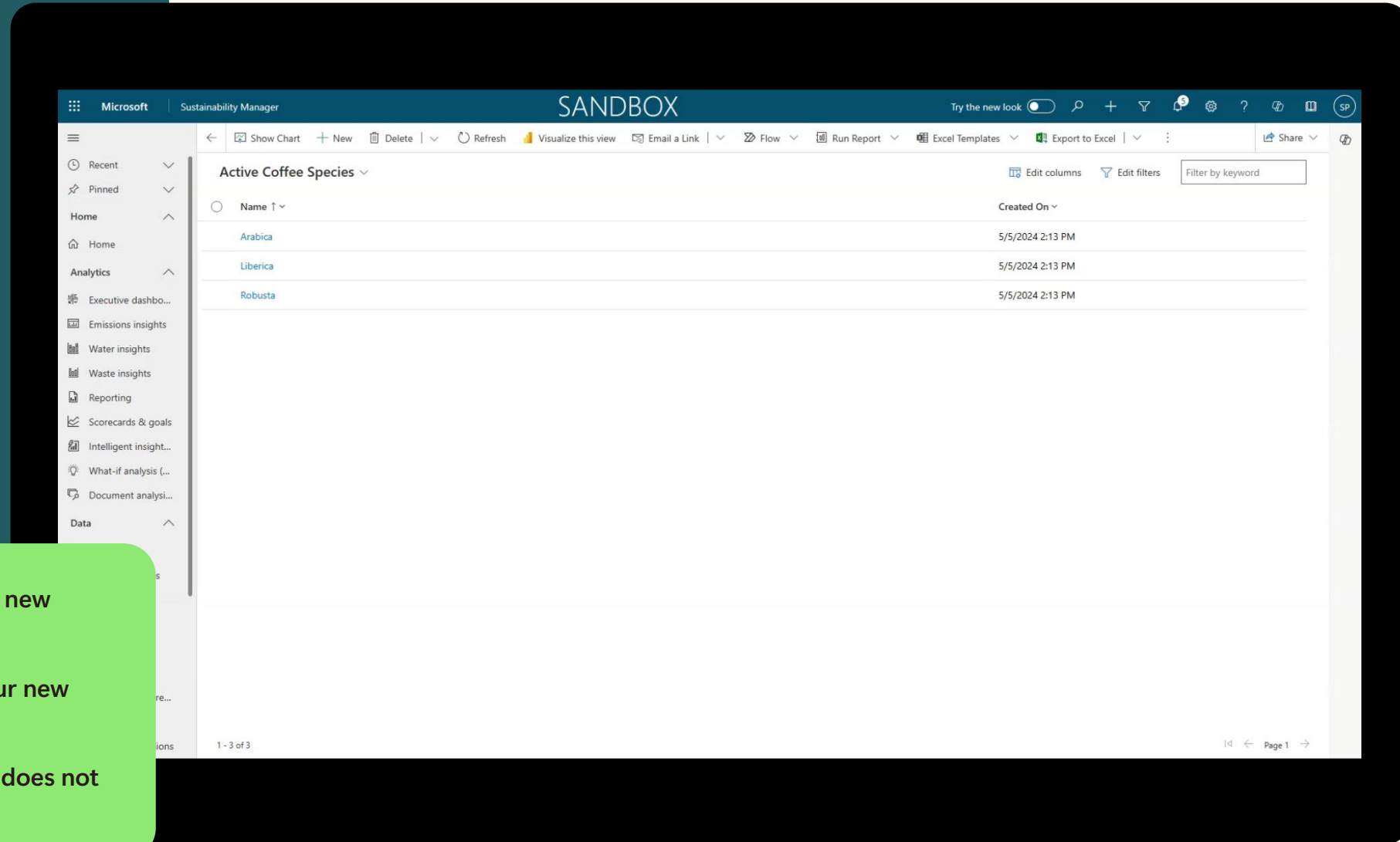
Utilize

Create reference data, import activity data, create factor mapping records, use factor mappings in calculation models, and run the calculation profiles.

Ensure your activity data utilizes your new tables.

Ensure your factor mappings uses your new tables.

The order of the factor mapping data does not matter.





What do I do when it doesn't work?

If you encounter issues where your custom table isn't appearing in the calculation model, check for these common mistakes.

Missing Reference Data Record

Add a record for your custom table to the Reference Data table. (**msdyn_referencedata**)

Entity name value is invalid

Ensure the Entity name in the Reference Data record matches the **logical name** of your table, and it is all lower case.

No factor mapping record

Verify you have a factor mapping record referencing the custom table, and activity data has a lookup field pointing to the custom table.

Check the [Custom Factor Mapping FAQ](#) for more tips.

Additional Use Cases for Custom Factor Mappings

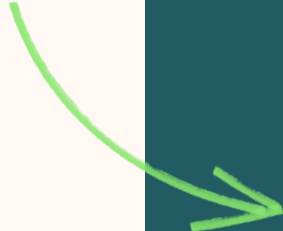
- **Timebound/Time constrained emission factors**
Create a Timeframe table with your specified time periods and add a lookup on your activity data.
- **Custom Regions for Scope 2 emission factors**
Create a Custom Region table to add additional ways to map your business regions to regional energy grids.
- **Equipment specific emission factors**
Create an equipment table to map equipment, such as specific generators, to specific emission factors.
- **What use cases are you thinking of?**
Let us know in the chat!

Related sessions

Session	Title	Abstract	Speaker	Date
SUS03M	Application Lifecycle Management of Microsoft Sustainability Manager	Join us for an insightful session on designing a robust ALM structure for Sustainability Manager solutions. In this session, we'll explore Sustainability Manager components and best practices on designing CI/CD pipelines for these elements, including a demo of build and release pipelines using Power Platform build tools for Azure DevOps.	Göksel Oral	Monday, May 6
SUS02W	Microsoft Cloud for Sustainability: Troubleshooting Essentials	Unlock the full potential of Microsoft Cloud for Sustainability with our expert troubleshooting session. Discover practical tips and tricks to navigate common challenges and optimize your Microsoft Cloud for Sustainability deployment. Join us to enhance your technical skills and drive impactful sustainability initiatives with confidence.	Steven Pride	Wednesday, May 8
SUS03R	Using Custom Dimensions in calculations and reporting	This session will guide you through the process of associating various aspects of your company's activities with sustainability metrics, enabling enriched calculations and insightful analyses. Learn how to effectively utilize custom dimensions to elevate your reporting and gain a deeper understanding of your environmental impact.	Eyal Schwartz	Thursday, May 9



Thank you!



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aka.ms/MCfSCommunity

→ **Learning Resources**
aka.ms/CloudforSustainabilityLearnCollection



Q&A

Please type your questions **in the chat** and we will answer them during the Q&A session.

