



Power Platform

Build your own Power Apps Solution

Module 1: Power BI
Hands-on Lab Step-by-Step

June 2021

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Power BI

Lab Prerequisites

Follow the pre-requisite steps described in the document: **00-BYOPAS Labs Overview.pdf**, that is included in the lab package. Before beginning this lab, confirm that you have provisioned an environment where you will save your apps, flows and database entities.

About Power BI

[Power BI](#) is a suite of business analytics tools that deliver insights throughout your organization. In this lab, we will be using Power BI to visualize data from the device procurement process. Power BI can connect to hundreds of data sources and prepare the data for use. In this lab, you will be using the Dataverse and the Excel connectors.

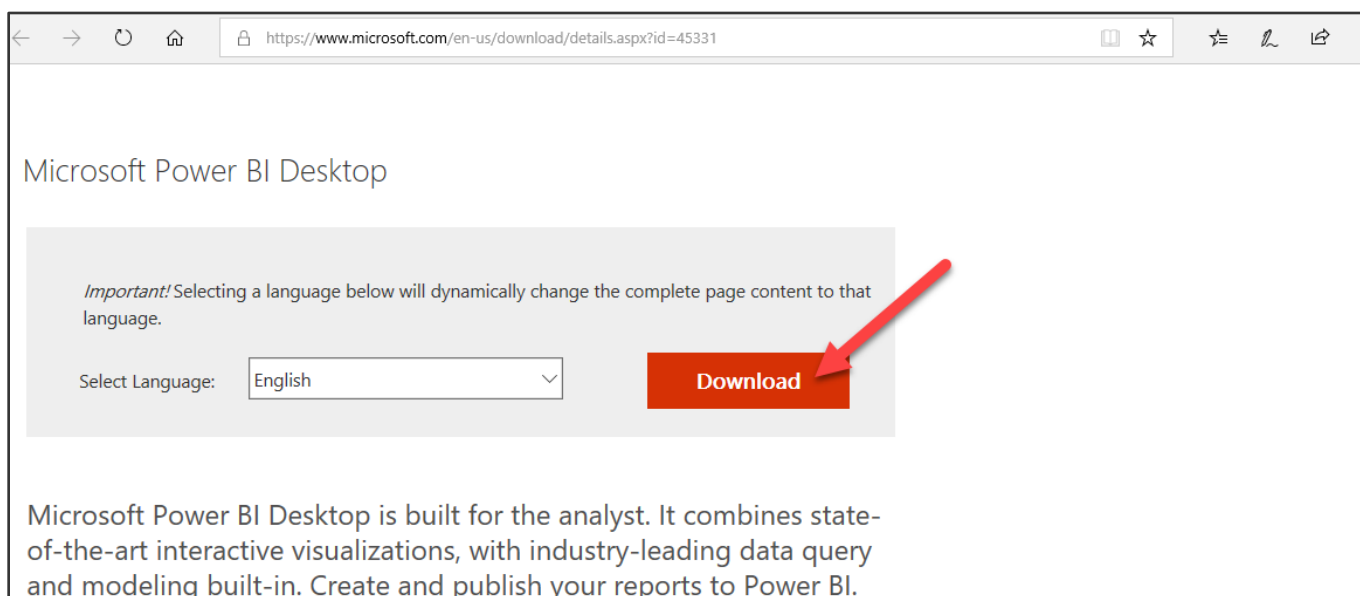
Exercise 1: Install Power BI Desktop

In this exercise you will install the Power BI Desktop application. **If you already have the application installed, you may skip to Exercise 2.**

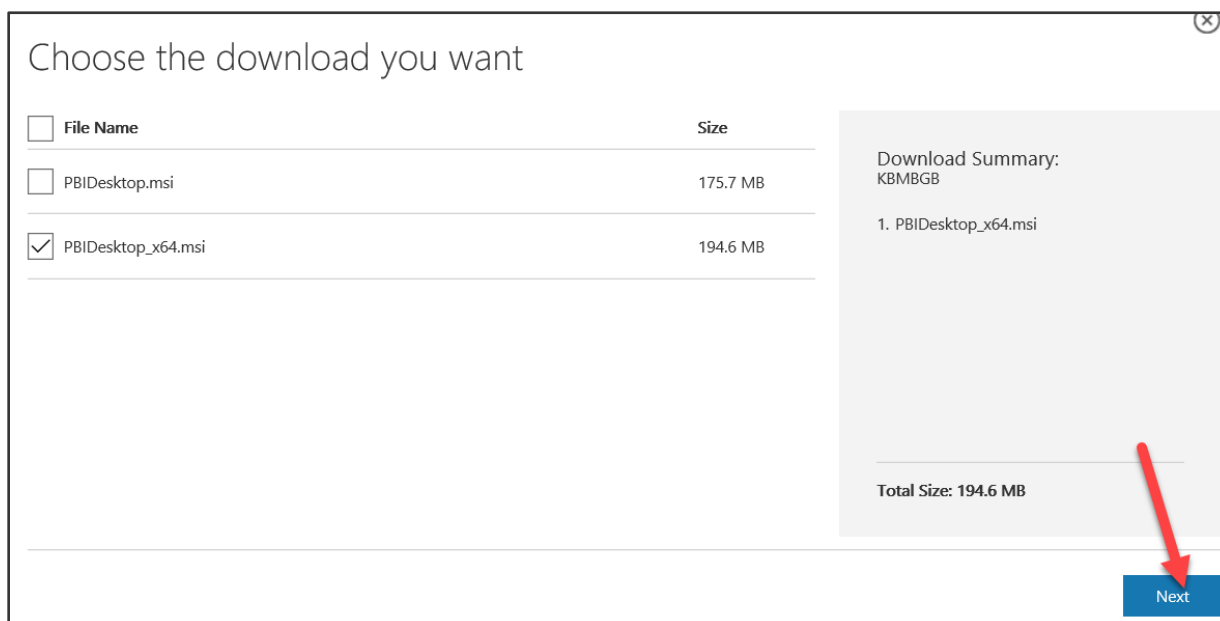
Task 1: Download and install Power BI Desktop

In this task, you will download and install Power BI Desktop.

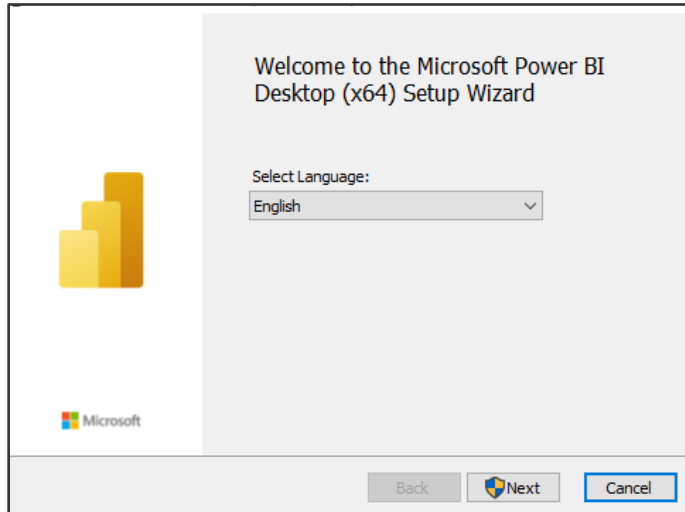
1. Navigate to [Power BI Installer](https://www.microsoft.com/en-us/download/details.aspx?id=45331) and click **Download**.



2. Select the appropriate version for your computer and click **Next**.



3. Click **Open**.
4. Click **Next**.



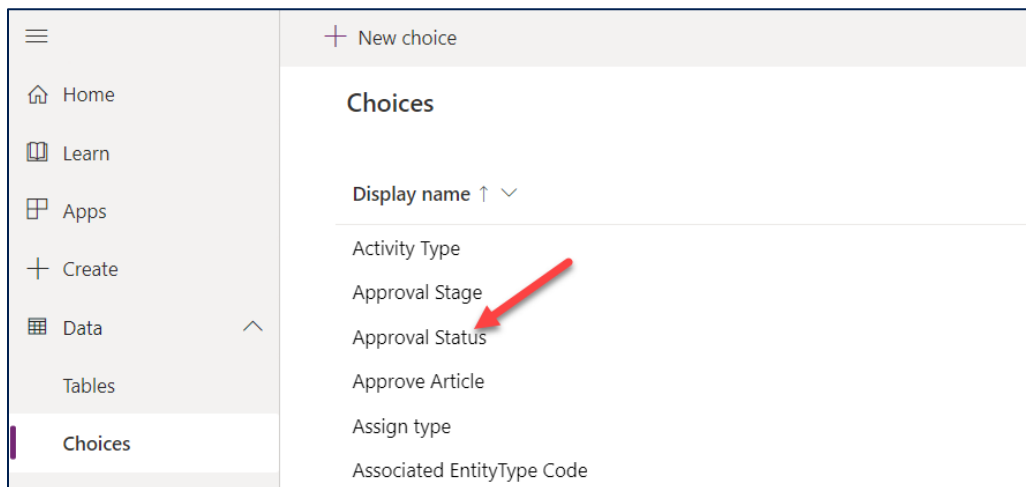
5. Follow the installation wizard and complete the installation.

Exercise 2: Import historical data

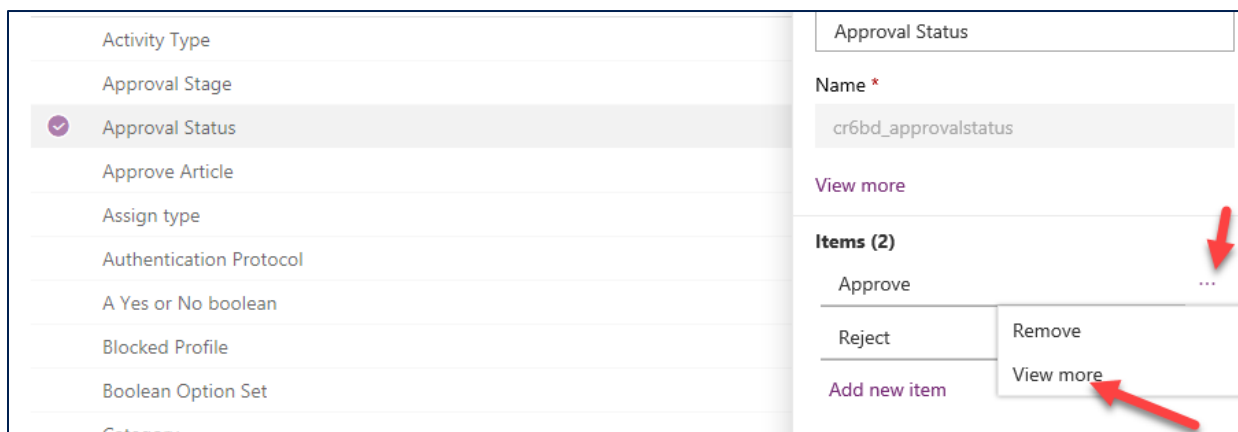
Task 1: Import past orders into Dataverse

Since you probably only input four or five device orders when testing the PowerApp you built in the prior modules we need more test data to report on. To make the Power BI Analytics more interesting we need some additional data. In this task you will be importing some historical orders into the Dataverse Orders table.

1. From [Make Power Apps](#) and make sure you are in the correct environment.
2. Expand **Data**, select **Choices** and click on the **Approval Status**.



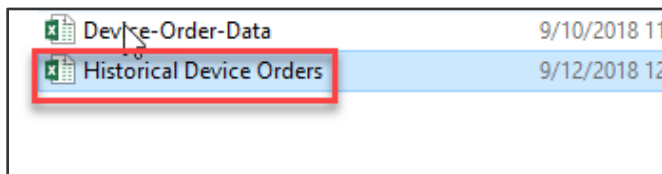
3. Click the ... button of the **Approve** choice and select **View more**.



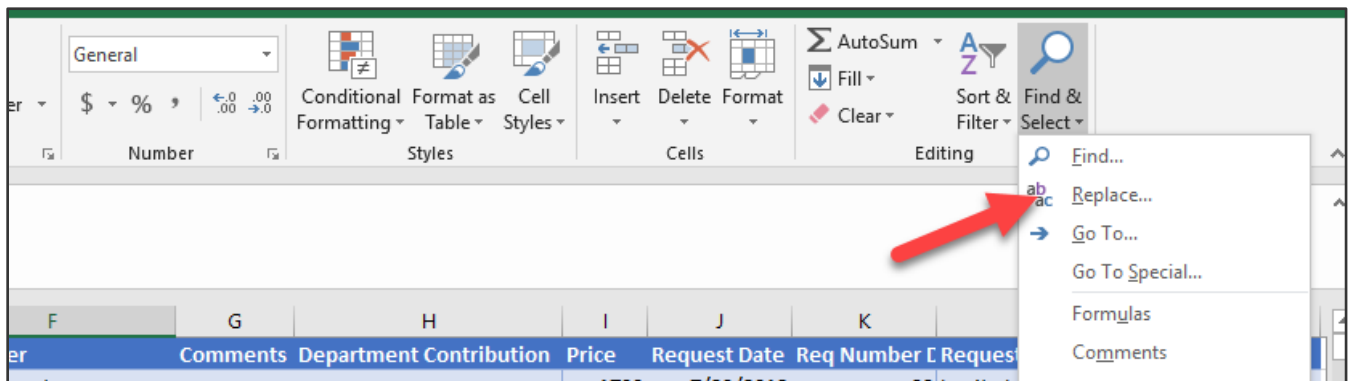
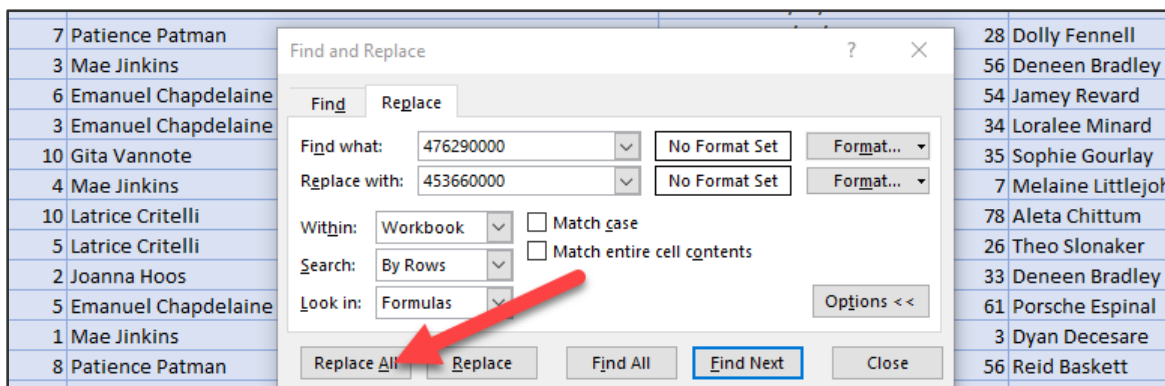
4. Copy the **Value**.

The screenshot shows the 'Approval Status' configuration screen. On the left is a list of activity types, with 'Approval Status' selected. On the right, the configuration details for 'Approval Status' are shown. The 'Name' field is 'cnc69_approvalstatus'. The 'Items' list contains 'Approve'. The 'Value' field is highlighted with a red box and contains the value '453,660,000'. Below the 'Value' field are 'Save' and 'Cancel' buttons.

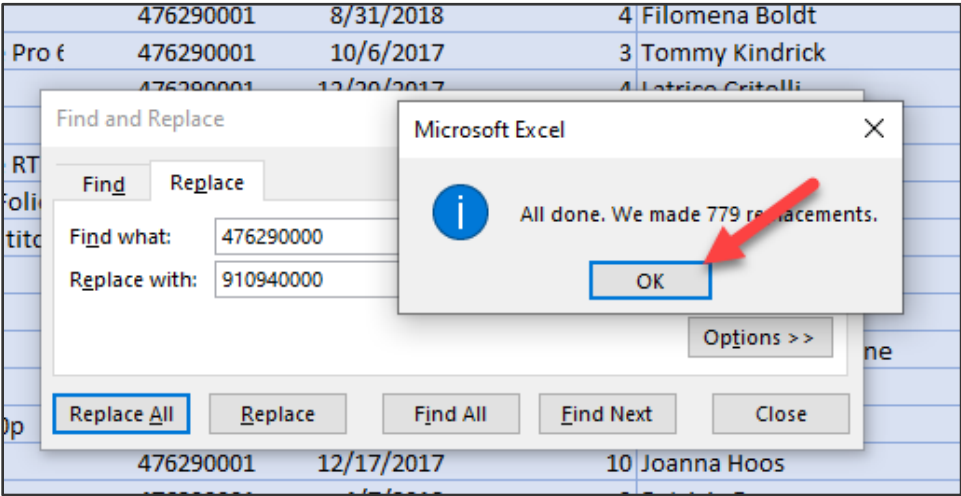
5. Go to the resources folder of the module and open the Historical Device Order Excel file



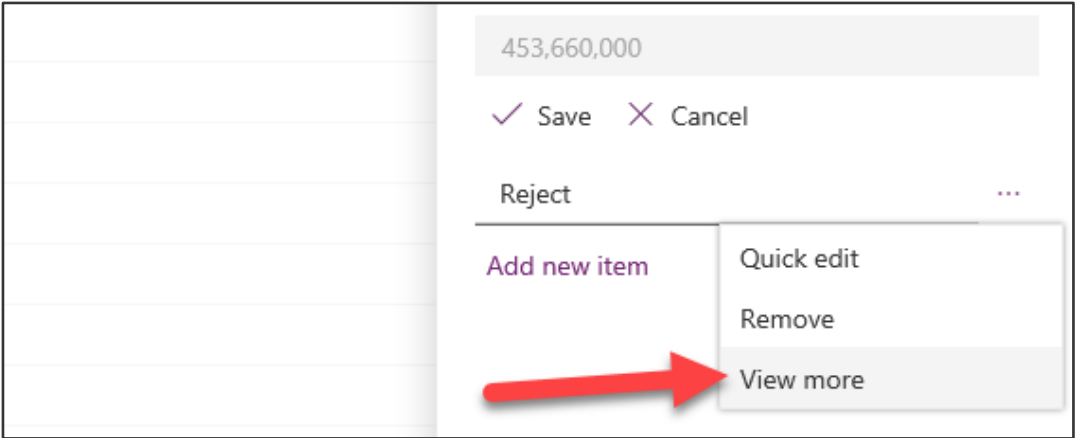
6. Click Find and select Replace.

7. Enter **476290000** for Find, type the Value you copied (without the commas) in the Replace field, and click **Replace All**.

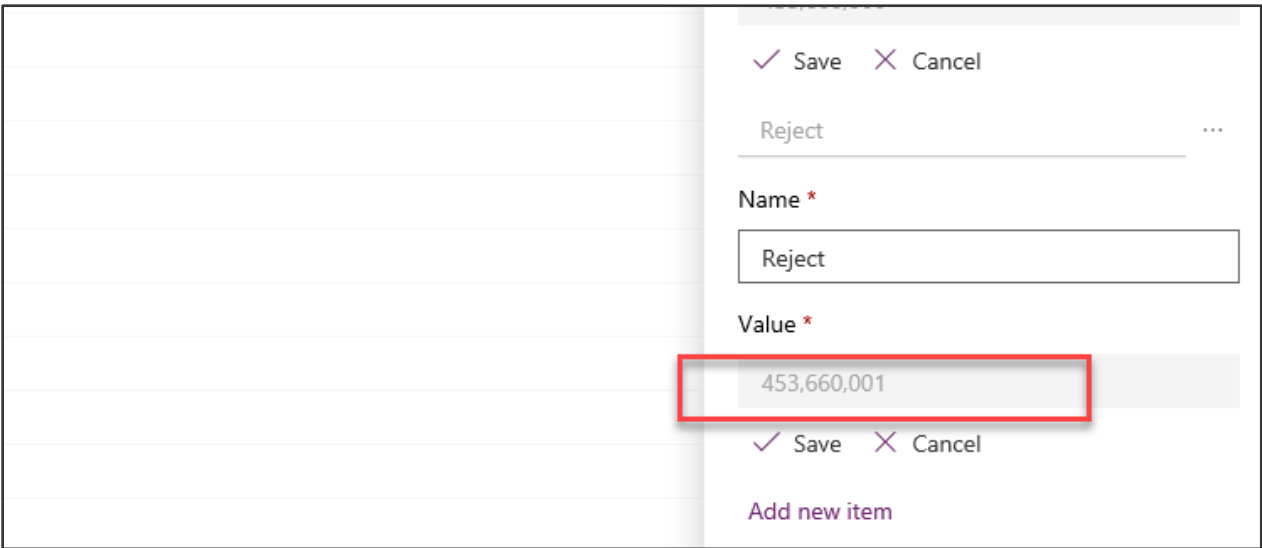
8. Click **OK**.



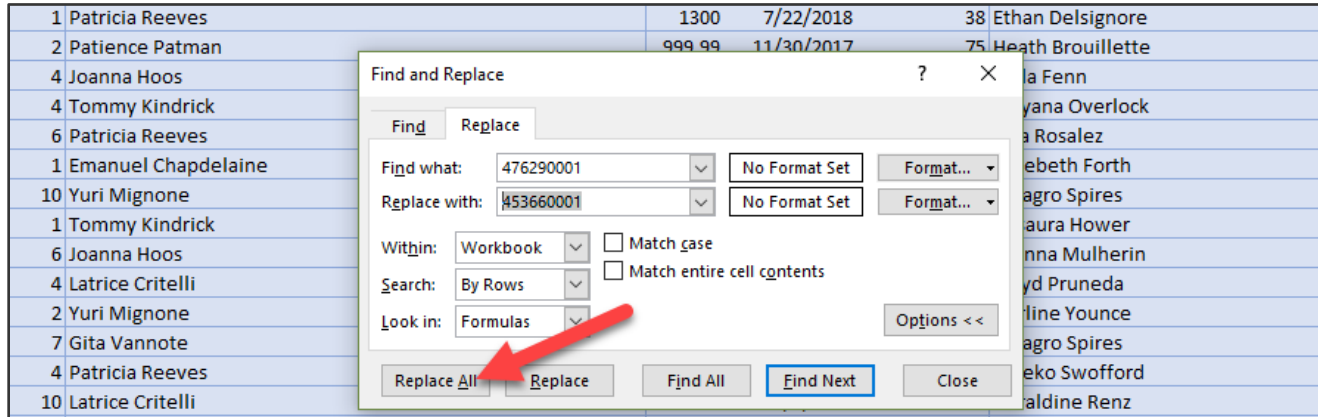
9. Go back to Power Apps, click on the ellipses button of the **Reject** option, and select **View more**.



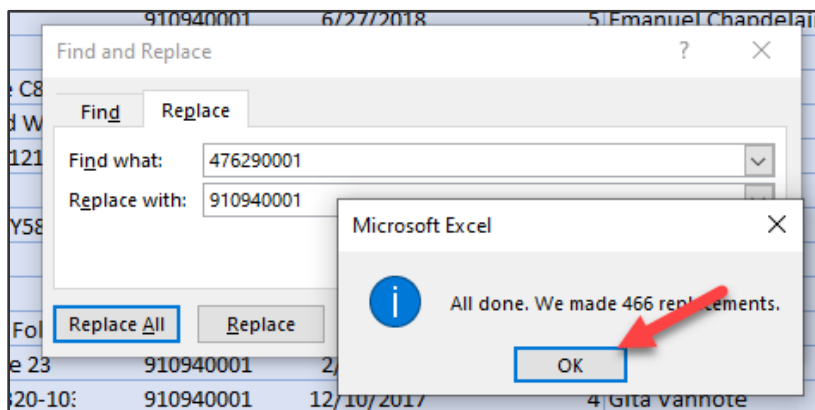
10. Copy the **Value** again.



11. Go back to the Excel file, type **476290001** on the find field, the value you copied (without the commas) in the replace field, and click **Replace All**.



12. Click **OK**.



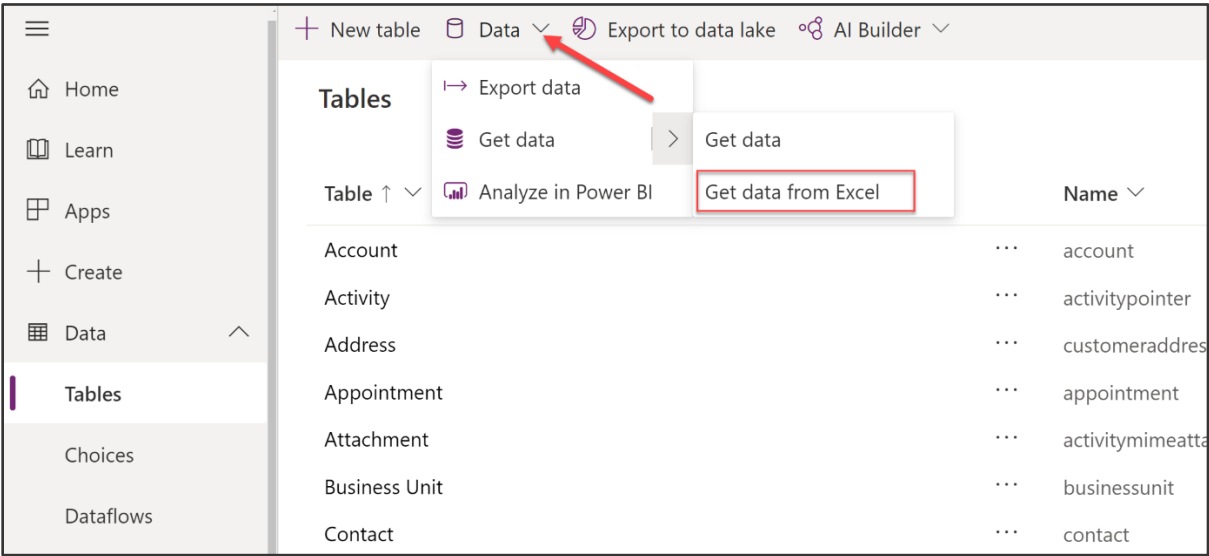
13. Close the Find and Replace dialog.
14. Save the Excel file and close it.

Note: The reason we are doing this is due to each environment having a unique publisher prefix, when you created your solution the values of the option set are prefixed based on that value. Currently the import process we are going to use requires the numeric value and not the label value so it must be adjusted.

15. Go back to the Power Apps and close the Choice editor window.



16. There are many options available to get data into Dataverse. We are going to import from an Excel file. Select **Tables** click **Data** then **Get Data** and select **Get Data from Excel**.



17. Scroll down the list of tables and choose **Device Order**

Data Map	Standard
✓ Device Order	Custom
Device Procurement Process	Custom

18. Scroll back up and in the upper right corner click **Next**



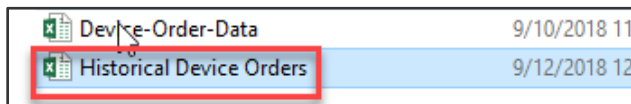
19. Click **Upload** to open the file browser

Import data

Choose the file you want imported for each entity, and we'll map the fields that match. [Learn more](#)

Name	File	Mapping status
Device Order	<div>File not uploaded</div> <div>Upload</div>	Not mapped

20. Select the **Historical Device Orders** Excel file.



21. After the file upload is complete it will show mapping errors, Click **Map columns**

Import data

Choose the file you want imported for each table, and we'll map the columns that match. [Learn more](#)

Device Order ↑ Upload ⚠ Mapping errors exist Map columns

22. Map the following fields

Device Order columns	Source values
Approval Status Value	Approval Status
Approved Date	Approved Date
Approver	Approver
Comments	Comments
Device Name	Device Name
Price	Price
Process ID	Select None to un map
Request Date	Request Date
Requested By	Requested By

23. Change the Show: dropdown to **Mapped fields** to show only the columns you have mapped. Confirm your list matches the list show in the image.

Field mappings for Device Order

Filter by entity field name: **Show:** Mapped fields Entity field filter has been applied

Device Order fields	Source values
Approval Status Value	Approval Status
Approved Date	Approved Date
Approver	Approver
Comments	Comments
Device Name *	Device Name
Price	Price
Request Date	Request Date
Requested By	Requested By

24. Confirm that Process Id is NOT mapped to Approved Date, if it is then un map it by selecting None.

Import Sequence Number	Not set
Owning Business Unit	Not set
Price (Base)	Not set
Process Id	Not set
Send Survey	Not set
Stage Id	Not set

25. Click **Save changes** to proceed. You may still have an Error and a Warning that is ok

Cancel **Save changes**

Field mappings for Device Order

Filter by entity field name: Show: **Entity field filter has been applied**

Device Order fields	Source values
Approved Date	Approved Date

26. Click **Import** to begin the import of the historical data

Import

Import data

Choose the file you want imported for each entity, and we'll map the fields that match. [Learn more](#)

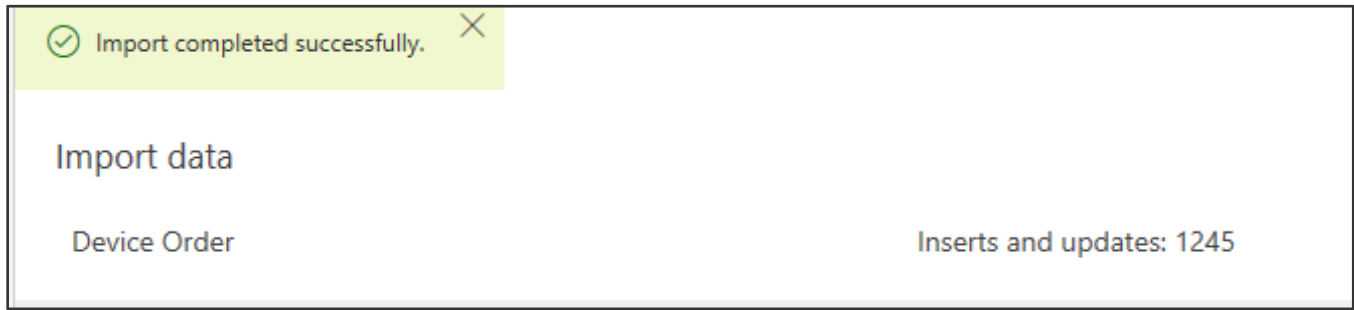
Name	File	Mapping status
Device Order	<input type="text" value="Historical Device Orde..."/>	<input type="button" value="Upload"/> <input type="button" value="Mapping warnings exist"/> <input type="button" value="Map fields"/>

27. This should take a couple of minutes to complete – while processing you should see the following

Import data

Importing your data...

28. Once the import has completed you should see the following



29. If for some reason the import wasn't successful, download the log file and review. Most common cause is an improper mapping of a column type. If that happens just start this task again as it doesn't retain your mappings.

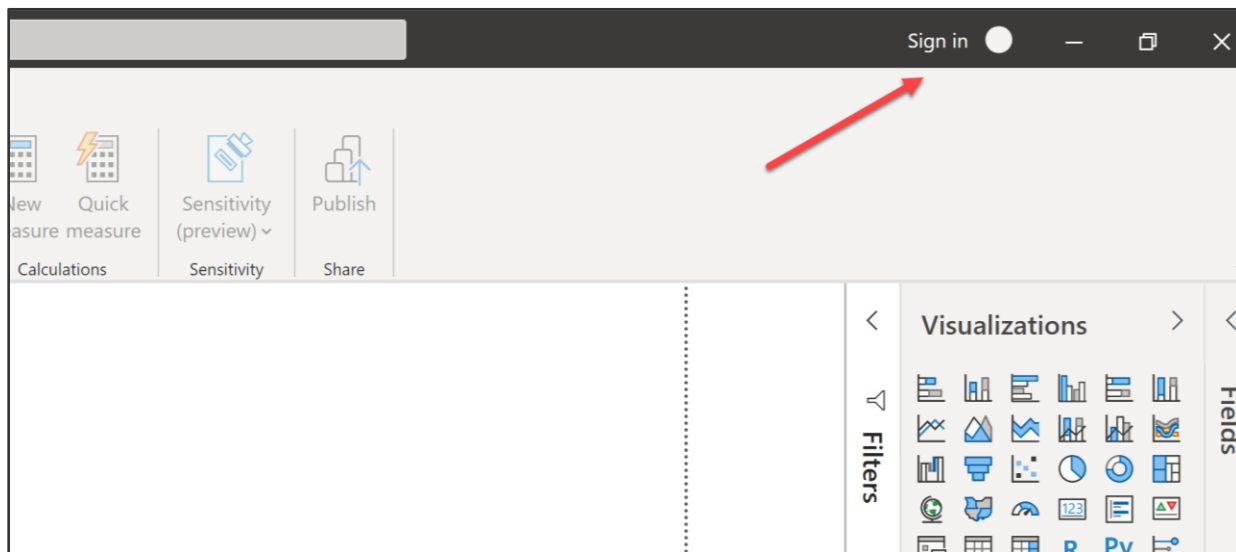
Exercise 3: Connect and reference data

In this exercise, you will connect to the Dataverse using a connector. You will then be referencing the data from the device procurement process that you will use to build the visualizations. This includes selecting only the data that is useful to help have an easy-to-use data set to work with.

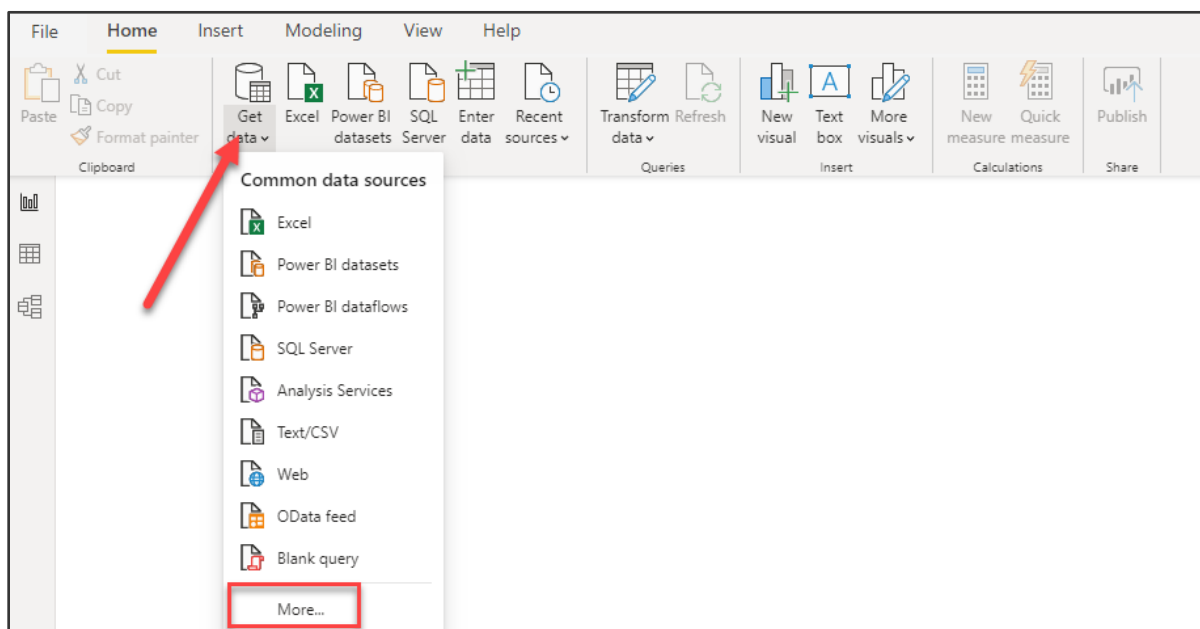
Task 1: Connect Power BI to the Dataverse Data

In this task, you will get data from your Dataverse.

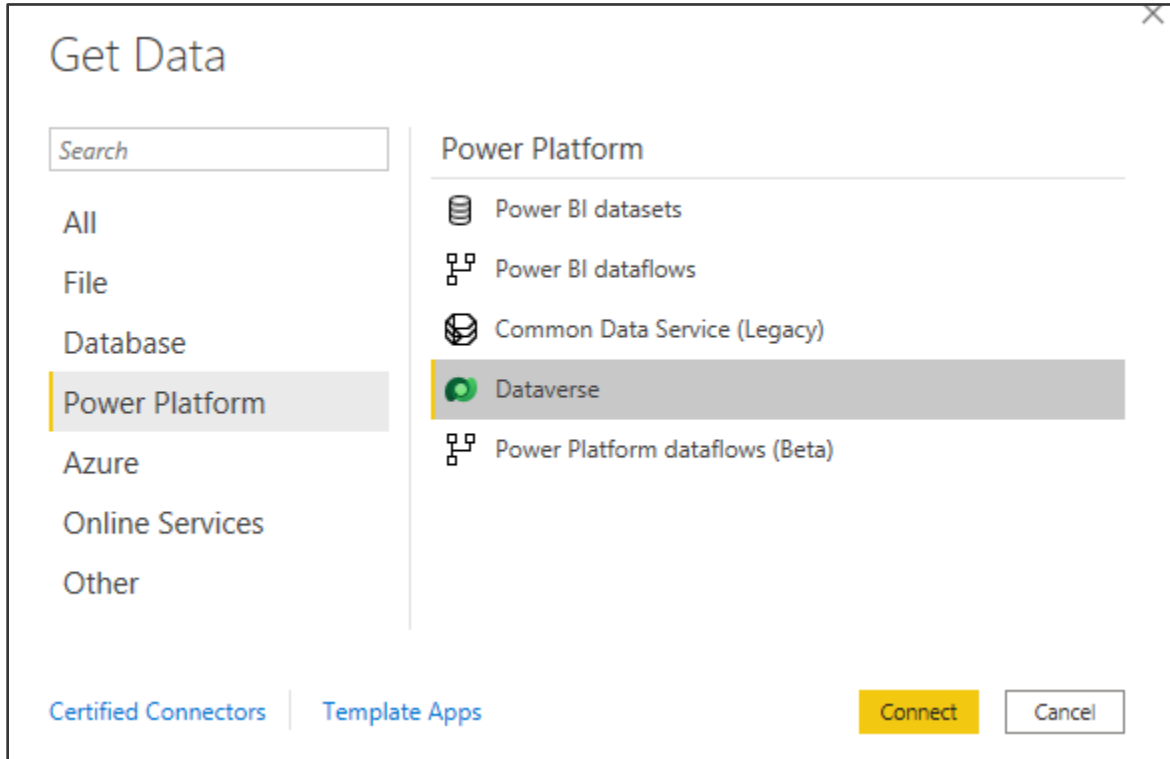
1. Start **Power BI Desktop** application. Exit out of the pop up screen and click **Sign In**.



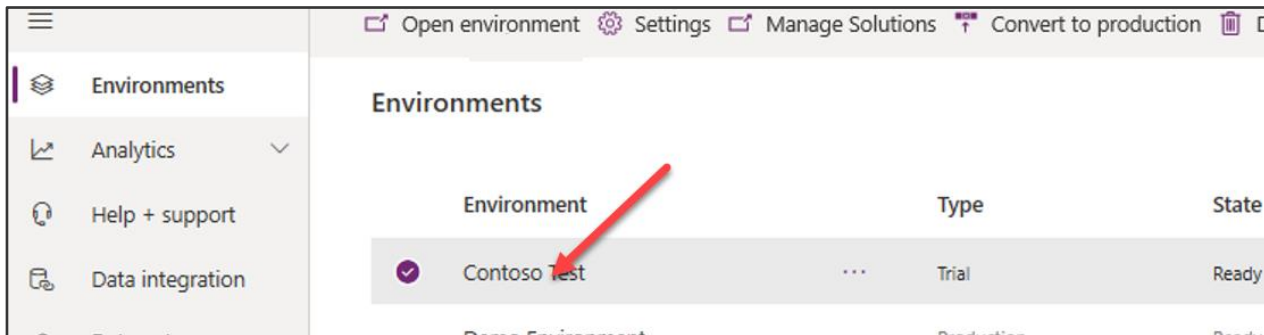
2. Provide your credentials and sign in.
3. Click **Get Data** and select **More...**



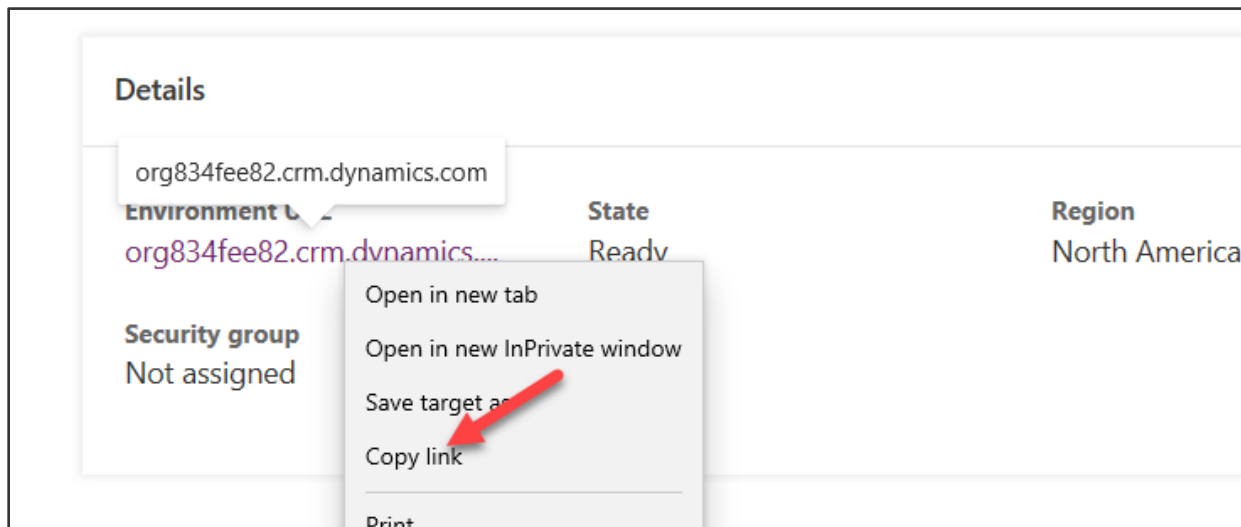
4. Select **Power Platform**.
5. Select **Dataverse** click **Connect**.



6. Navigate to [Admin Power Platform](#) and select Environments.
7. Click to open your environment.



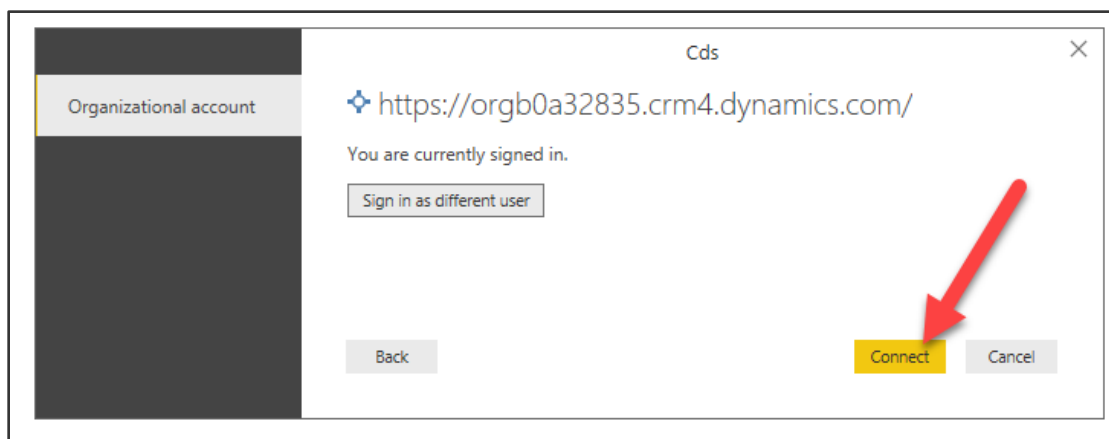
8. Right click on the **URL** and copy the link



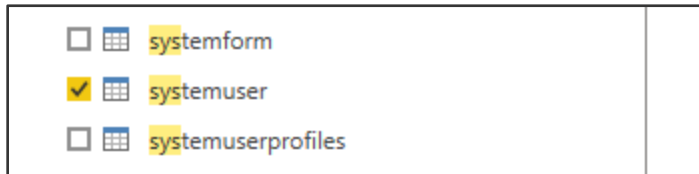
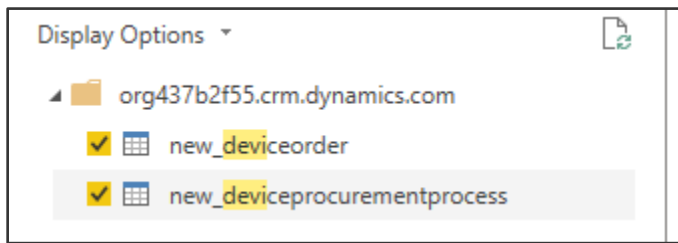
9. Go back to Power BI Desktop, paste the **URL** you copied without the **https://** part into the **Environment domain**, and click **OK**.



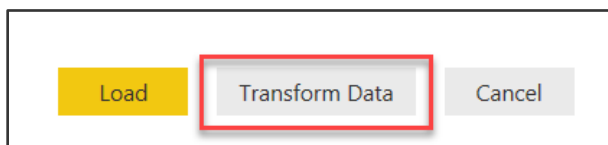
10. If you are prompted to sign in, click **Sign in** and provide your credentials.
 11. Click **Connect**.



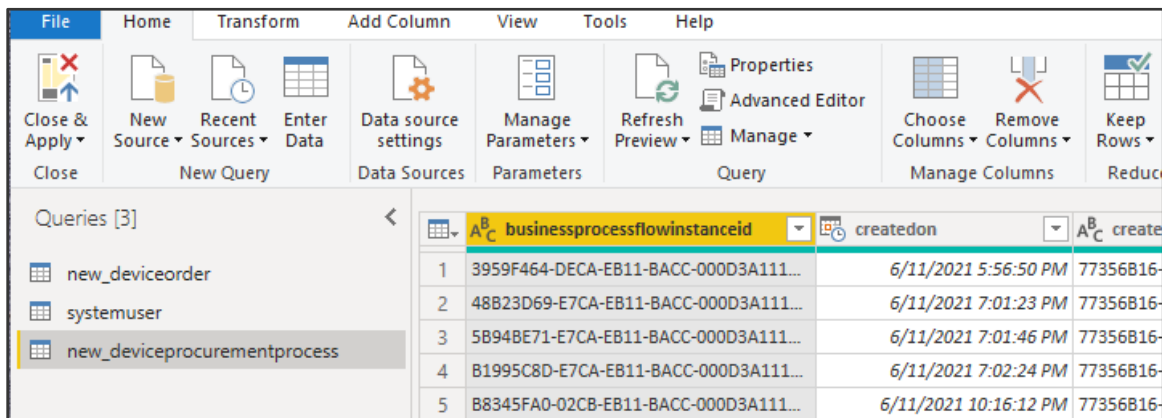
12. Select **new_deviceOrder**, **systemuser** and select **new_deviceprocurementprocesses** Note: it will be in the format of <prefix>_DeviceOrder where the prefix will be different in each environment.



13. Click **Transform Data**



14. Your data will now be available in the Power Query Editor.

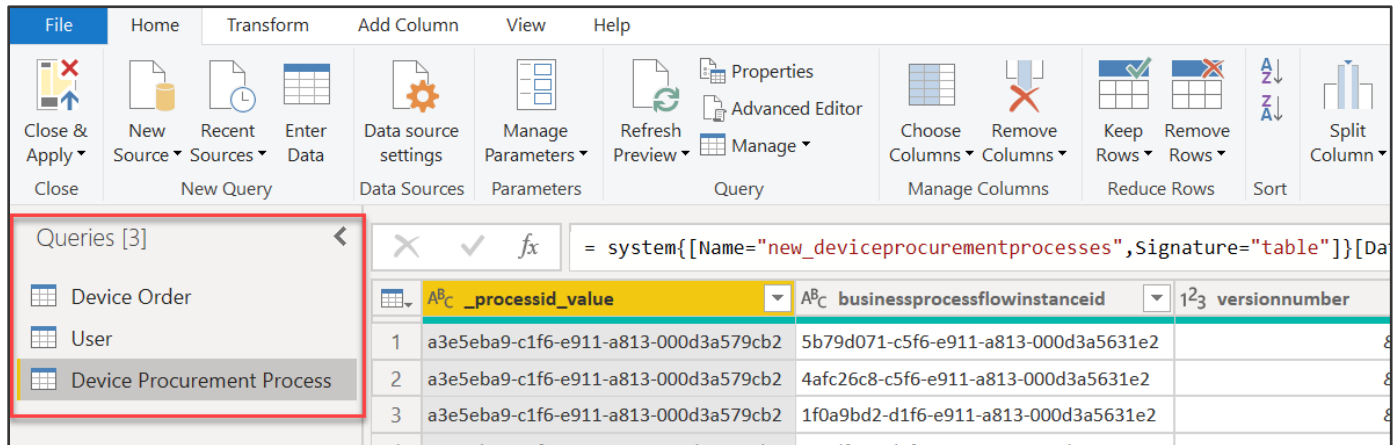


Task 2: Clean up and Transform

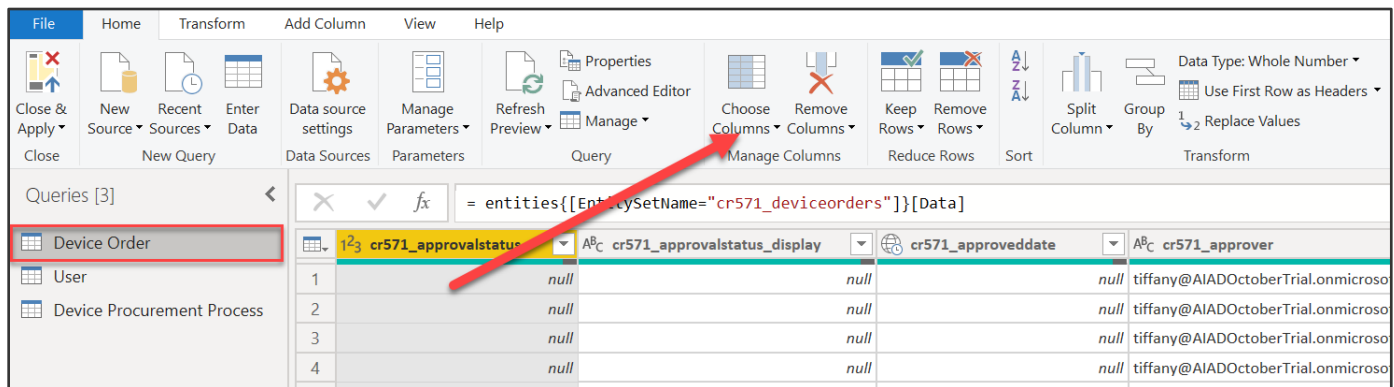
1. Right click on the **systemuser** table and click **Rename**.



- Rename the table from **systemuser** to **User**.
- Rename the **deviceorder** table to **Device Order** and the **deviceprocurementprocesses** to **Device Procurement Process**. Your table names will now look like the image below.



- Next, we are going to remove columns from our query on the Device Order table to make it fewer columns we need to work with.
- Select the **Device Order** table and click **Choose Columns**. *Alternatively, you can also select the column header in the grid while holding the Ctrl key and then select the columns, then right-click and select Remove Other columns.*



- Un check the **Select All Columns** checkbox.
- Select the columns listed below and click **OK**. Note: the action names will be in the format of <prefix>_<name>.

The following are the names

- Approvalstatus
- Approvalstatusname
- Approveddate
- Approver
- Departmentcontribution
- Devicename
- Deviceorderid
- Price
- Requestdate
- Requestedby

Choose Columns

Choose the columns to keep

A Z

- ☒ new_devicename
- ☐ processid
- ☐ stageid
- ☐ traversedpath
- ☒ new_approvalstatus
- ☒ new_approvalstatusname
- ☒ new_approveddate
- ☒ new_approver
- ☐ new_capitalapproved
- ☐ new_capitalapprovedname
- ☐ new_comments
- ☐ new_deviceconfigured
- ☐ new_deviceconfiguredname
- ☐ new_devicedelivered
- ☐ new_devicedeliveredname
- ☐ new_devicereceived
- ☐ new_devicereceivedname
- ☐ new_estimatedshipdate
- ☒ new_price
- ☐ transactioncurrencyid

OK Cancel

8. Right click on the **Approvalstatusname** column header and click **Rename**.

123 new_approvalstatus	A ^B new_approvalstatusname	A ^B new_approver
100000000	Approve	labadmin2@m365x
100000000	Approve	labadmin2@m365x
null		labadmin2@m365x
100000001	Reject	labadmin2@m365x
100000001	Reject	Gita Vannote
100000001	Reject	Tommy Kindrick
100000001	Reject	Filomena Boldt
100000001	Reject	Tommy Kindrick
100000001	Reject	Yuri Mignone
100000001	Reject	Mae Jinkins
100000001	Reject	Mae Jinkins

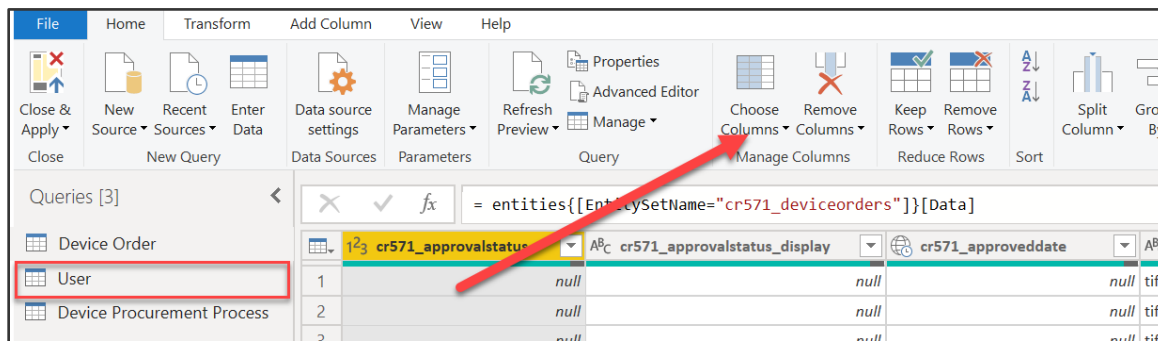
9. Rename the column **Approval Status**.

123 cr571_approvalstatus	A ^B Approval Status	cr571_approveddate
1	null	null
2	null	null
3	null	null
4	null	null
5	322730000 Approve	10/25/2019 3:00:29 AM +00:00
6	322730001 Reject	10/25/2019 3:00:33 AM +00:00

10. Rename the rest of the columns as shown below. You may rename other columns if you have time but not required for the lab.

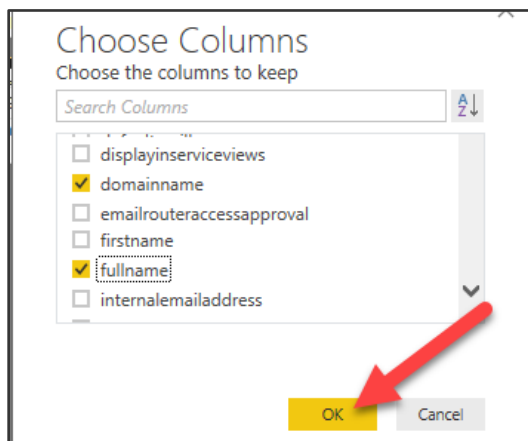
Current Name	New Name
approvalstatus	Approval Status ID
approveddate	Approved Date
approver	Approver
departmentcontribution	Department Contribution
devicename	Device Name
deviceorderid	Device Order
price	Price
requestdate	Request Date
requestedby	Requested By

11. Select the **User** table and click **Choose Columns**.



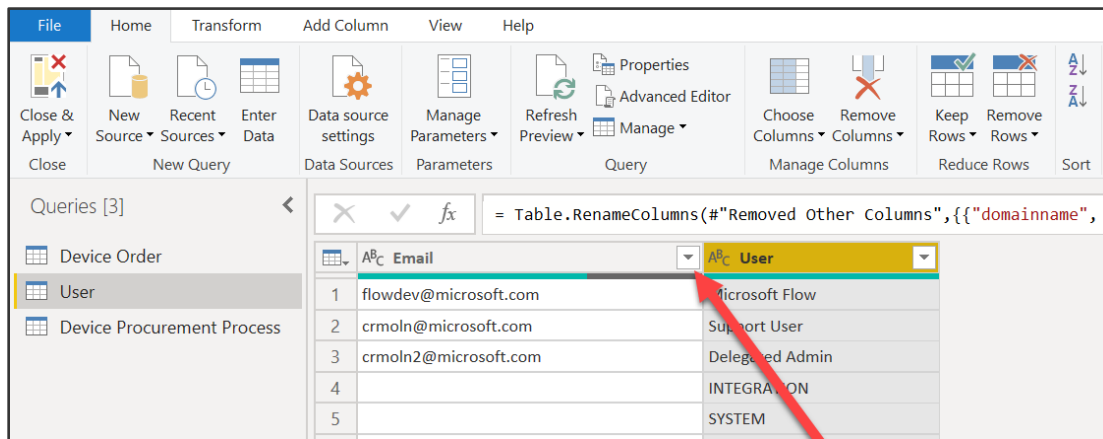
12. Uncheck Select All Columns

13. Select **domainname**, **fullname** and click **OK**. Tip: Using Search can speed up finding the columns.

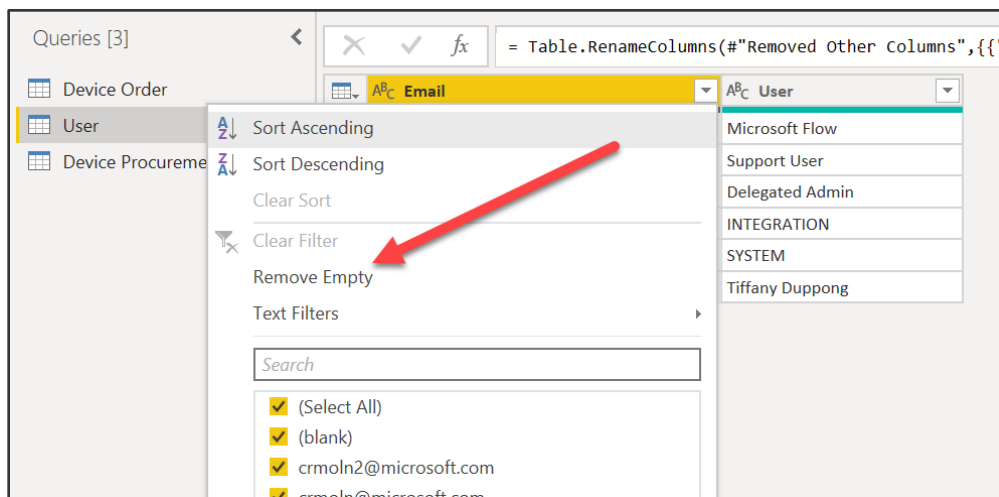


14. Rename the **domainname** column to **Email** and the **fullname** column to **User**.

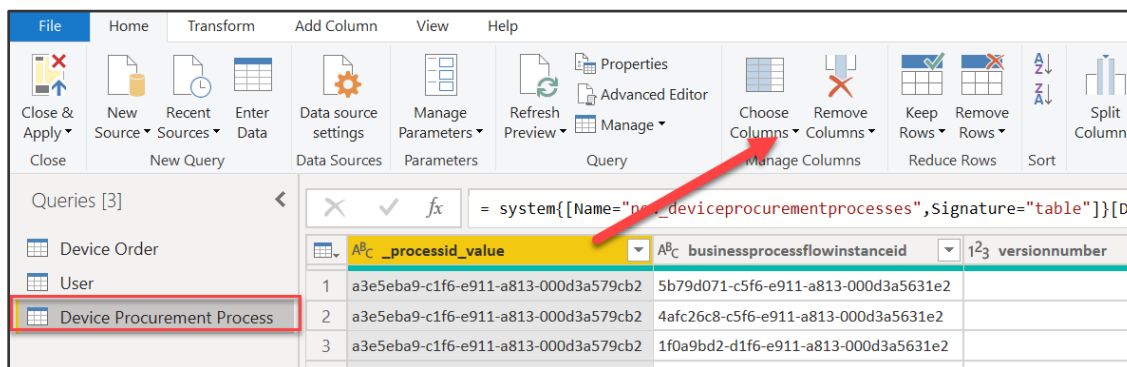
15. Click Sort on the **Email** column.



16. Click **Remove Empty**.



17. Select the **Device Procurement Process** table and click **Choose Columns**.



18. Uncheck **Select All Columns**.

19. Select the columns listed below and click **OK**.

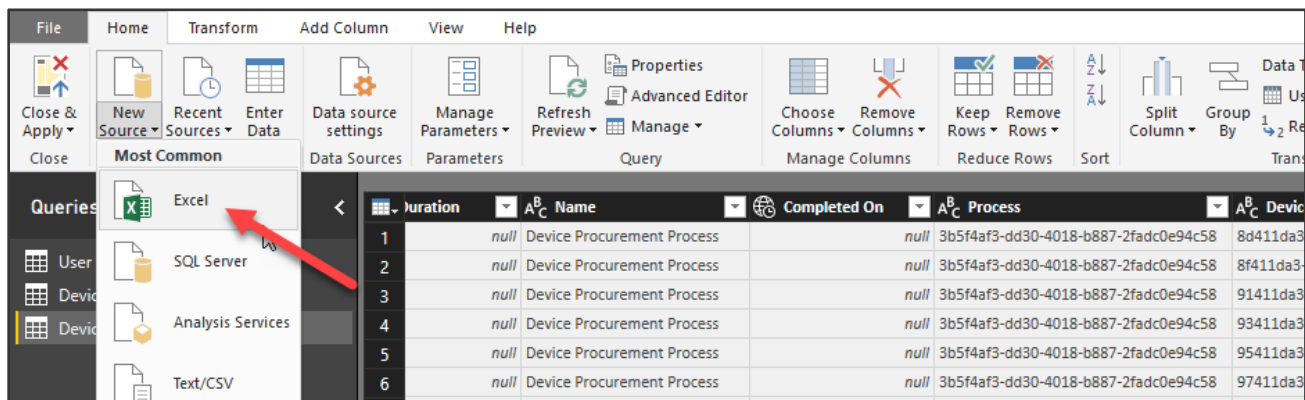
- bpf_name
- processid
- completedon
- businessprocessflowinstanceid
- bpf_new_deviceorderid (Note: the new might be different in your list)
- Activestageidname

20. Rename the columns as shown below. You may rename the other columns.

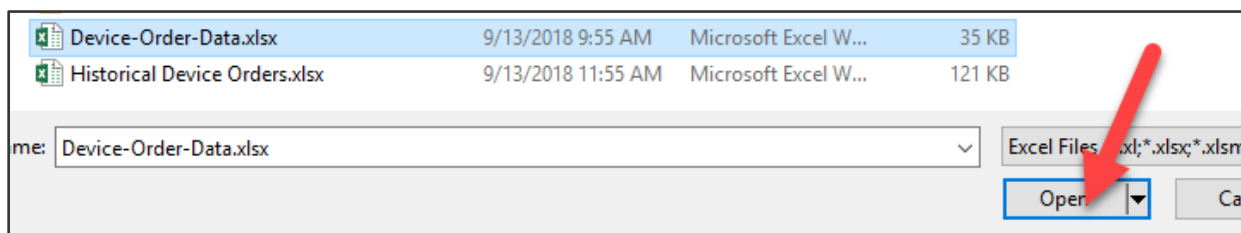
Current Name	New Name
bpf_name	Name
processid	Process
businessprocessflowinstanceid	Device Procurement Process
bpf_new_deviceorderid (Note: the CRC69 might be different in your list)	Device Order
activestageidname	Active Stage
completedon	Completed On

Task 3: Add Device Manufacturer Data

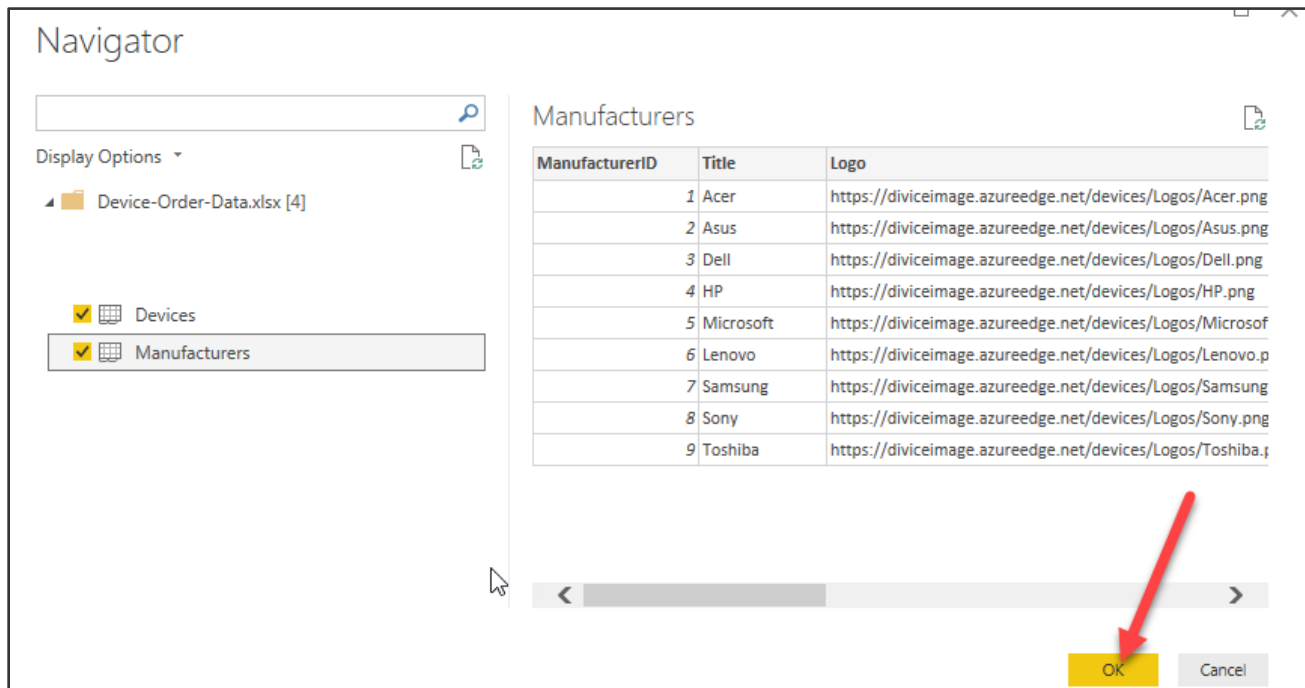
1. Select the Home tab, click **New Source**, and select **Excel**.



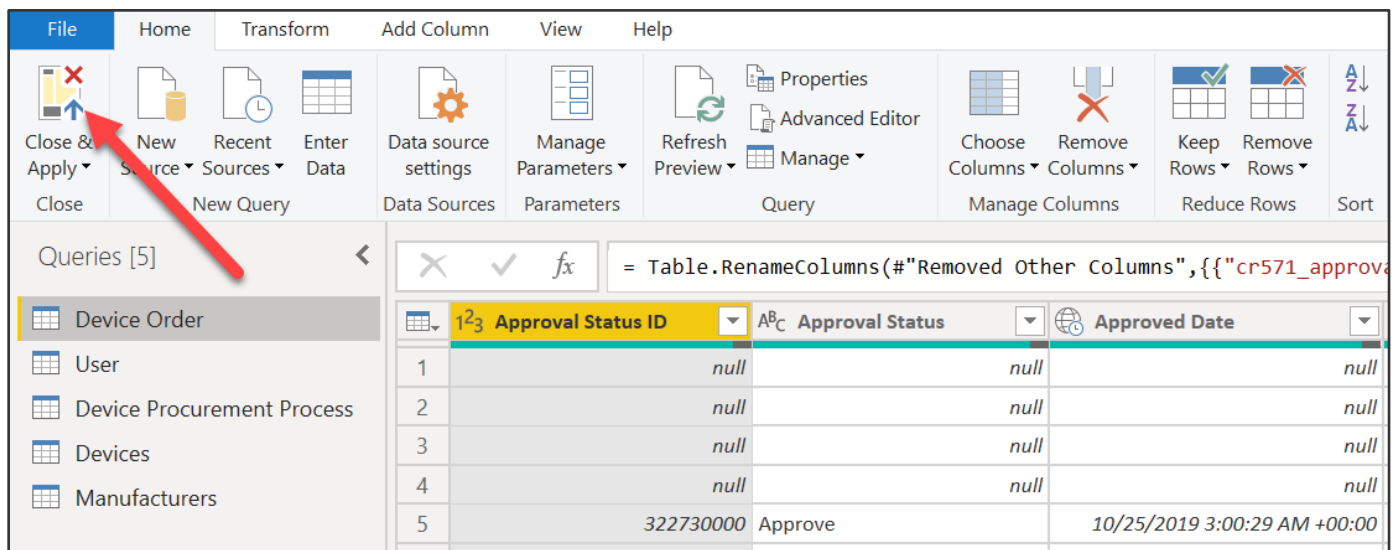
2. Select the Device Manufacturer Data (**Device Order Data.xlsx**) file provided to you and click Open.



3. Select the **Devices** and **Manufacturers** tables and click **OK**.

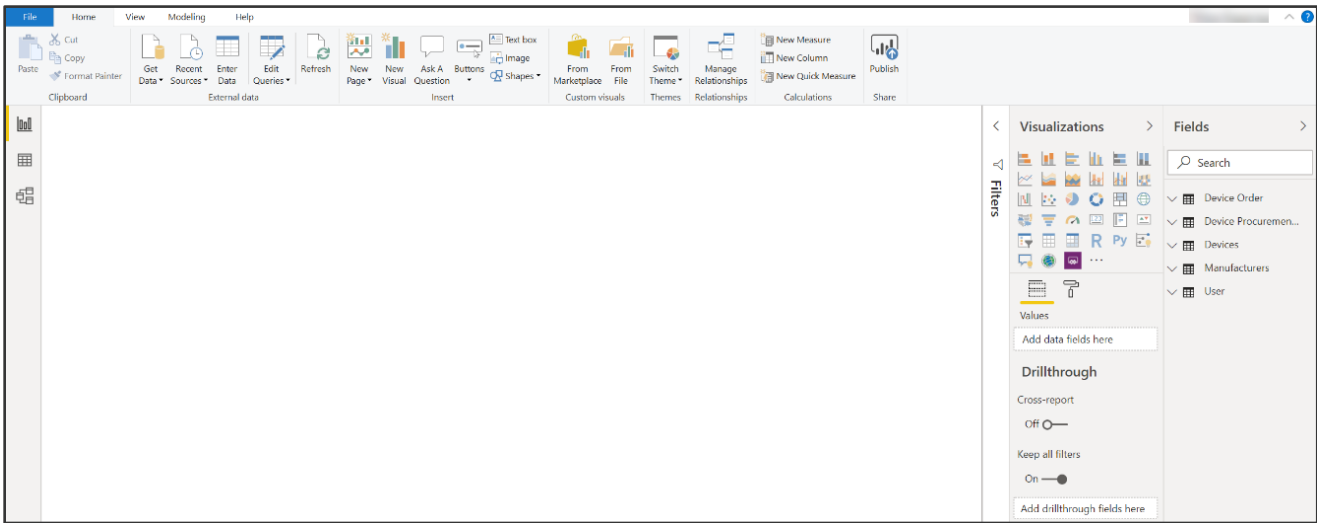


4. Click **Close and Apply**.



Note: Power Query has a lot of powerful transformations that can be done including trimming, replacing values, transpose, change data type, and many more. Each of these transformations are built as an M query that is applied each time you refresh the data. You can see the query that is built by clicking on the Advanced Editor button.

5. The Power Query editor will close, and you will be back on the Power BI Desktop.

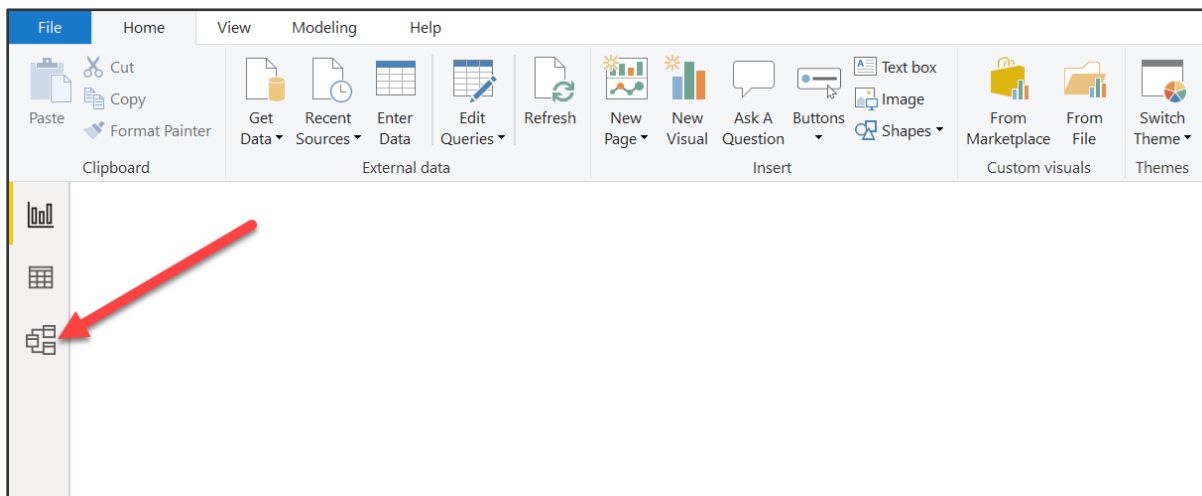


Exercise 4: Setup Relationships and Calculated Columns

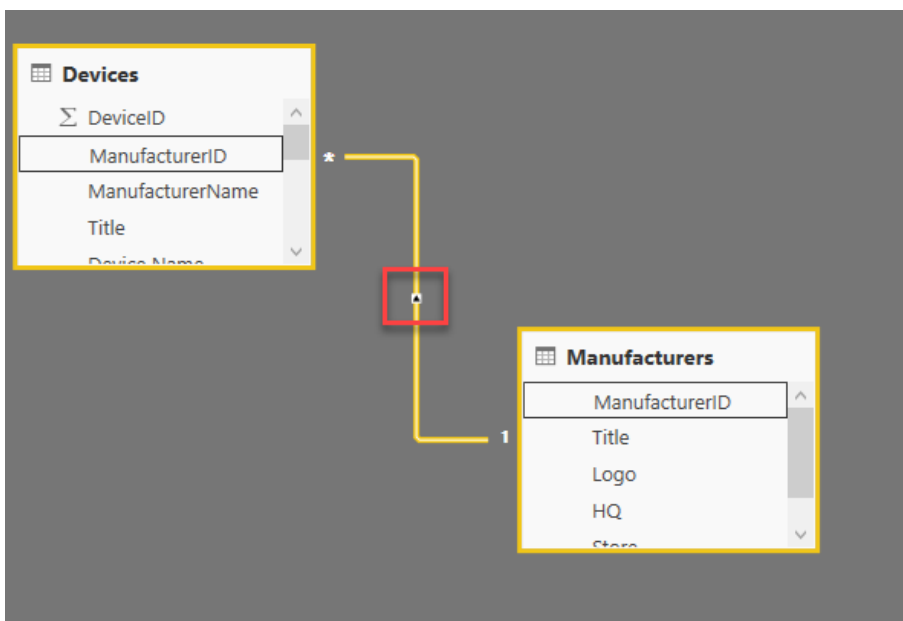
Task 1: Manage Relationships

In this task, you will establish the relationships between the data. You will notice auto detection identifies a couple of relationships within the data. In this task you will be establishing the remaining relationships.

1. Select **Relationships** from the left side navigation.



2. Double click the **Devices to Manufacturers** autodetected relationship, this action will load the Edit relationship page. Here you can see the settings on the relationship and make any changes that was required to existing relationships.



3. Click **Cancel** to close the page.

Edit relationship

Select tables and columns that are related.

Devices

DeviceID	ManufacturerID	ManufacturerName	Title	Device Name	DeviceType	Price	Proc
1	1	Acer	Aspire U	Acer - Aspire U	All in one	1899.99	Intel Core i5-
2	1	Acer	Aspire M	Acer - Aspire M	Ultrabook	699.99	Intel Core i5-
3	1	Acer	Aspire S3	Acer - Aspire S3	Ultrabook	628	Intel Core i3-

Manufacturers

ManufacturerID	Title	Logo	HQ
1	Acer	https://deviceimage.azureedge.net/devices/Logos/Acer...	https://deviceimage.azureedge.net/devi...
2	Asus	https://deviceimage.azureedge.net/devices/Logos/Asus...	https://deviceimage.azureedge.net/devi...
3	Dell	https://deviceimage.azureedge.net/devices/Logos/Dell...	https://deviceimage.azureedge.net/devi...

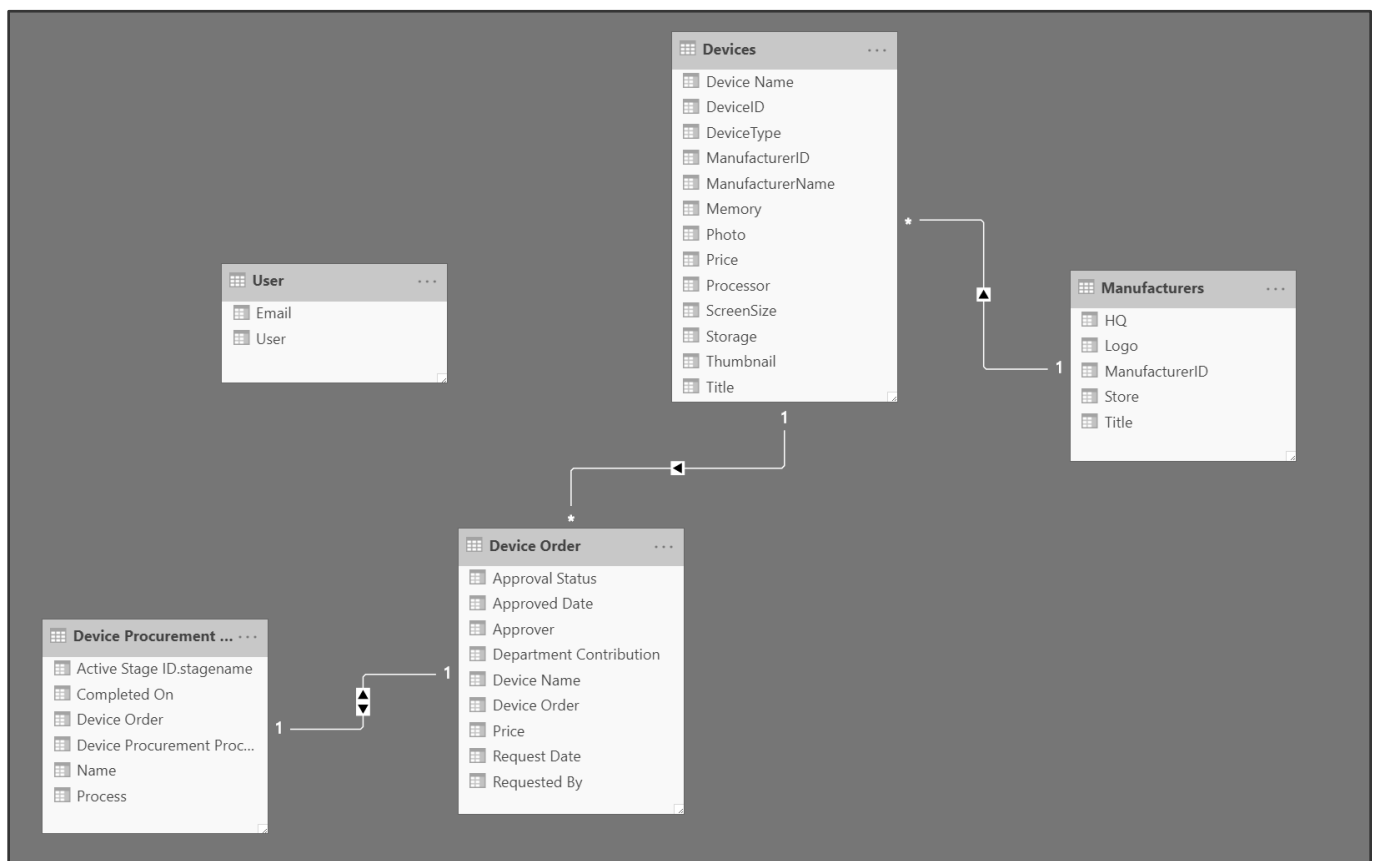
Cardinality: Many to one (*:1) Cross filter direction: Single

☒ Make this relationship active ☐ Apply security filter in both directions

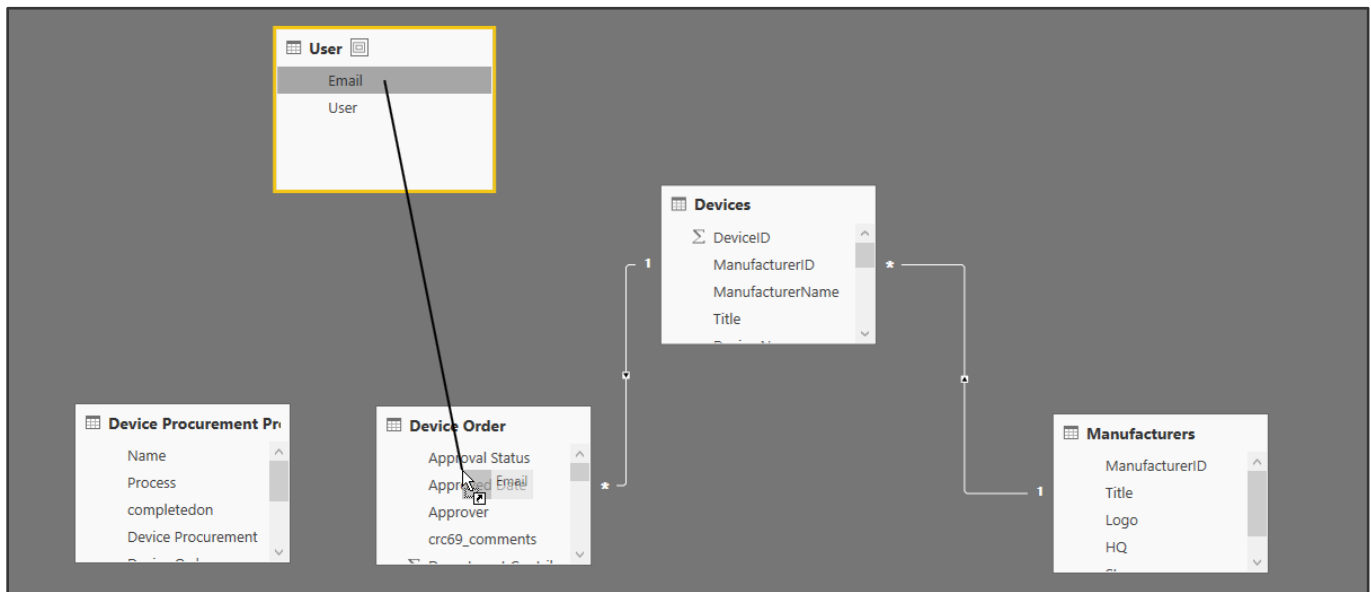
☐ Assume referential integrity

OK Cancel

4. Reposition the table as shown in the image below, so it will be easier to visualize the relationships. If you don't immediately see the User table, scroll left.



5. Drag the Email column of the **User** table to the **Device Order** table and release it.



6. A One to Many relationship will be created. Double click on the new relationship to edit the properties
7. Select **Requested By** from the **Device Order** table and **Email** from **User** table. Click **OK**. *Note: Yes the Requested By should also have e-mails in order for them to match, this is just different in the historical data you imported and won't impact your results in this lab.*

Device Order

	Estimated Ship Date	Price	Requested Date	Requested By	Capital Approved	Device Configured
0f992	7/29/2018 6:00:00 AM	999.99	7/5/2018 6:00:00 AM	Berenice Zarrella	False	Fal
0f992	11/20/2017 7:00:00 AM	999.99	10/25/2017 6:00:00 AM	Florencia Gee	False	Fal
0f992	6/14/2018 6:00:00 AM	999.99	5/27/2018 6:00:00 AM	Milagro Spires	False	Fal

User

Email	User
crm0ln@microsoft.com	Support User
crm0ln2@microsoft.com	Delegated Admin
bap_sa@microsoft.com	Business Application Platform Service account

Cardinality: Many to one (*:1)

Cross filter direction: Single

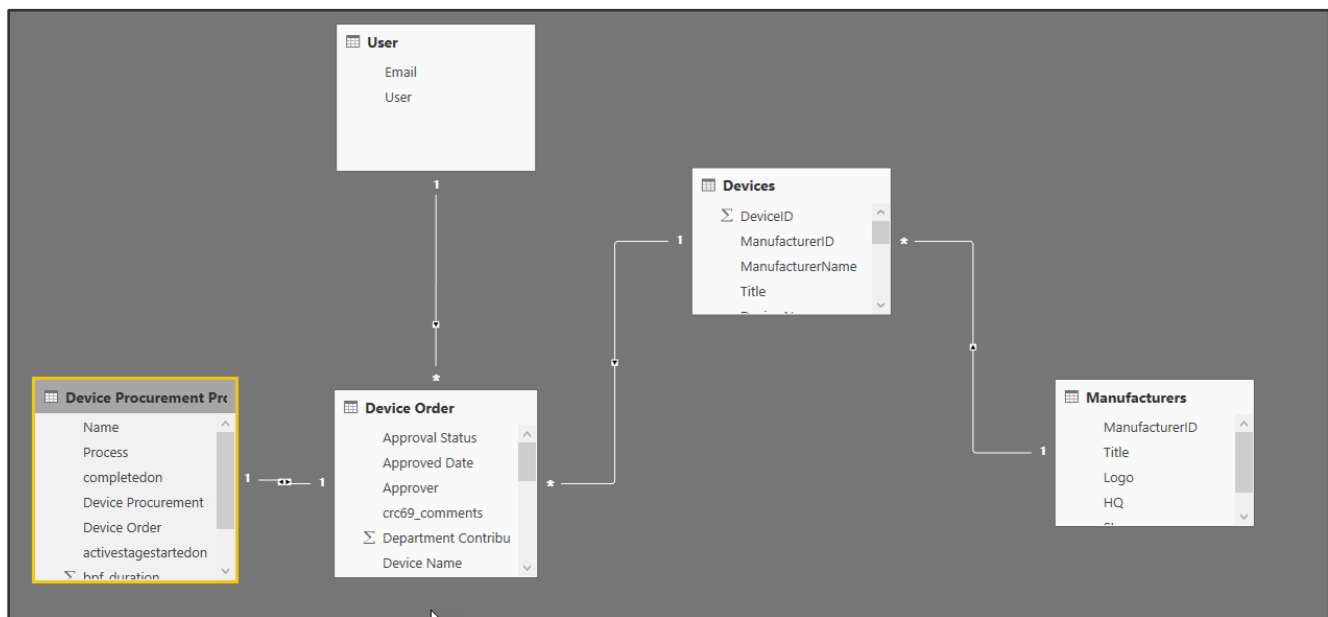
☒ Make this relationship active

☐ Assume referential integrity

☐ Apply security filter in both directions

OK Cancel

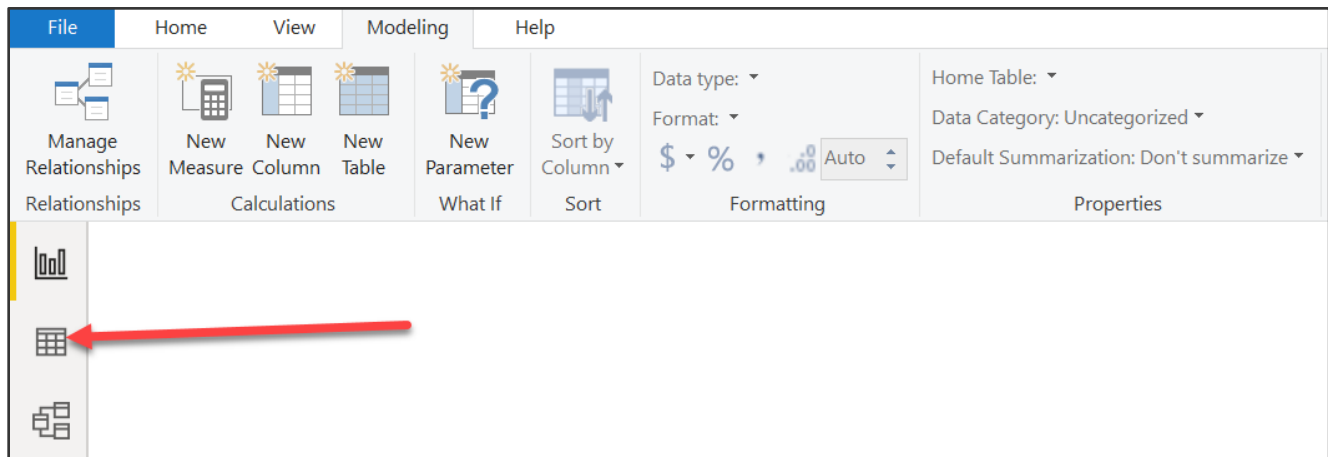
8. Your relationships will now look like the image below.



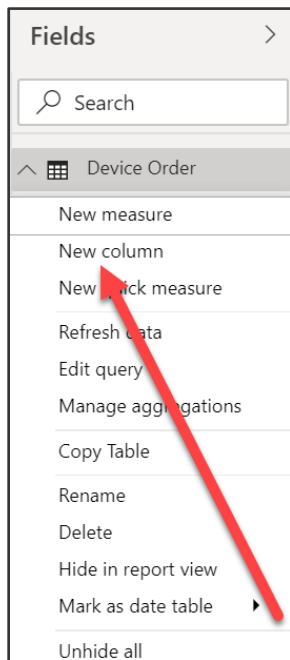
Task 2: Add Link to the Dataverse Record Form

A common ask when building a Power BI visual of Dataverse data is to allow the user to open the record using the Dataverse form. In this task you will build a column that will be a link to directly open the record.

1. Select **Data**.



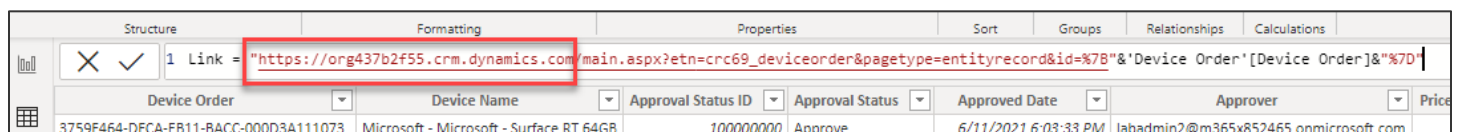
2. Right click on the **Device Order** table and select **New Column**.



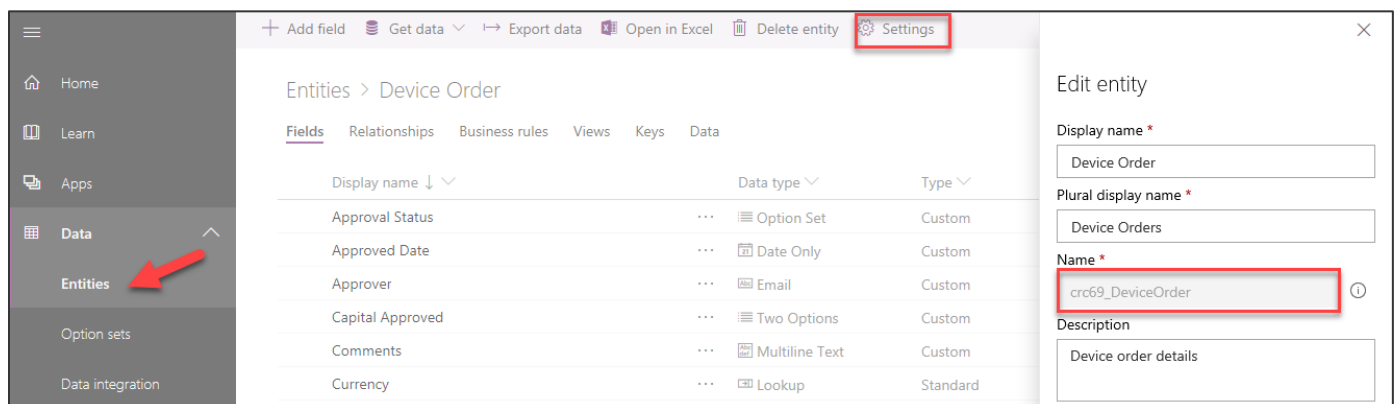
3. Provide the function below to build the column value. This needs to be adjusted to match your organization url and table type name that can vary from environment to environment, for now paste it in exactly like you have below

Link = "https://orgb0a32835.crm.dynamics.com/main.aspx?etn=crc69_deviceorder&pagetype=entityrecord&id=%7B"&'Device Order'[Device Order]&"%7D"

4. Now get your environment URL, you can get this from [Admin Power Platform](#) by selecting the environments and then ... and then open copy the url and replace it in the function



5. Next, we need to get the table schema name for Device Order. You can get that by going to [make.powerapps.com>Data>Tables>Device Order>Settings](#), and copy the prefix of the table.



6. If your value is different than what is in the Link function, replace it in Power BI. This value can vary from environment to environment.

Clipboard	Data	Queries	Relationships	Calculations	Security	Share
1	Link = "https://org437b2f55.crm.dynamics.com/main.aspx?etn=new_deviceorder&pagetype=entityrecord&id=%78"&'Device Order'[Device Order]&"%7D"					
Device Name	Approval Status ID	Approval Status	Approved Date	Approver	Price	Request Date
Microsoft - Microsoft - Surface RT 64GB	100000000	Approve	6/11/2021 6:03:33 PM	labadmin2@m365x852465.onmicrosoft.com	\$599	6/11/2021 6:00:00 AM

7. Select the new column and from the **Column tools** tab click on the **Data Category** dropdown.

File Home Help Table tools Column tools

NameLink

Data typeText

\$%FormatText

\$ % %Auto

Σ SummarizationDon't summarize

☰ Data categoryUncategorized

Sort by column

Data groups

Manage relationships

New column

StructureFormattingPropertiesSortGroupsRelationshipsCalculations

1 Link = "https://org06ecb02a.crm.dynamics.com/main.aspx?etn=crd38_deviceorder&pagetype=entityrecord&id=%78"&'Device Order'[Device Order]&"%7D"

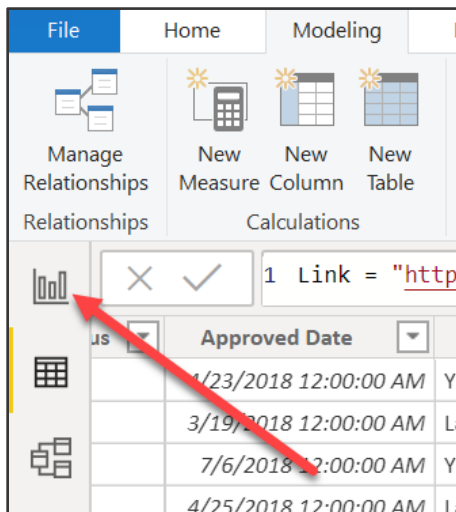
	Device Name	Device Order	Price	Request Date	Requested By	Link
130	Dell - XPS 15	7caeb862-9989-ea11-a811-000d3a569702	1299.99	4/28/2020 6:00:00 AM	admin@M365x532063.onmicrosoft.com	https://org06ecb02a.crm.dynamics.com/main.aspx?etn=c
100	Asus - N56VJ	c2d2dfd9-538a-ea11-a811-000d3a569702	999.99	10/31/2017 12:00:00 AM	Chieko Swofford	https://org06ecb02a.crm.dynamics.com/main.aspx?etn=c
50	Dell - Inspiron One 20	cdd2dfd9-538a-ea11-a811-000d3a569702	499.99	7/25/2018 12:00:00 AM	Lauren Singh	https://org06ecb02a.crm.dynamics.com/main.aspx?etn=c
140	Acer - Aspire S7	d2d2dfd9-538a-ea11-a811-000d3a569702	1399.99	10/19/2017 12:00:00 AM	Carla Delancey	https://org06ecb02a.crm.dynamics.com/main.aspx?etn=c
50	Dell - XPS 10	d9d2dfd9-538a-ea11-a811-000d3a569702	499.99	5/4/2018 12:00:00 AM	Jona Rhoades	https://org06ecb02a.crm.dynamics.com/main.aspx?etn=c

8. Select **Web URL**.

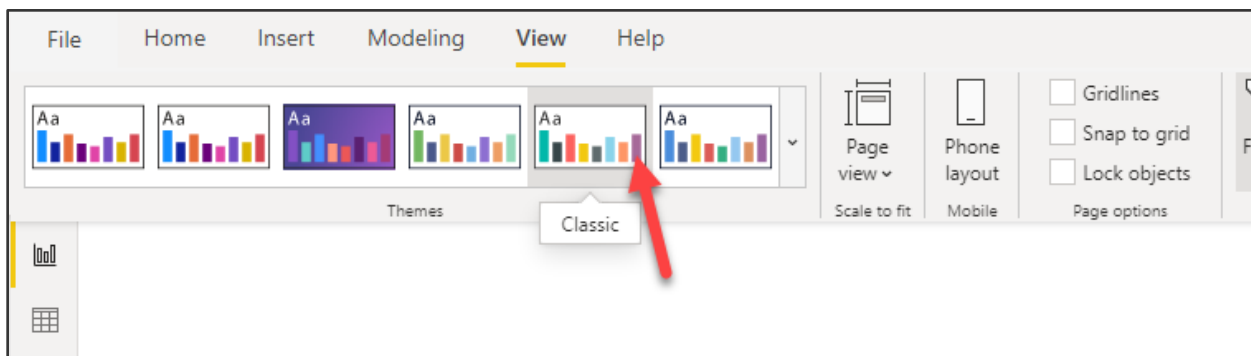
Table tools	Column tools
Format	Text
\$ %	Auto
Summarization	Don't summarize
Data category	Uncategorized
Address	Place
City	County
State or Province	Postal code
Country	Continent
Latitude	Longitude
Web URL	Image URL
Barcode	

Device Name	Device Order	Price	Request Date	Requested By
Microsoft - Microsoft - Surface RT 64GB	7caeb862-9989-ea11-a811-000d3a569702	1299.99	4/28/2020 6:00:00 AM	admin@M365x532063.onmicrosoft.com
Asus - N56VJ	c2d2dfd9-538a-ea11-a811-000d3a569702	999.99	10/31/2017 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	cdd2dfd9-538a-ea11-a811-000d3a569702	499.99	7/25/2018 12:00:00 AM	Lauren Singh
Acer - Aspire S7	d2d2dfd9-538a-ea11-a811-000d3a569702	1399.99	10/19/2017 12:00:00 AM	Carla Delancey
Dell - XPS 10	d9d2dfd9-538a-ea11-a811-000d3a569702	499.99	5/4/2018 12:00:00 AM	Jona Rhoades
Dell - XPS 15	ded2dfd9-538a-ea11-a811-000d3a569702	679.99	6/24/2020 12:00:00 AM	Carla Delancey
Asus - N56VJ	e5d2dfd9-538a-ea11-a811-000d3a569702	999.99	12/11/2017 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	ead2dfd9-538a-ea11-a811-000d3a569702	449.99	12/15/2017 12:00:00 AM	Chieko Swofford
Acer - Aspire S7	f1d2dfd9-538a-ea11-a811-000d3a569702	999.99	5/5/2018 12:00:00 AM	Chieko Swofford
Dell - XPS 10	f6d2dfd9-538a-ea11-a811-000d3a569702	849	5/11/2018 12:00:00 AM	Chieko Swofford
Dell - XPS 15	fdd2dfd9-538a-ea11-a811-000d3a569702	699	5/5/2018 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	02d3dfd9-538a-ea11-a811-000d3a569702	879.99	12/18/2017 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	09d3dfd9-538a-ea11-a811-000d3a569702	699.99	5/16/2018 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	0fd3dfd9-538a-ea11-a811-000d3a569702	999.99	8/12/2018 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	15d3dfd9-538a-ea11-a811-000d3a569702	1399.99	3/17/2020 12:00:00 AM	Chieko Swofford
Dell - Inspiron One 20	1bd3dfd9-538a-ea11-a811-000d3a569702	379.99	5/6/2020 12:00:00 AM	Chieko Swofford

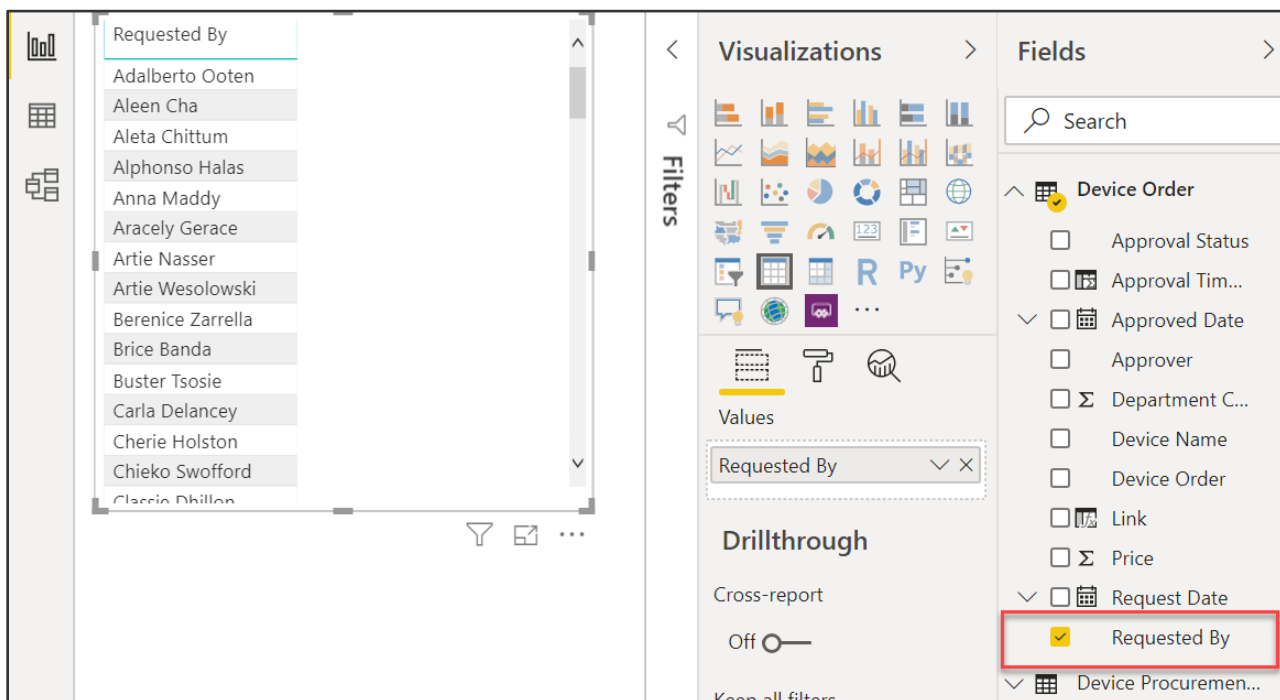
9. Select **Reports**.



10. From the View tab and switch the theme to **Classic**.



11. Expand the **Device Order** table and select **Requested By**.



12. Select **Approver**, **Approval Status**, **Price**, **Device Name**, and **Link** from the Device Order table.

The screenshot shows the Power BI interface with the 'Visualizations' pane on the left and the 'Fields' pane on the right. The 'Device Order' table is expanded in the Fields pane, and the following fields are selected with checkboxes:

- Approval Status
- Approval Tim...
- Approved Date
- Approver
- Department C...
- Device Name
- Device Order
- Link
- Price
- Request Date
- Requested By

Price	Device Name	Link
479.99	Toshiba - Satellite C870-ST3NX3	https://challengephoto.crm11.dynamics.com/main.aspx?etn=cr2fe_deviceorder&pagetype=entityrecord&id=%7B00e578c6-0288-e911-a980-0022480149c2%7D
1,499.00	Asus - Eee Slate B121	https://challengephoto.crm11.dynamics.com/main.aspx?etn=cr2fe_deviceorder&pagetype=entityrecord&id=%7B013171cc-0288-e911-a980-0022480149c2%7D
1,299.99	Samsung - Series 9 13.3	https://challengephoto.crm11.dynamics.com/main.aspx?etn=cr2fe_deviceorder&pagetype=entityrecord&id=%7B018592ae-0288-e911-a980-0022480149c2%7D

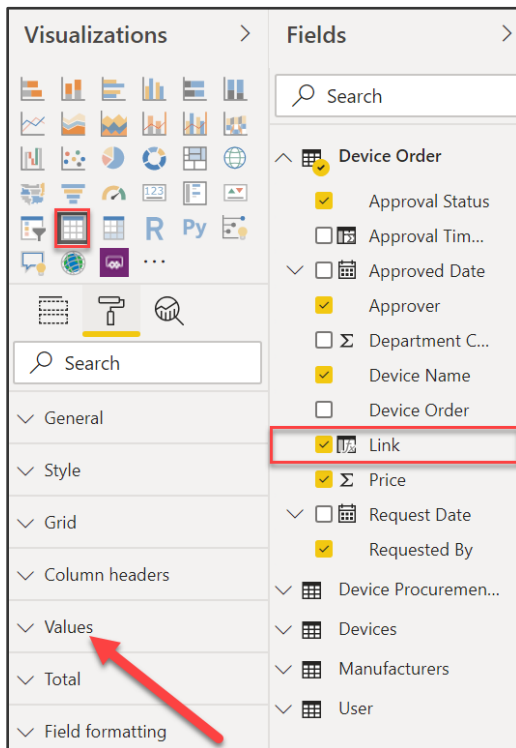
13. Select the **Format** tab

The screenshot shows the Power BI interface with the 'Visualizations' pane on the left and the 'Fields' pane on the right. The 'Device Order' table is expanded in the Fields pane, and the following fields are selected with checkboxes:

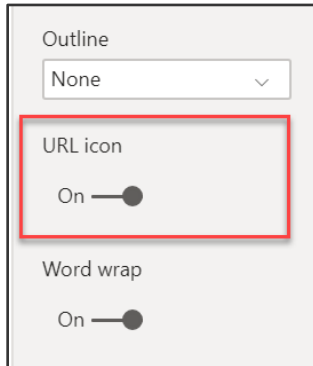
- Approval Status
- Approval Stat..
- Approved Date
- Approver
- Department C.
- Device Name
- Device Order
- Link

The 'Format' tab is selected in the Visualizations pane, and the 'Requested By' and 'Approver' fields are visible in the 'Values' section.

14. Select the **Link** column and from the **Format** tab, expand **Values**.



15. Turn on the **URL Icon**.



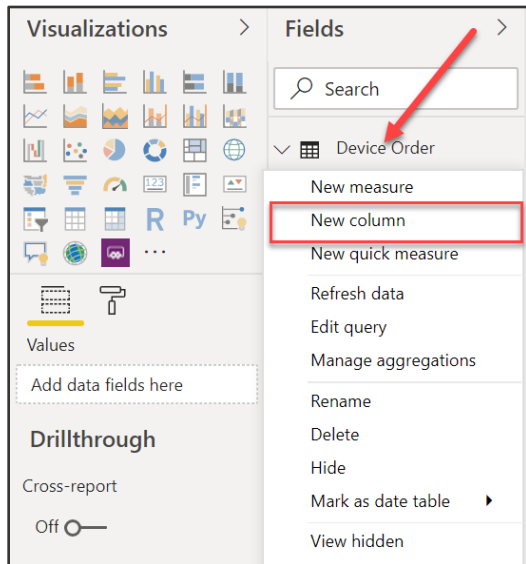
16. Click on the link. Your Dataverse record should open.

Requested By	Approver	Approval Status	Price	Device Name	Link
Inna Maddy	Patience Patman	Approve	1,299.99	Asus - ET2701INTI	Link
Artie Nasser	Emanuel Chapdelaine	Approve	799.99	Sony - VAIO S	Link
Thieko Swofford	Latrice Critelli	Approve	879.00	Lenovo - B540	Link
Morsche Espinal	Filomena Boldt	Approve	699.99	Lenovo - Essential G Series	Link
Colbie Garn	Gita Vannote	Approve	699.99	Lenovo - G480	Link
Concetta Nagao	Emanuel Chapdelaine	Approve	419.99	Samsung - Series 3 15.6	Link
Katharina Mazon	Joanna Hoos	Approve	379.99	Acer - Aspire E	Link
Alphonso Halas	Latrice Critelli	Reject	419.99	Samsung - Series 3 15.6	Link
Terline Younce	Yuri Mignone	Reject	1,399.99	Asus - ET2411INTI	Link
Amey Revard	Emanuel Chapdelaine	Reject	1,099.99	Asus - Zenbook	Link
Susan Coover	Patience Patman	Approve	1,349.00	HP - HP EliteBook Folio 9470m	Link

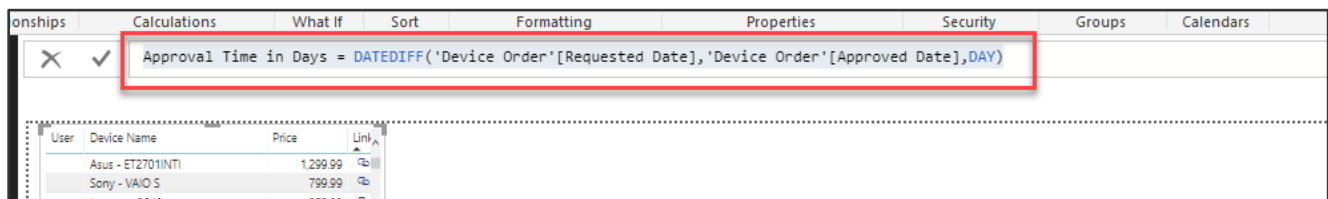
Task 3: Add a Calculated Field for approval time

In this task, you will add a calculated column with the approval time in days, you will add a column chart to the report page.

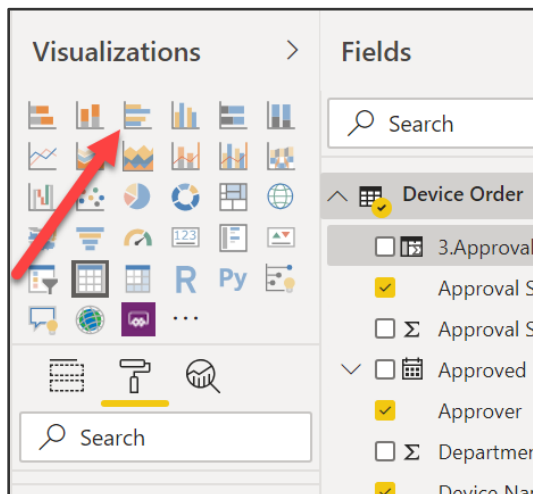
1. Right click on the **Device Order** table and select **New Column**.



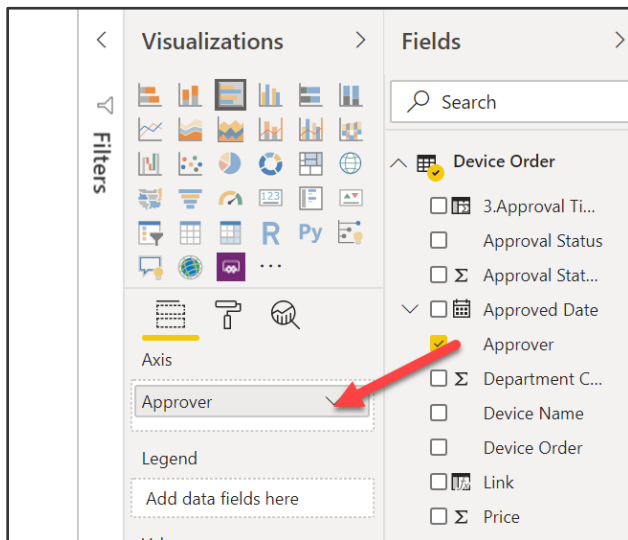
2. Type in the formula bar.
Approval Time in Days = DATEDIFF('Device Order'[Request Date], 'Device Order'[Approved Date], DAY)



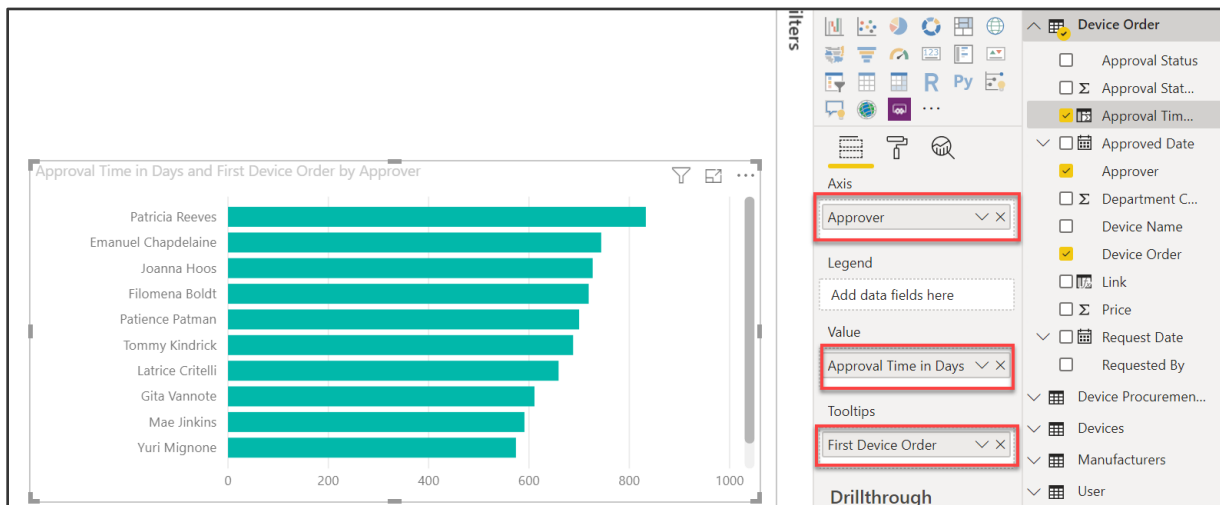
3. Select the canvas to make sure the list of device orders is no longer selected
4. Click **Clustered Bar Chart**.



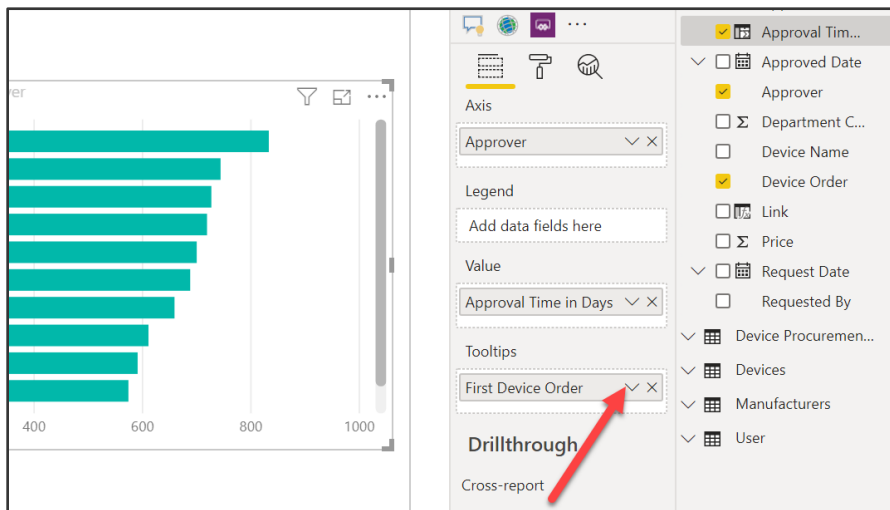
5. Select the chart you added, drag the **Approver** column and drop it in the **Axes** target.

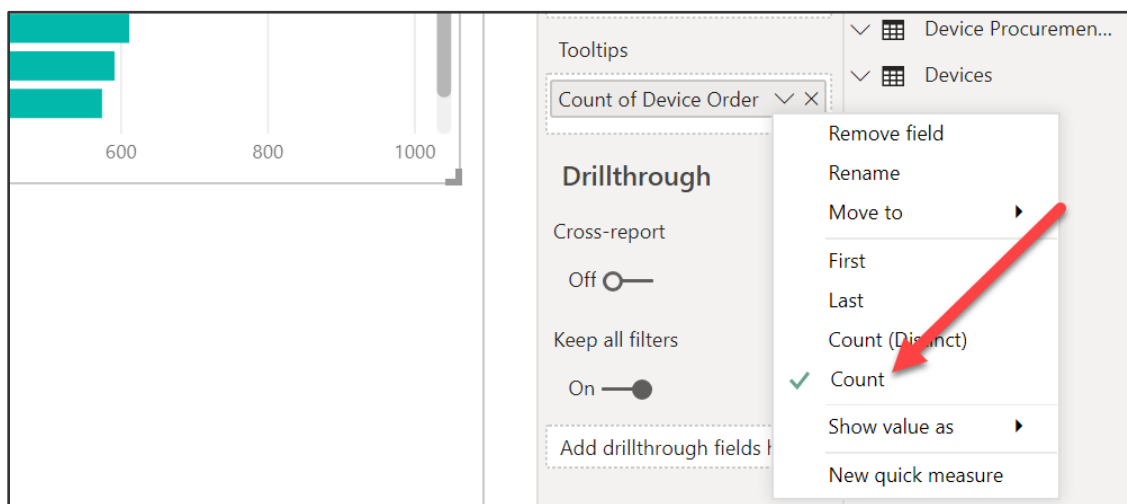
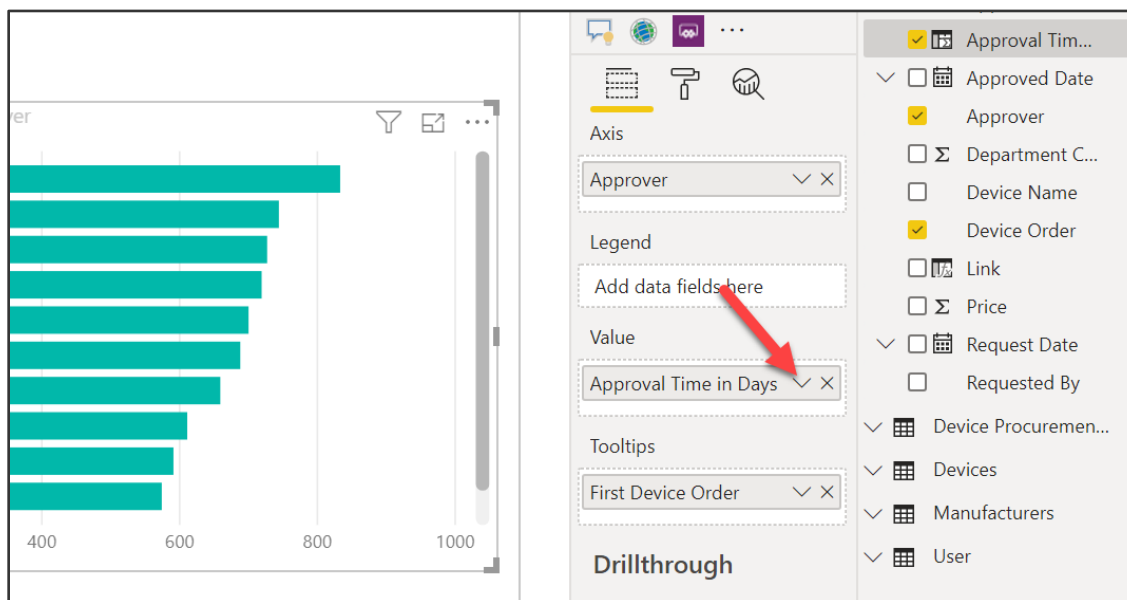
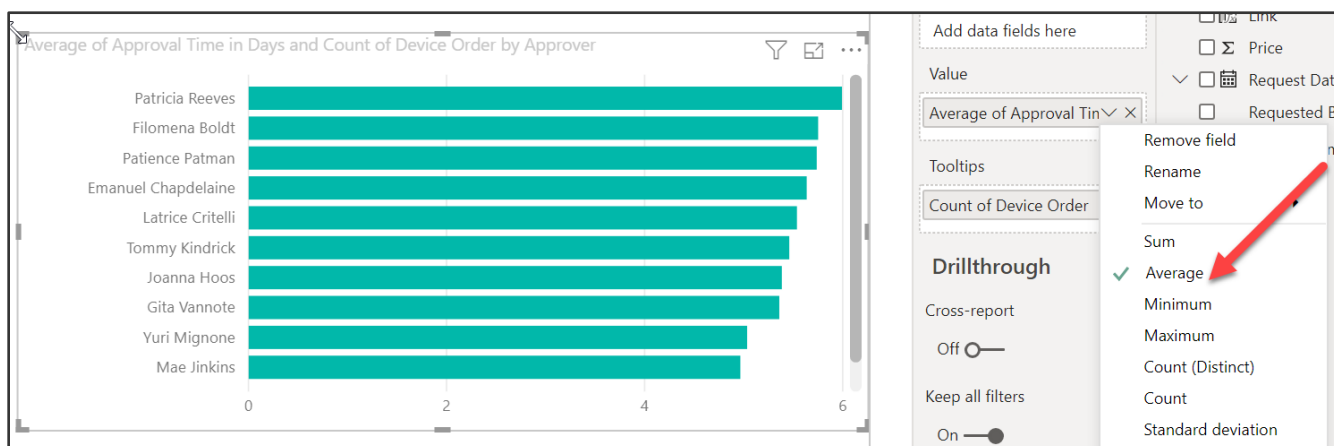


6. Drag **Approval Time in Days** to the Value target and drag **Device Order** to the Tooltip target.

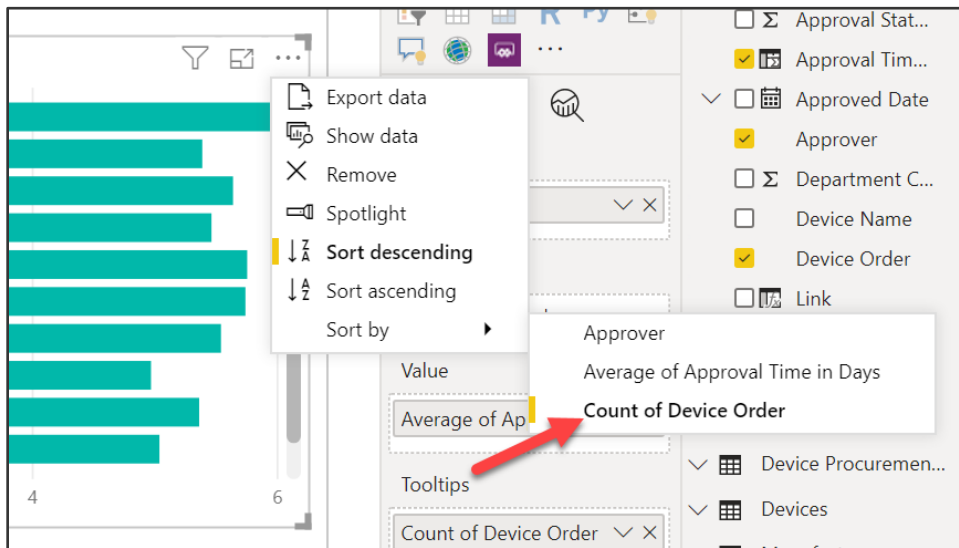


7. Click on the dropdown button next to the **First Device Order**.

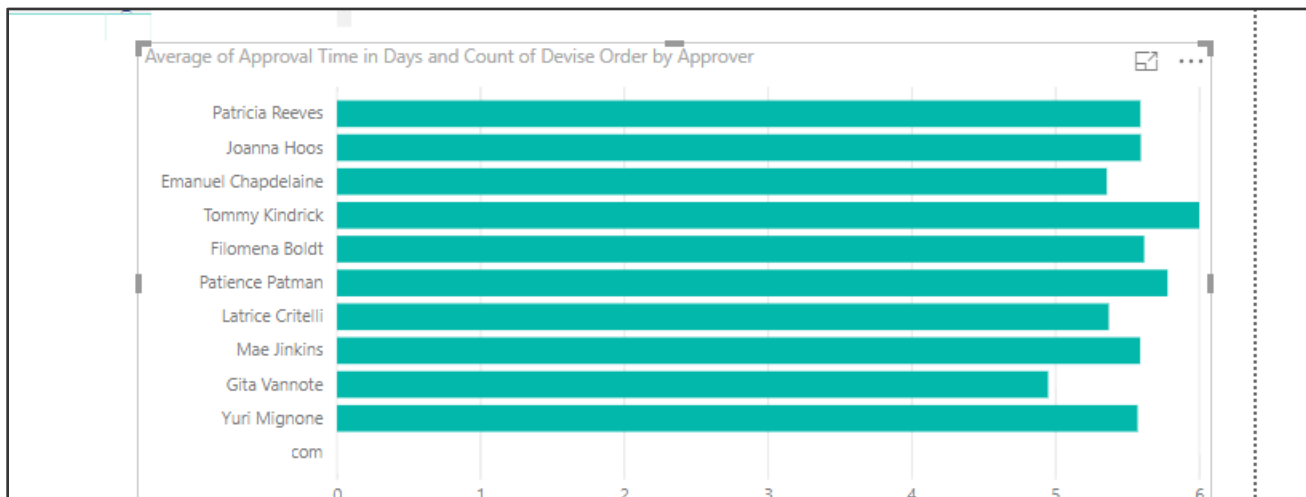


8. Select **Count**.9. Click on the dropdown button next to the **Approval Time in Days**.10. Select **Average**.

11. Click on the chart ellipses (the ...), click **Sort By**, and select **Count of Device Order**.



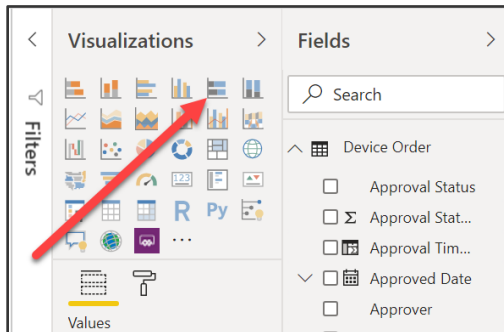
12. Your chart should now look like the image below.



Exercise 5: Add visuals to the report

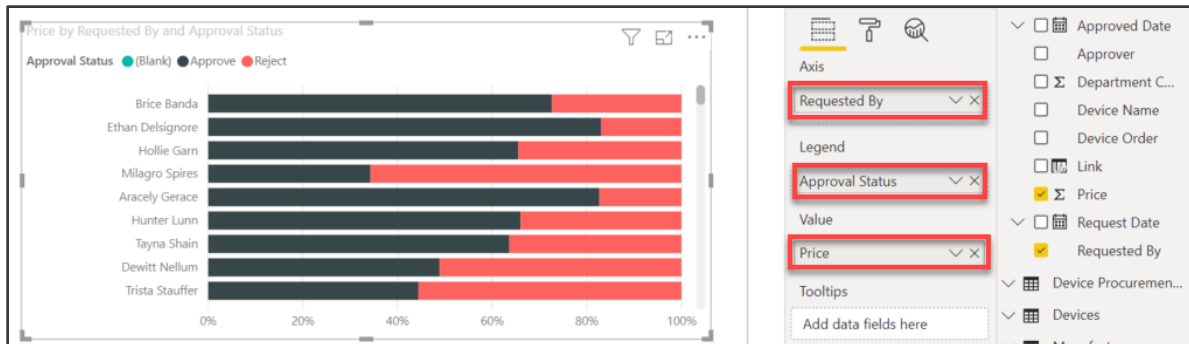
Task 1: Add Stacked Bar Chart of orders

1. Select an empty area of the canvas and click on the **Stacked Bar Chart**.



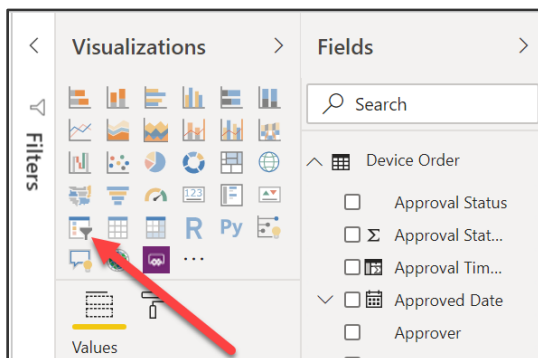
2. Select the columns below for the stacked bar chart.
Requested By for **Axis**.
Approval Status for **Legend**.
Price for **Value**.

Note: Your chart may not look the same based on how many rejected items you have in your data. You can edit the records in Dataverse and reject more if you want!

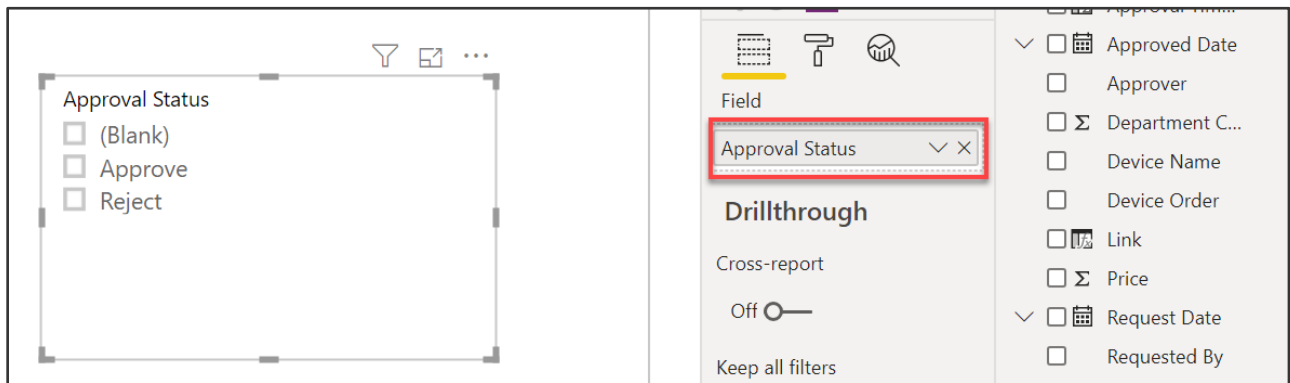


Task 2: Add a Slicer on Approval Status

1. Select an empty area of the canvas and click **Slicer**.

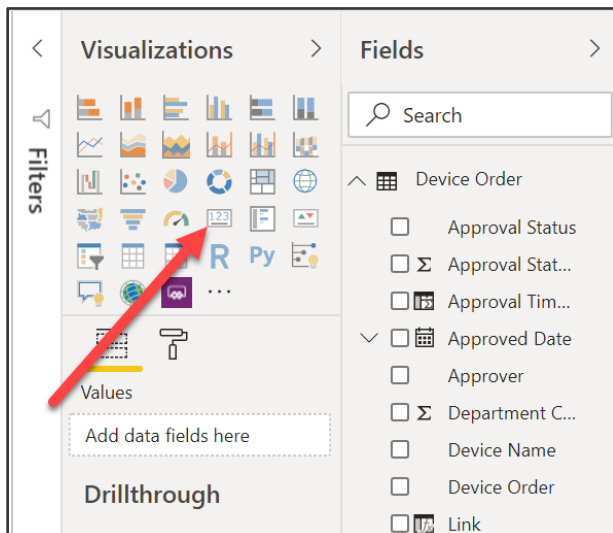


2. Drag the **Approval Status** to the **Field** target.

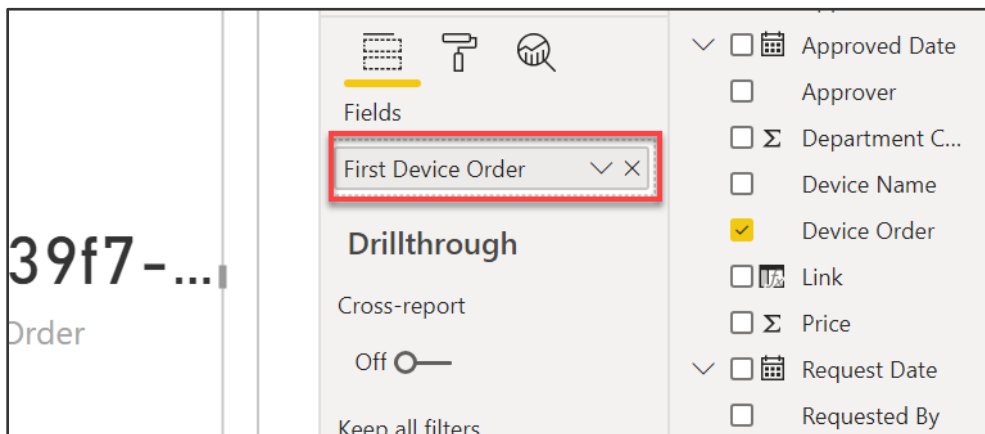


Task 3: Add Cards with Device Order statistics

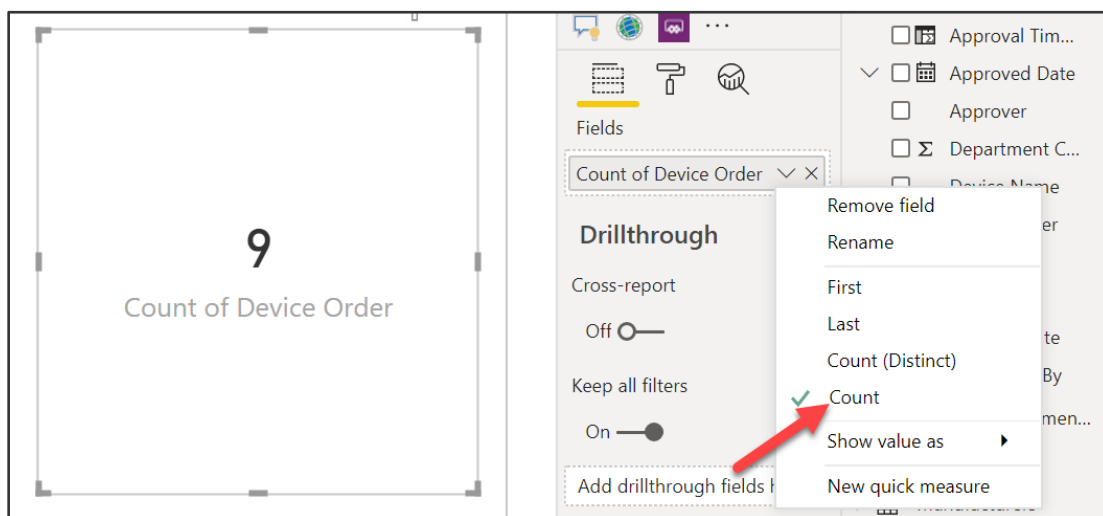
1. Select an empty area of the canvas and click **Card**.



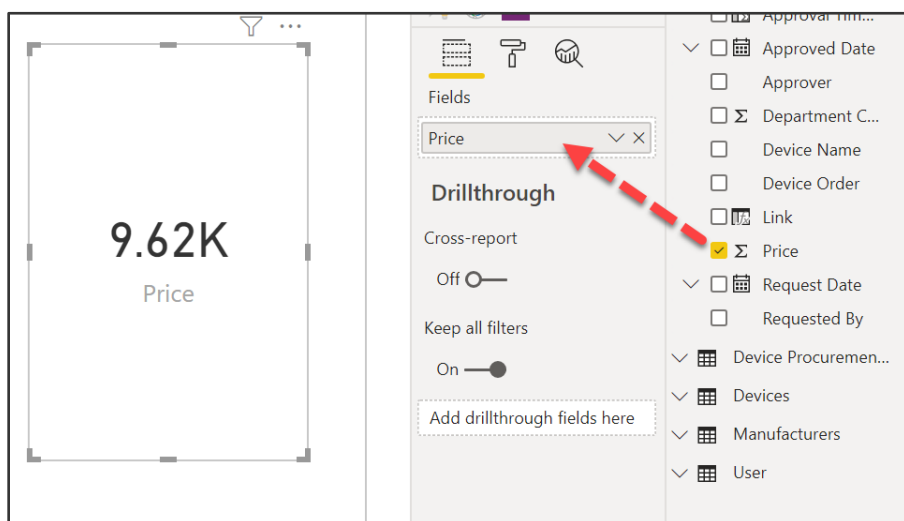
2. This card will show the total count of devices ordered. Select the card and drag **Device Order** to the **Fields** target.



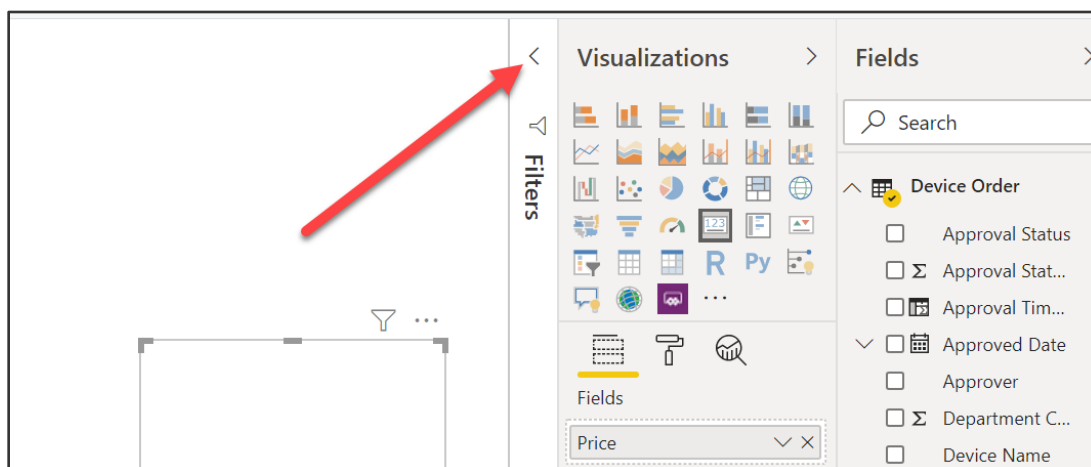
3. Select Count.



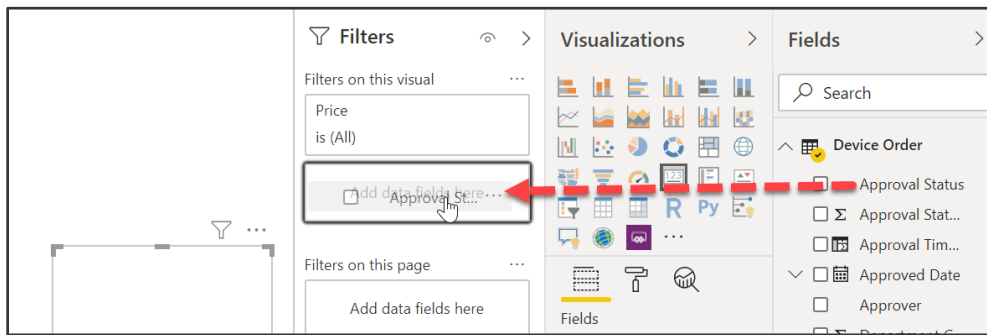
4. Add another Card to the canvas. This card will display total amount spent on approved devices.

5. Drag the **Price** to the **Fields** target

6. Click to expand the Filters pane.



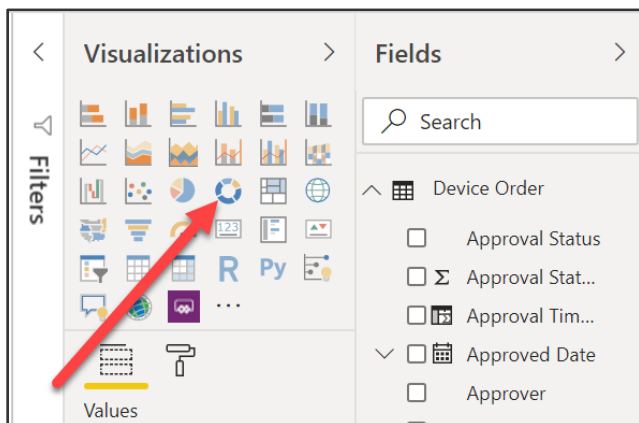
7. Drag the **Approval Status** to the **Filters** on this Visual target.



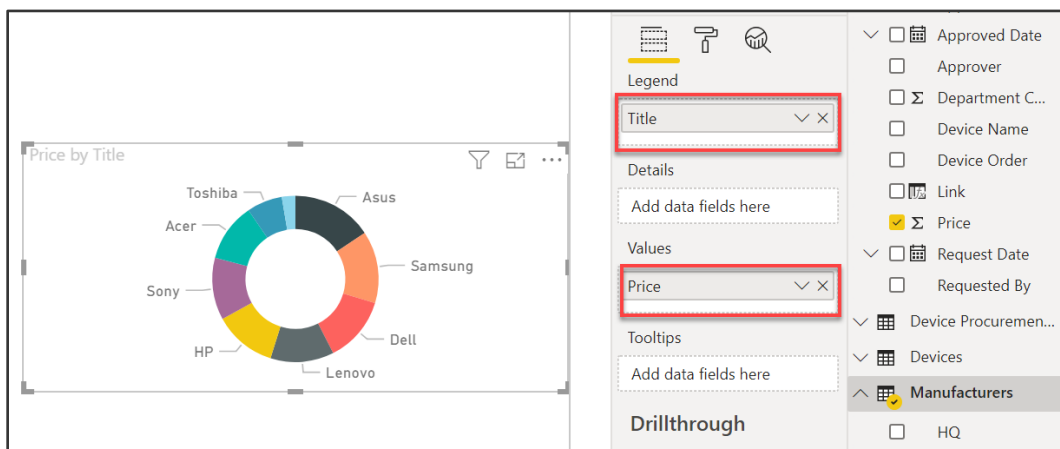
Task 4: Add a Donut Chart by Manufacture

In this task, you will add a Donut to represent the amount spent by manufacture. This can provide a quick visual way of allowing the CFO or other financial management staff to look at which manufactures they want to negotiate better pricing with. You can also click on a segment of the donut to filter the rest of the page to just that manufacture.

1. Add a Donut Chart to the canvas.

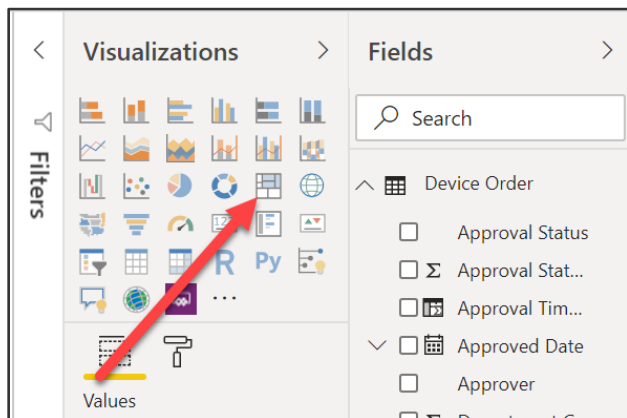


2. Drag **Title** from the **Manufacturers** table to the **Legend** target and **Price** from the **Devices** table to the **Values** target.

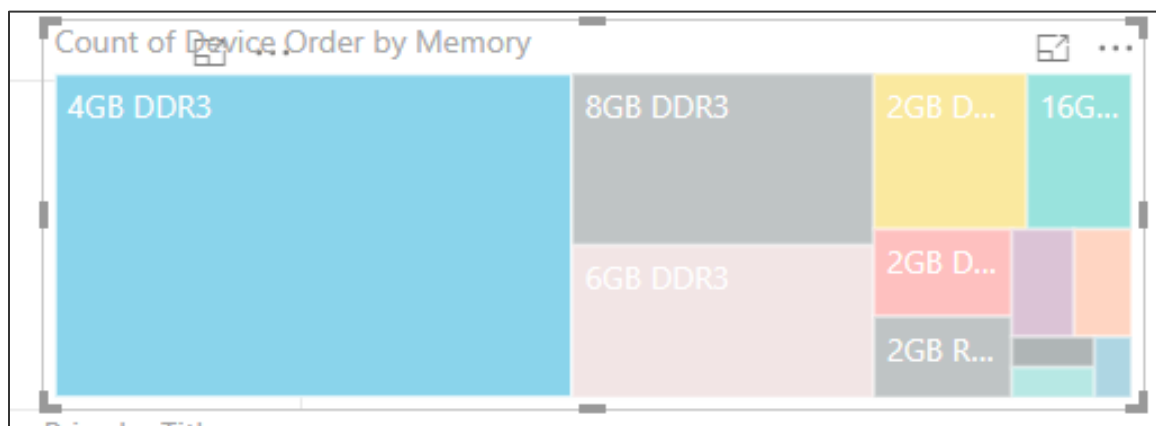
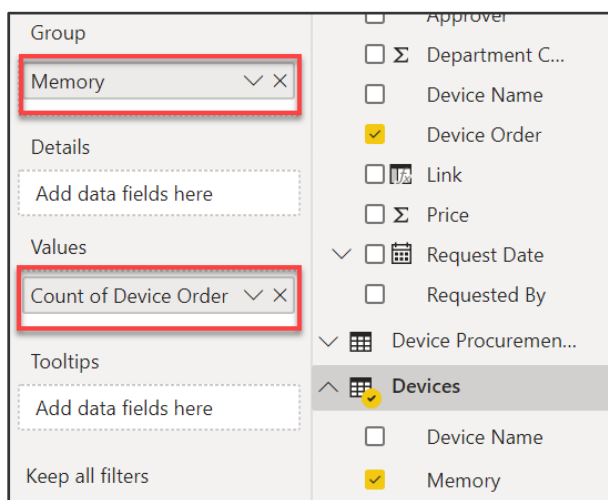


Task 5: Add a Tree Map by Device Name

1. Add Tree Map visual to the canvas.

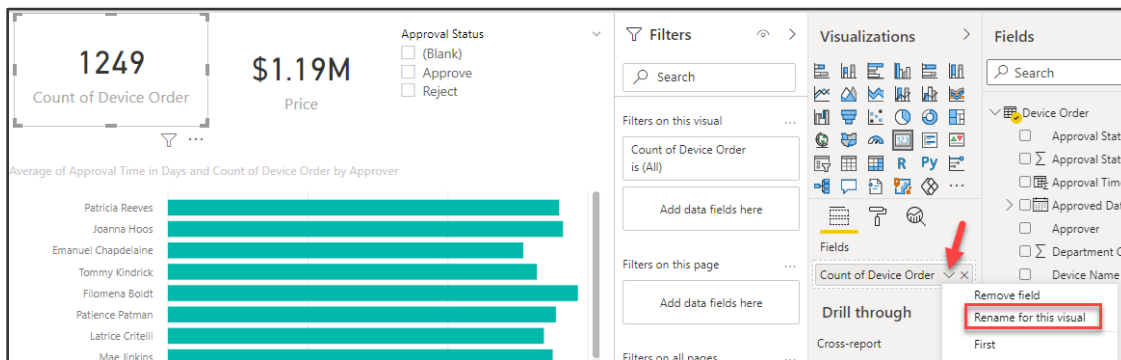


2. Drag **Memory** from the **Devices** table to the **Group** target and **Device Order** from **Device Order** table to the **Values** target.

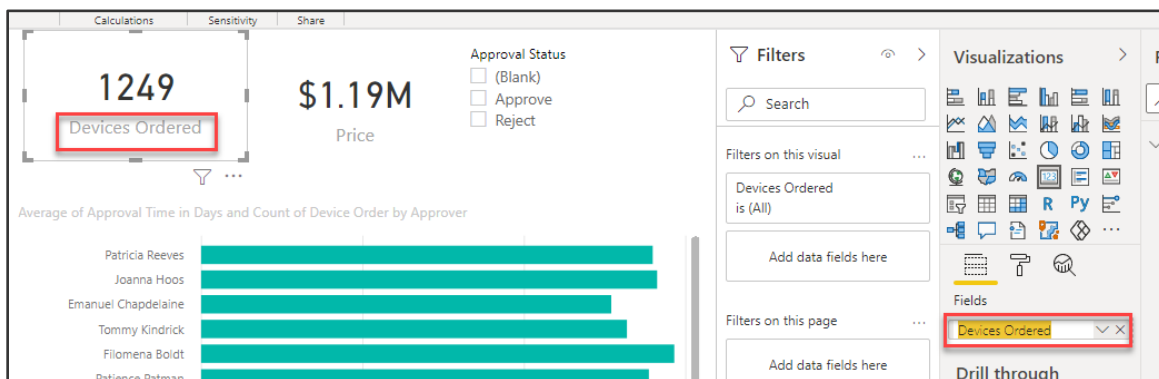


Task 6: Format the Statistics Cards

1. Select the **Count of Device Order** card and click **Rename for this visual**.



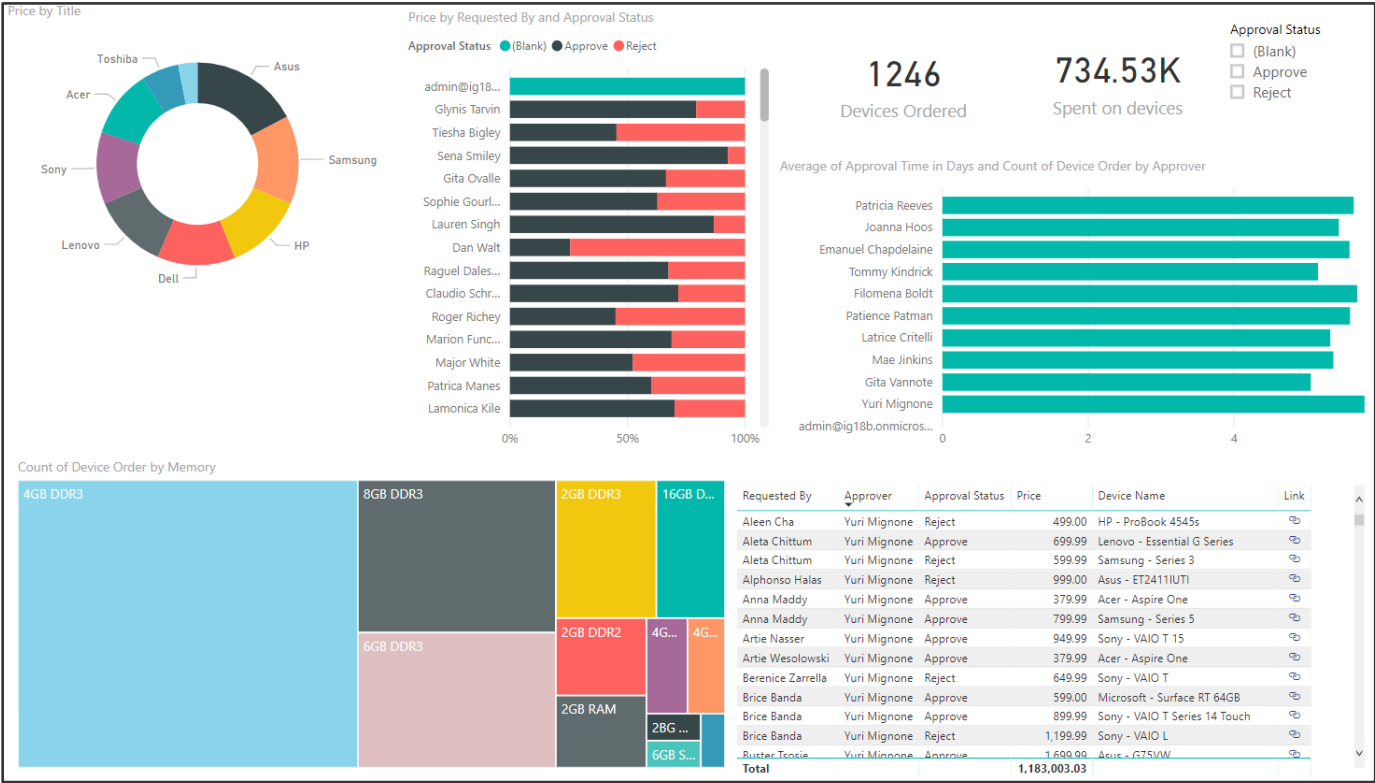
2. Rename it **Devices Ordered**.



3. You may rename other visuals as you see appropriate.

Task 7: Arrange the visuals on the report page

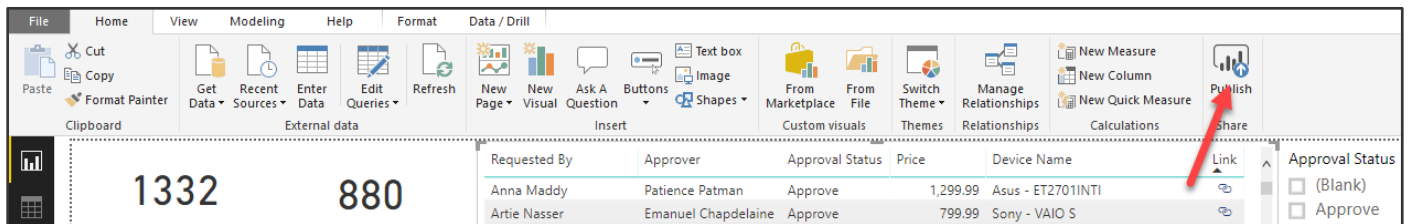
1. Arrange Visuals on the report page as shown in the image below.



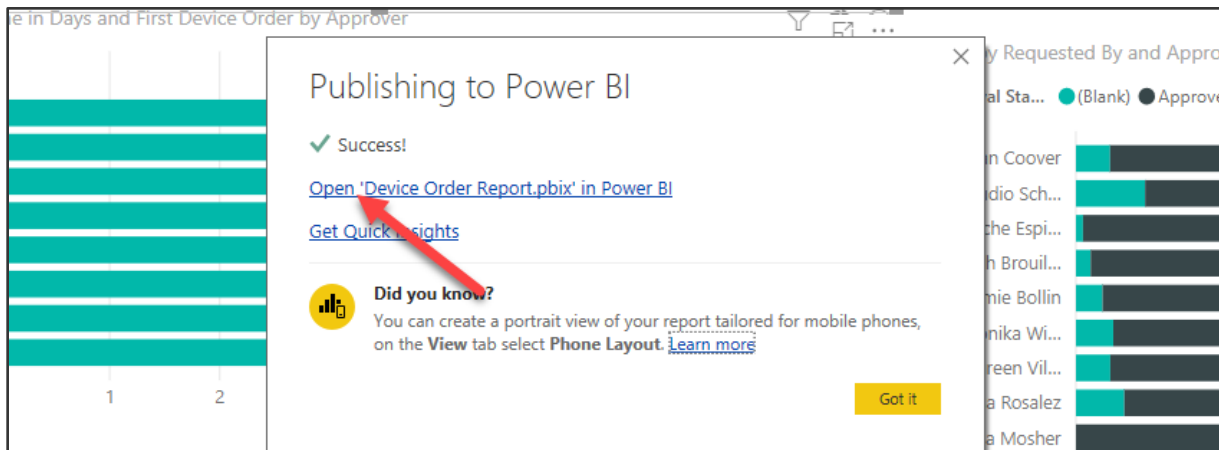
Exercise 6: Publish and Share

Task 1: Publish and Share

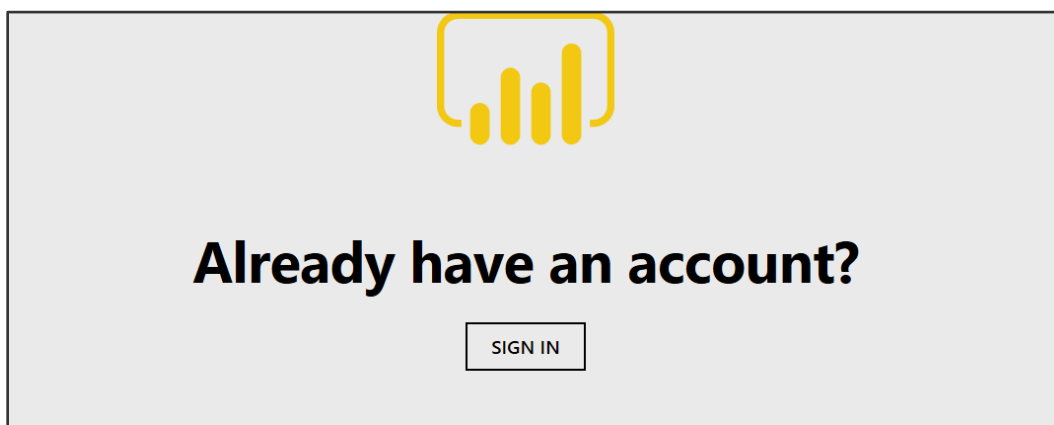
1. Make sure you are logged in in your environment.
2. Click **Save**.
3. Name the report **Device Order Report** and save it on your machine.
4. Click **Publish**.



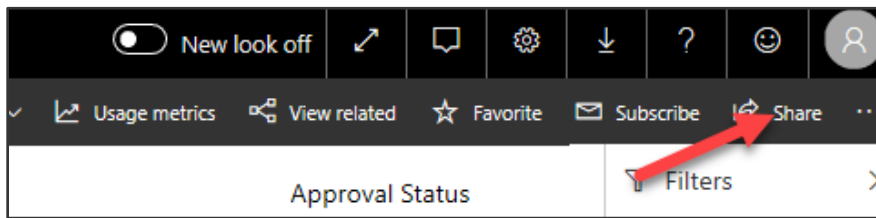
5. Click **Select** to select a workspace and wait for the publishing to complete
6. Click **Open in Power BI**.



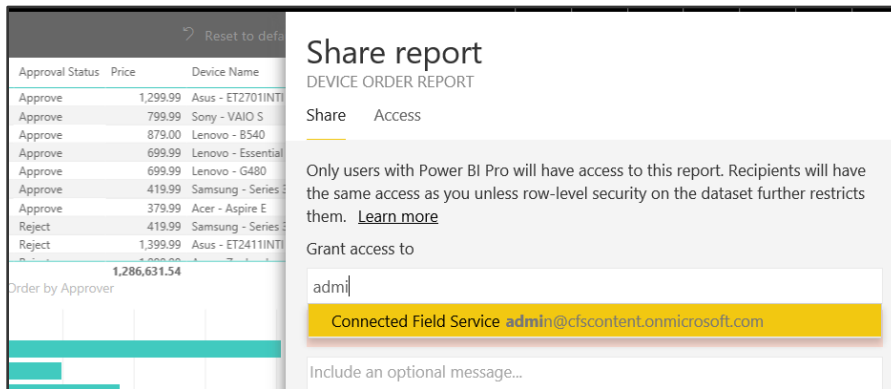
7. Click **Sign in**.



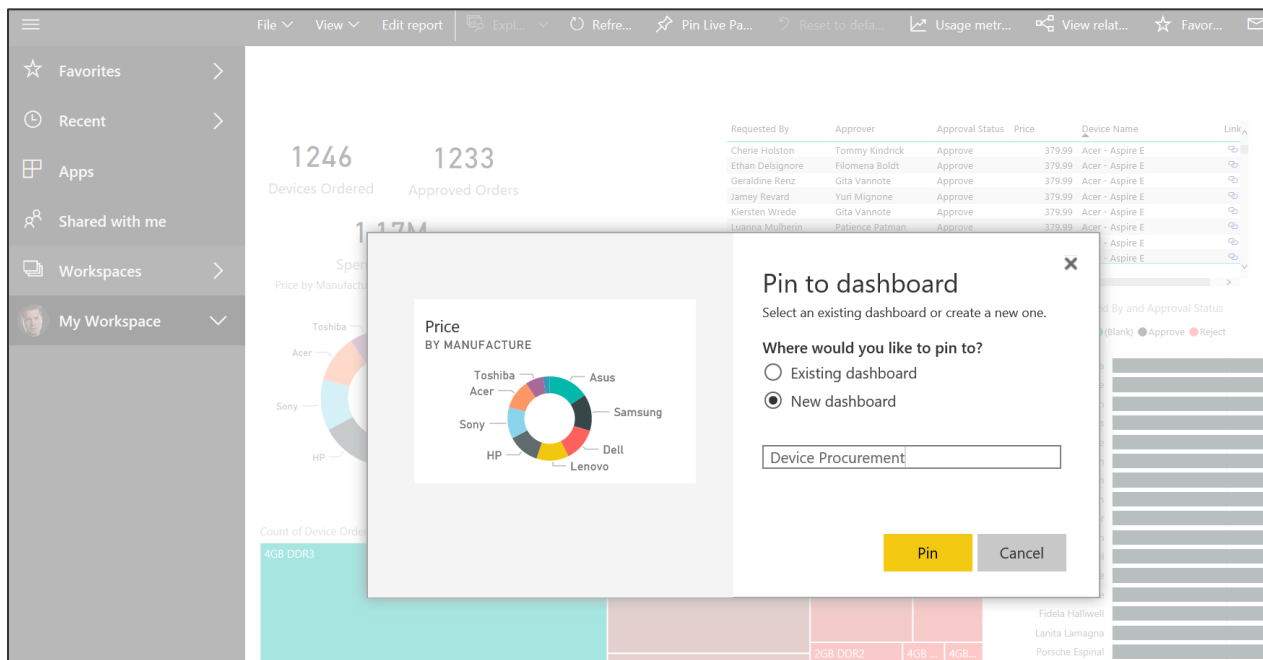
8. Click **Share**.



9. You can share with any user in your organization.



From within PowerBI.Com you can also add the report visualizations to an existing dashboard or create a new dashboard.



You can also embed the Power BI Visualizations in a personal dashboard in Dataverse. You can read more about that here [Power BI embed](#) if you have time give it a try!

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