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@KanwarTheOne

Kanwar Manish, has worked in the IT industry across domains in last 18 years. Range of experience includes heading delivery in Global Wealth Management [Financial Service Industry, USA], in Life Insurance [Insurance industry, USA] and DMS [Document Management System, ECMS, India]. He is a unique blend of having strong people management skills and being .NET hands on.

AGENDA

1. Power BI & Power BI Service
2. Import Data
3. Transformations – Date, Numbers
4. Query Editor & Advanced Query Editor
5. Conditional Column
6. Merging and Split
7. BI Service
8. Dashboard, Datasets, Left Navigation
9. Relation between Dashboards, Reports and Datasets
10. Look at Power BI Service Sample
11. Publish Report
12. Import Report
13. Tiles management, Resize Etc.
14. Natural Language

AGENDA

1. Download Power BI Desktop

<https://powerbi.microsoft.com/en-us/desktop/>

2. Register for Power BI Service – as Individual

<https://docs.microsoft.com/en-us/power-bi/service-self-service-signup-for-power-bi>

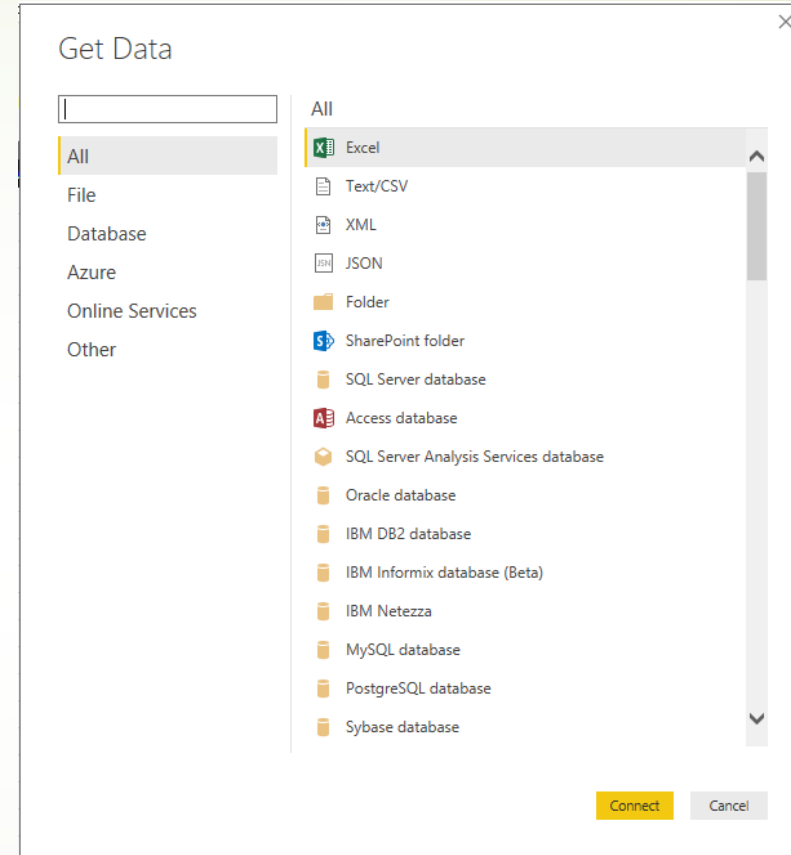
3. Sample Data For you

<https://drive.google.com/open?id=18lkXzhABelHyqVAA9sma3t6bC4GvUNUr>

POWER BI - DESKTOP

Import From Excel

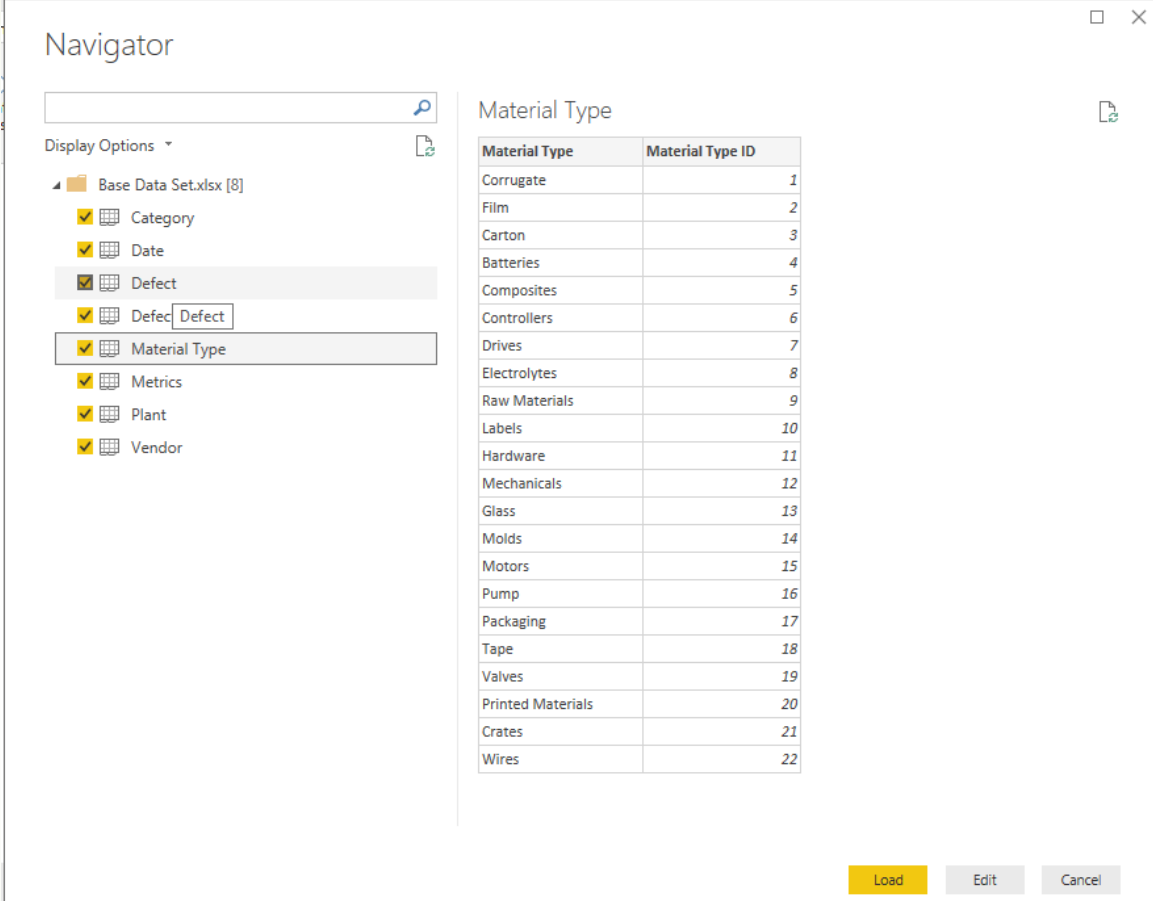
- Microsoft has done a tremendous amount of work to ensure that you can't find data that can't be imported.
- MySQL, SQL, CSV, Excel, IBM, PostgreSQL, Sybase, SAP, Dynamics 365.
- Hard to find option for data source that you can't import.



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Let's Import

- We will use sample data that we have with US.
- Get Data -> Excel
- Select The Sheets you want – Click Load



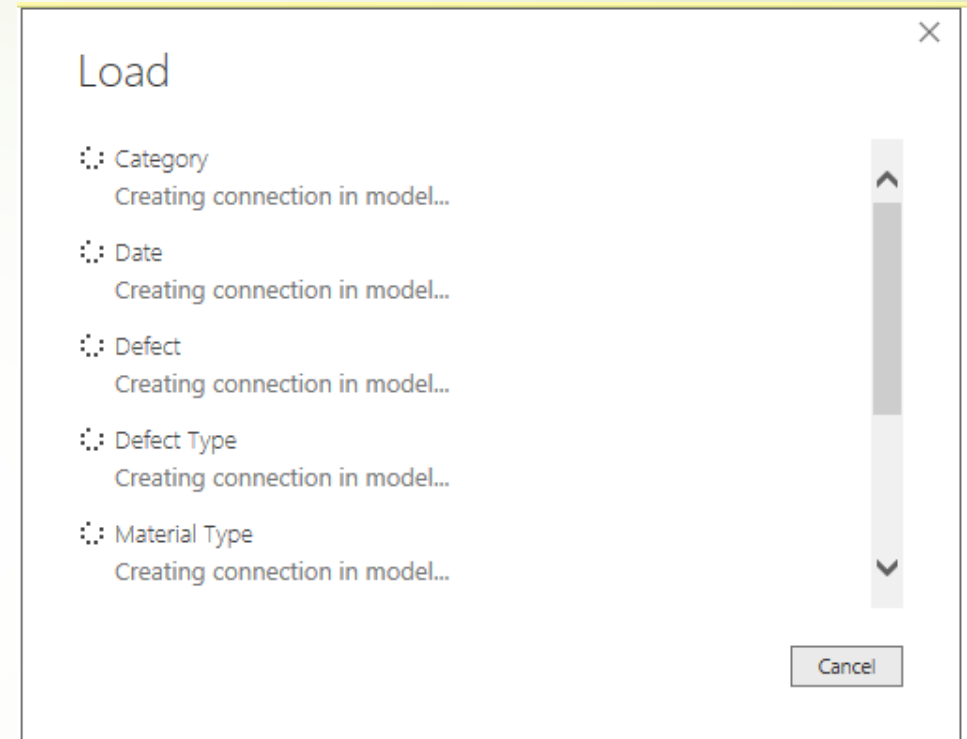
The screenshot shows the Power BI Desktop Navigator window. On the left, under 'Display Options', the 'Base Data Set.xlsx [8]' file is expanded, showing a list of tables: Category, Date, Defect, Defec (with a sub-table 'Defect'), Material Type, Metrics, Plant, and Vendor. The 'Material Type' table is selected. On the right, the 'Material Type' table is displayed with two columns: 'Material Type' and 'Material Type ID'. The table contains 22 rows of data. At the bottom right, there are three buttons: 'Load' (yellow), 'Edit' (grey), and 'Cancel' (grey).

| Material Type | Material Type ID |
|-------------------|------------------|
| Corrugate | 1 |
| Film | 2 |
| Carton | 3 |
| Batteries | 4 |
| Composites | 5 |
| Controllers | 6 |
| Drives | 7 |
| Electrolytes | 8 |
| Raw Materials | 9 |
| Labels | 10 |
| Hardware | 11 |
| Mechanicals | 12 |
| Glass | 13 |
| Molds | 14 |
| Motors | 15 |
| Pump | 16 |
| Packaging | 17 |
| Tape | 18 |
| Valves | 19 |
| Printed Materials | 20 |
| Crates | 21 |
| Wires | 22 |

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Intermittent Screen

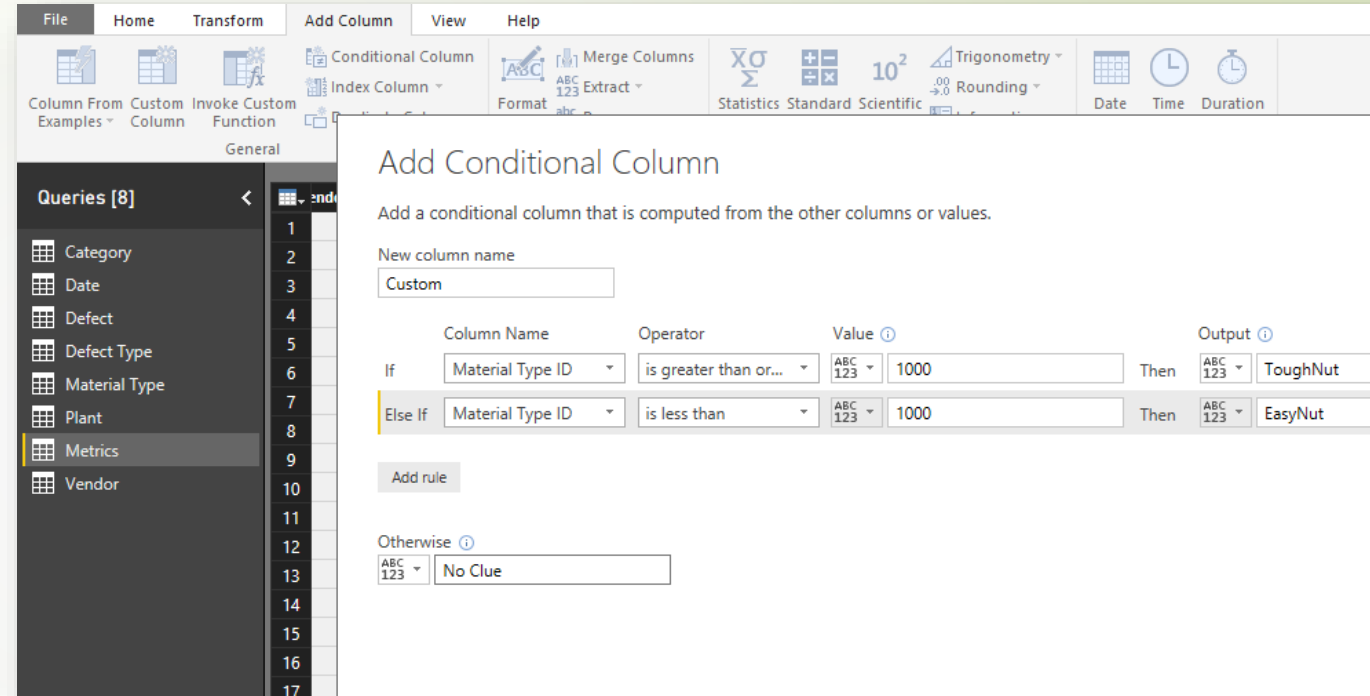
- Depending on Transformation being done on the data
- Depending on number of records.
- In our case should be less than 15 seconds.



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Conditional Column Screen

- Try date transformations.
 - Rename Columns
 - Select a Column – and then Add Column – based upon that easily.
 - Let's add a conditional Column
 - --Try yourself – based upon this screen.
- 
-
- Question – Why do we have all such options for transformation?



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Hint Screens – Merging & Split

- Add Column -> Merge Column
- Right Click column - >Split Column by Delimiter
- Splitting is usually a very common operation often needed.
- You can split by

03 - Transformations - Power Query Editor

Add Column View Help

Conditional Column Index Column Duplicate Column Merge Columns Extract Parse From Text From Number From Date & Time

Statistics Standard Scientific Rounding Information Date Time Duration

| Material ID | Defect Type ID | Material Type ID | Defect ID | Defect Qty | Downtime min | Custom |
|-------------|----------------|------------------|-----------|------------|--------------|-----------|
| 377 | 1697 | 1 | 9 | 247 | 14685 | 0 EasyNut |
| 378 | 973 | 1 | 9 | 247 | 15130 | 0 EasyNut |
| 379 | 973 | | | | | |
| 380 | 973 | | | | | |
| 381 | 973 | | | | | |
| 382 | 933 | | | | | |
| 383 | 934 | | | | | |
| 384 | 974 | | | | | |
| 385 | 974 | | | | | |
| 386 | 974 | | | | | |
| 387 | 963 | | | | | |
| 388 | 668 | | | | | |
| 389 | 2044 | | | | | |
| 390 | 2043 | | | | | |
| 391 | 2009 | | | | | |

Merge Columns

Choose how to merge the selected columns.

Separator
Colon

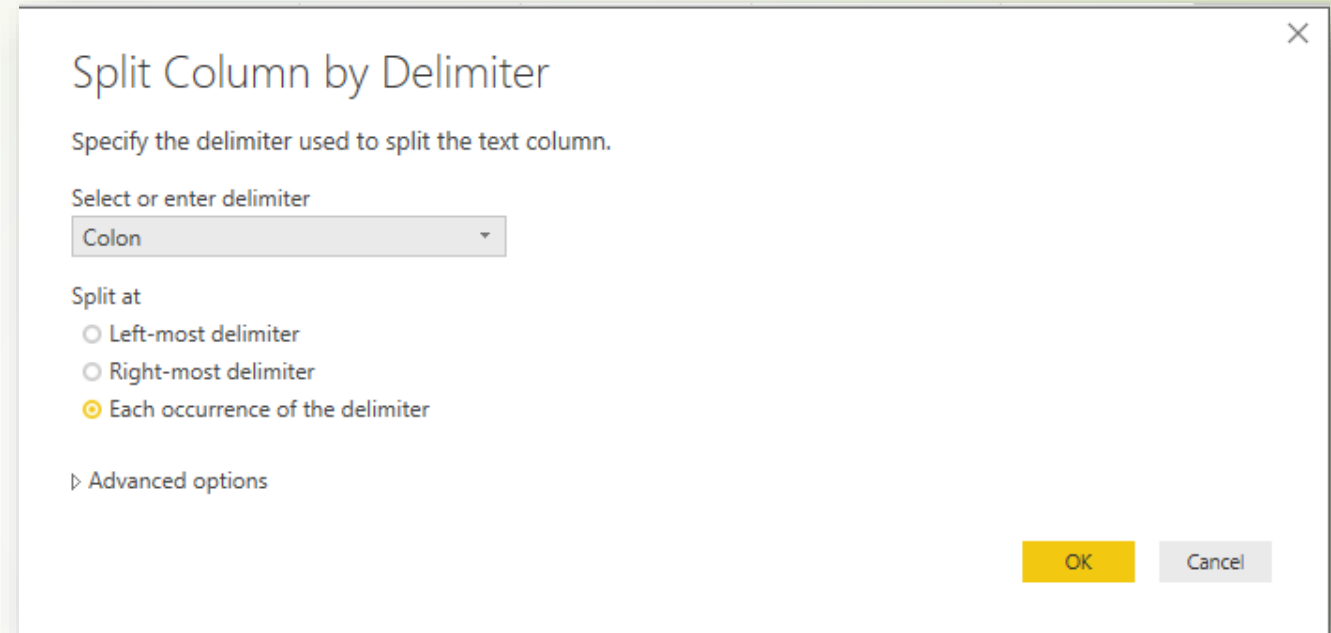
New column name (optional)
Merged-01

OK Cancel

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Hint Screens – Split Column

- Plenty of options
- Left / Right – delimiter consideration



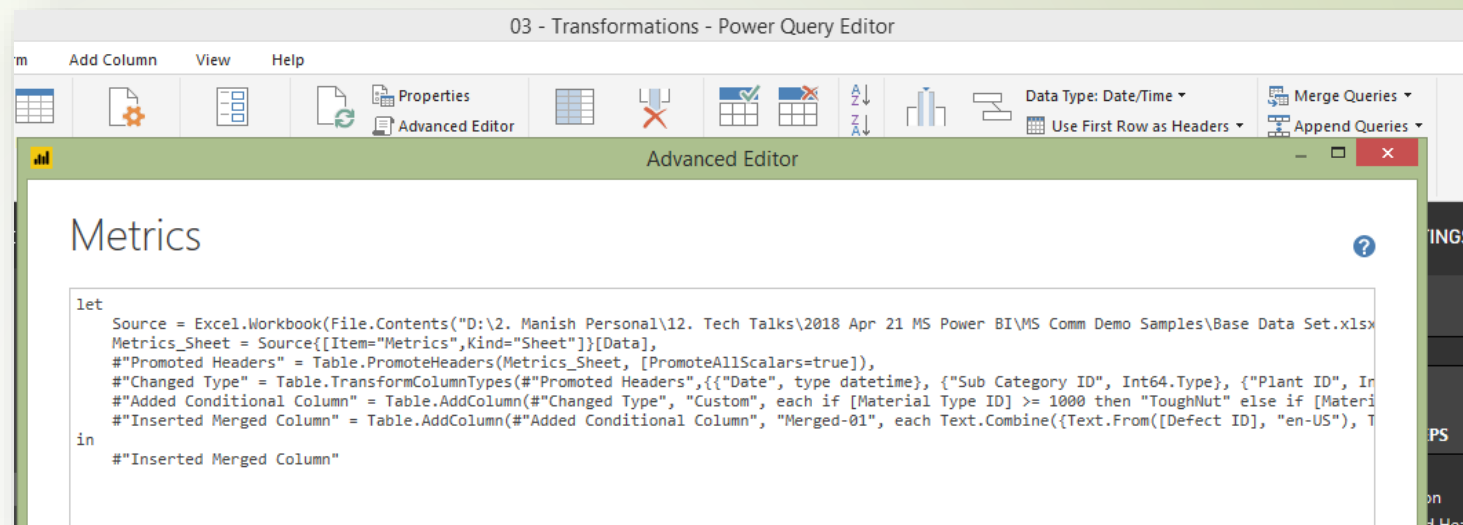
The screenshot shows the 'Split Column by Delimiter' dialog box in Power BI Desktop. The dialog has a title bar with a close button (X). The main content area is white and contains the following elements:

- Title:** 'Split Column by Delimiter' in a large, dark font.
- Instruction:** 'Specify the delimiter used to split the text column.' in a smaller, dark font.
- Delimiter Selection:** A label 'Select or enter delimiter' followed by a dropdown menu showing 'Colon'.
- Split at Options:** A label 'Split at' followed by three radio button options:
 - ☐ Left-most delimiter
 - ☐ Right-most delimiter
 - ☒ Each occurrence of the delimiter
- Advanced Options:** A link 'Advanced options' with a right-pointing arrow.
- Buttons:** Two buttons at the bottom right: 'OK' (yellow) and 'Cancel' (gray).

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GEEKS to REST
WE ARE ALIVE

- Fine. Take the Advanced Editor



POWER BI - SERVICE

BI Services - Initially all will be blank.

Dashboards are the top level objects/entity in the BI service.

Dashboard comprises of different visual elements - it can be text, images, charts etc.

Let's discuss quickly what are dashboards


- a. Track Data from different aspects/sources of your business into a single place.
- b. This data projection on single place helps you make quick and better decisions.

POWER BI - SERVICE

Left hand navigation shows all the Dashboards, Reports and Datasets that you have.

Dashboards comprise of multiple tiles and each of the tiles is connected to a report

In other words each report that you want to see on your dashboard is represented by a tile element on your dashboard that you can interact with.



Once you click on a tile - you will see that the navigation has moved to the reports section and there are more elements in the actual report on the screen.

The report in turn is based upon a dataset.

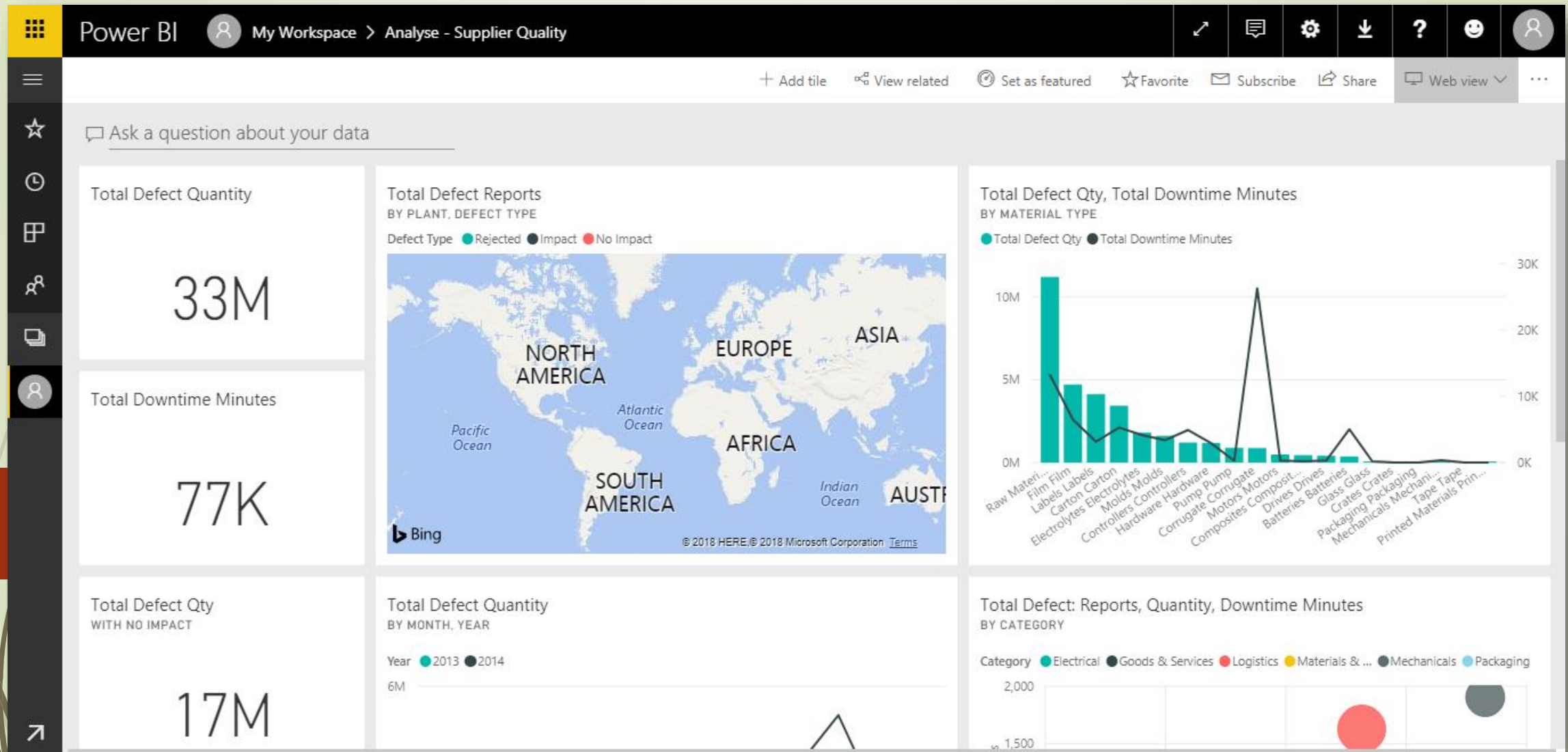
Question - Can anybody answer - what comes intuitively to your mind - when we refer to a Dataset here?

You can think of it as a connection to a database or set of data cached in Power BI service and this cache in most likelihood is being updated on a schedule.

Relation - Dataset can be base for multiple reports but a Report will have a single dataset only. Reports can then be linked multiple dashboards.

So you can pin visuals from one the reports to multiple dashboards.

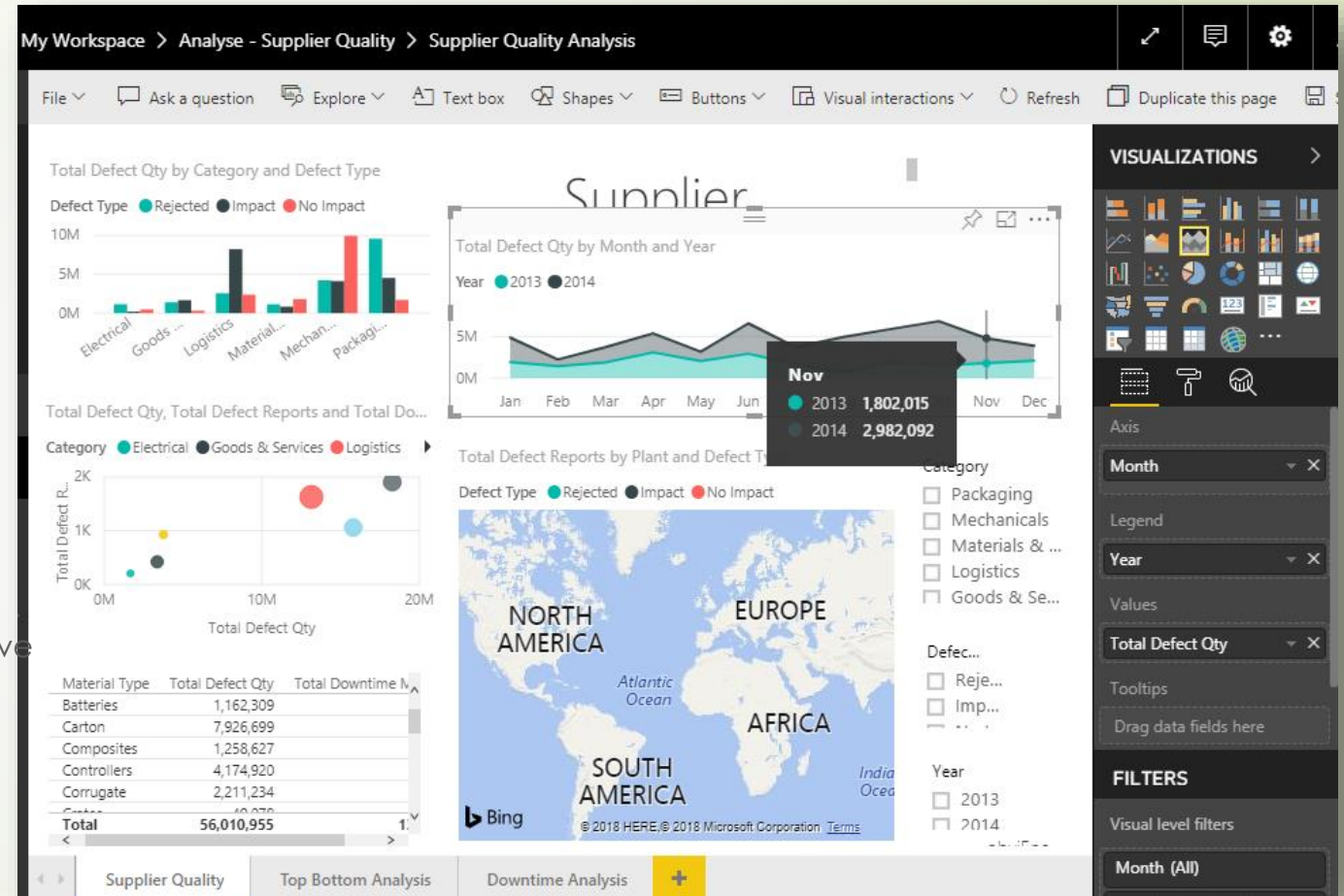
POWER BI - SERVICE



POWER BI - SERVICE

Let's enter the report in EDIT MODE

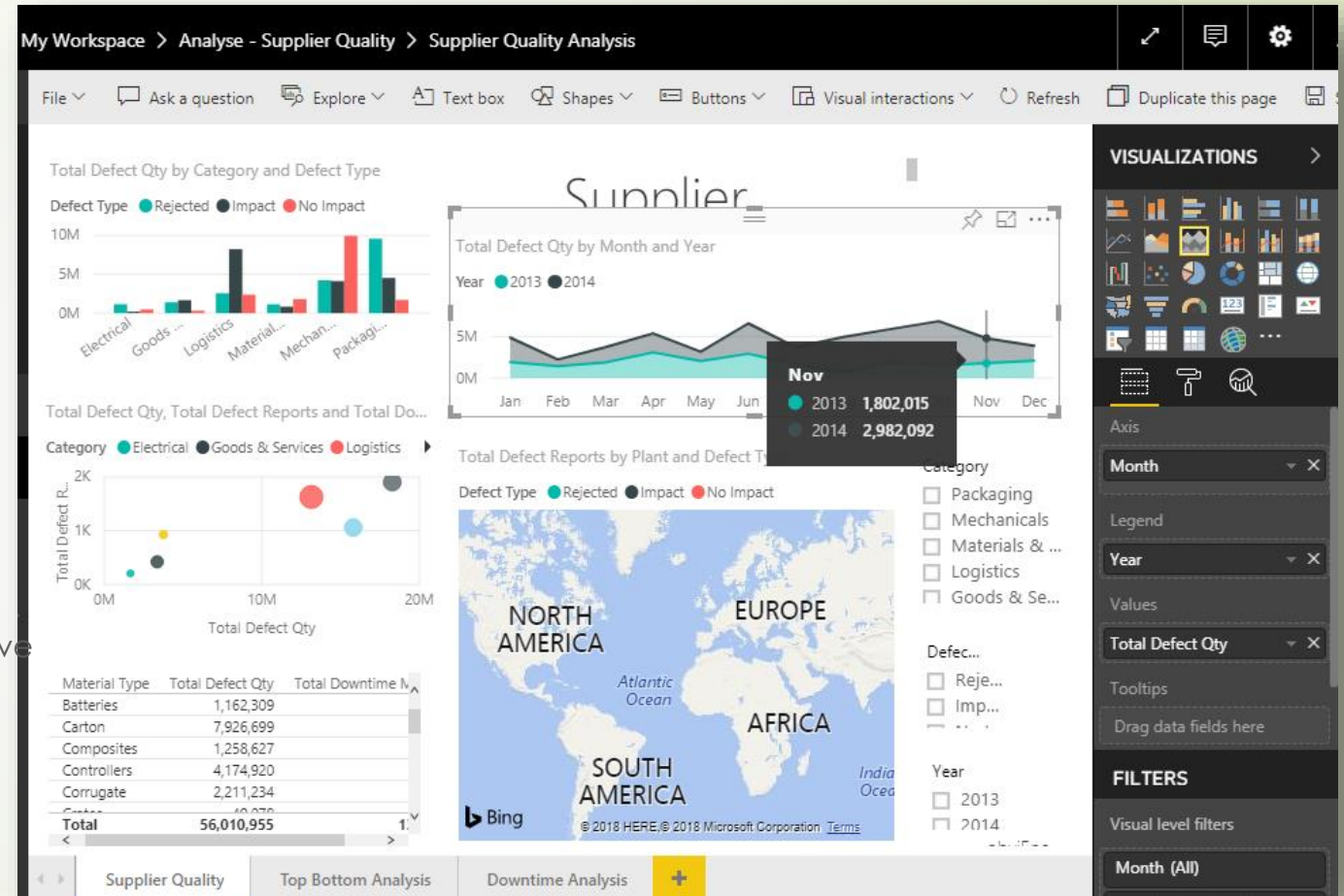
- Try Resizing
- Try Changing Visualization
- Try Drilling Down
- Try Focus Mode
- Select the Graph and Try Format under visualization
 - Changing Colors
 - Changing Axis Colors
 - Use Cookies to go back and Save/Not Save



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Let's enter the report in EDIT MODE

- Try Resizing
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Publishing Dashboards

- We can have multiple workplace – where we can Publish
- Let's create a Power BI Desktop Report on Defect Qty and Plant ID and Publish this Report.
- And then let's explore Quick Insights – A lot of ML runs on your data produces results for you to take a look at.

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Created and Published from Power
BI Desktop

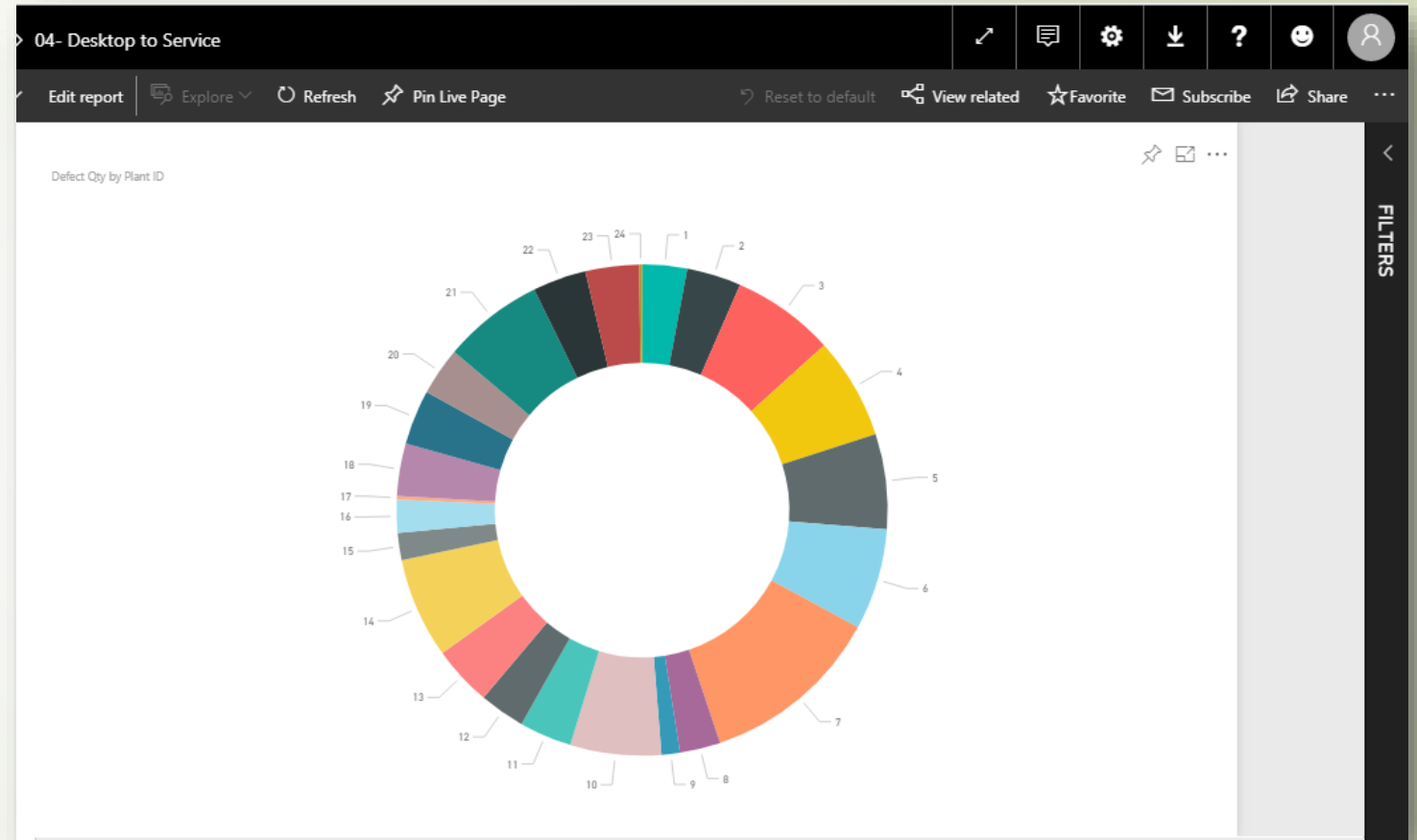
To
Power BI Service

Same Visuals

Pin It Like regular Report

(Explore new interface here)

Interact with it



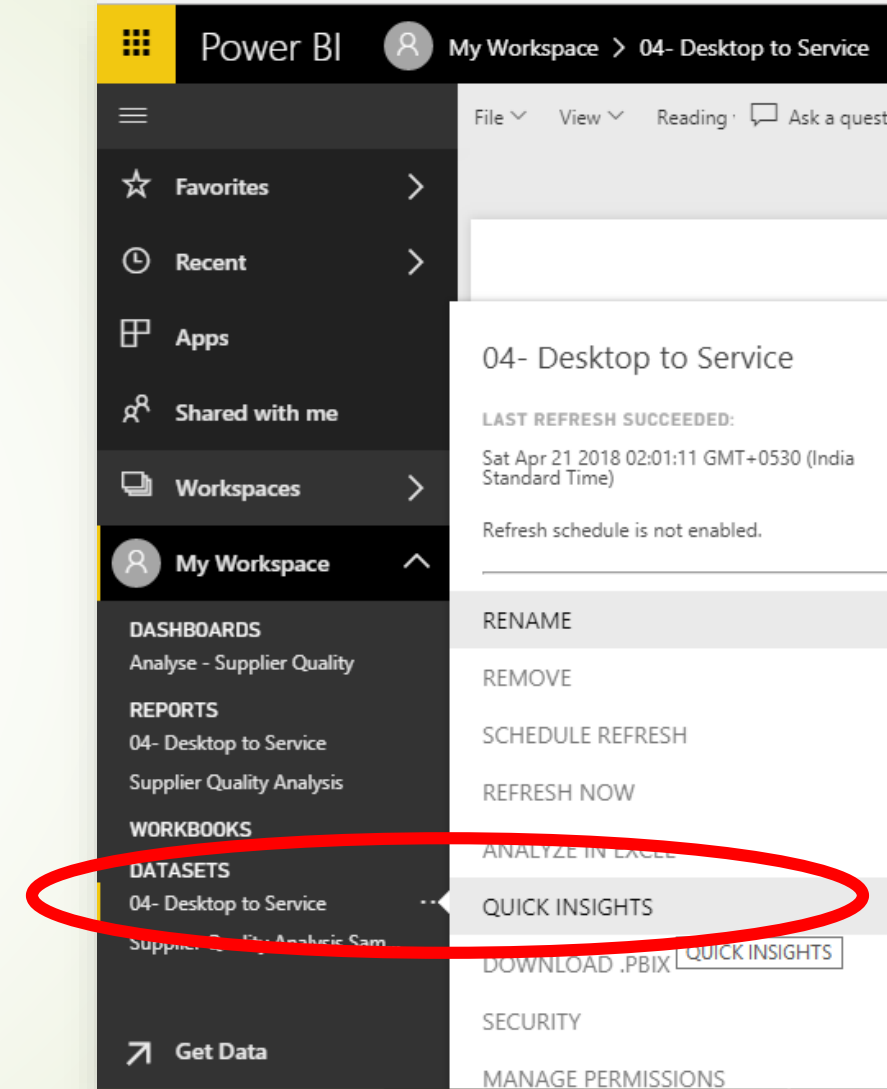
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Quick Insights

My workspace - > Datasets -> Options in the right side interface - and click **Quick Insights**.

Once the insights are ready - you will get notified for the same. Access from notifications or View Insights.

All insights have a text and a visual elements. Just go on and see if you want to drill down to any of the insights.



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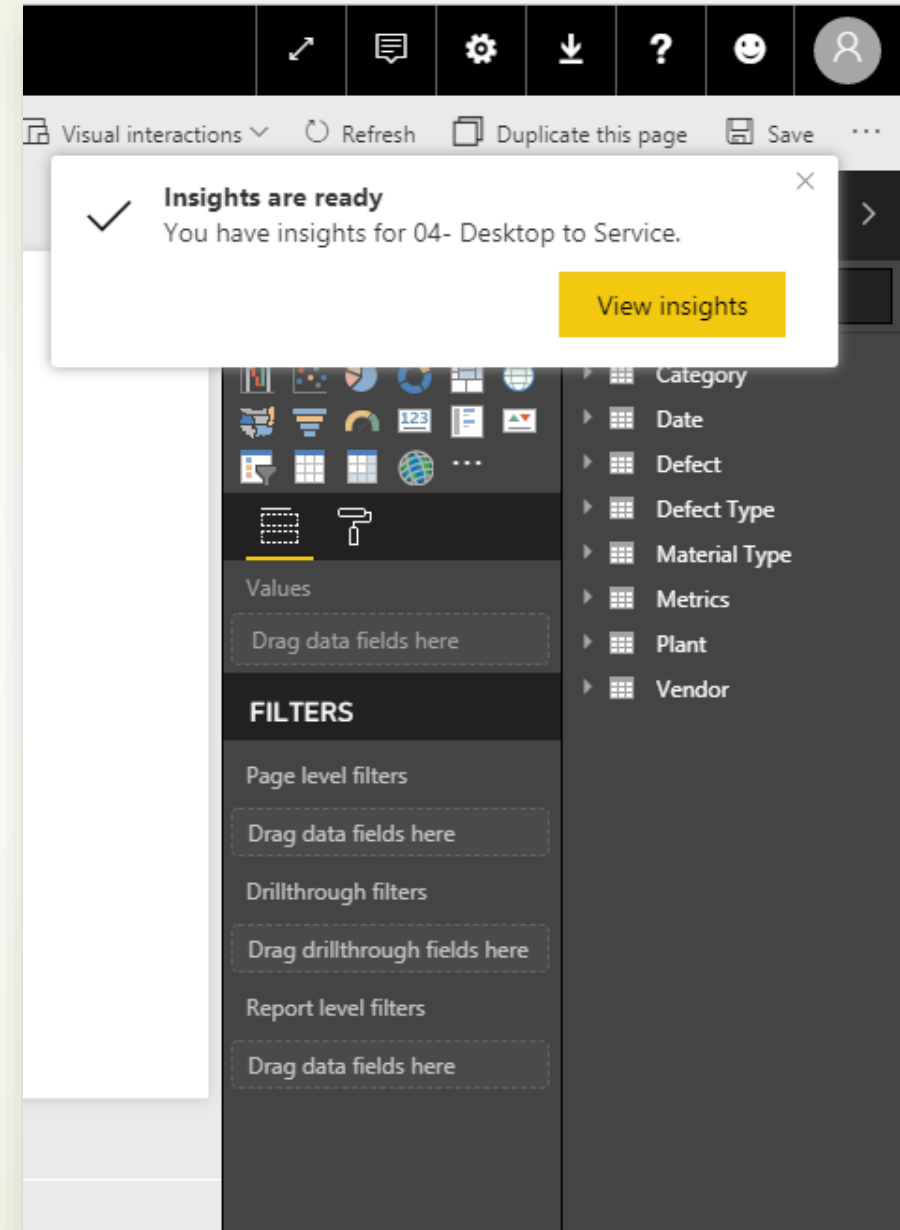
Quick Insights

You can pin it, view details - that easy.

There is a small caveat here - these algorithms run on the whole data.

We have another way of having the insights run on a small set of data - just go to a tile and click Get Insights - this time the same algorithm will run but on the underlying filtered dataset.

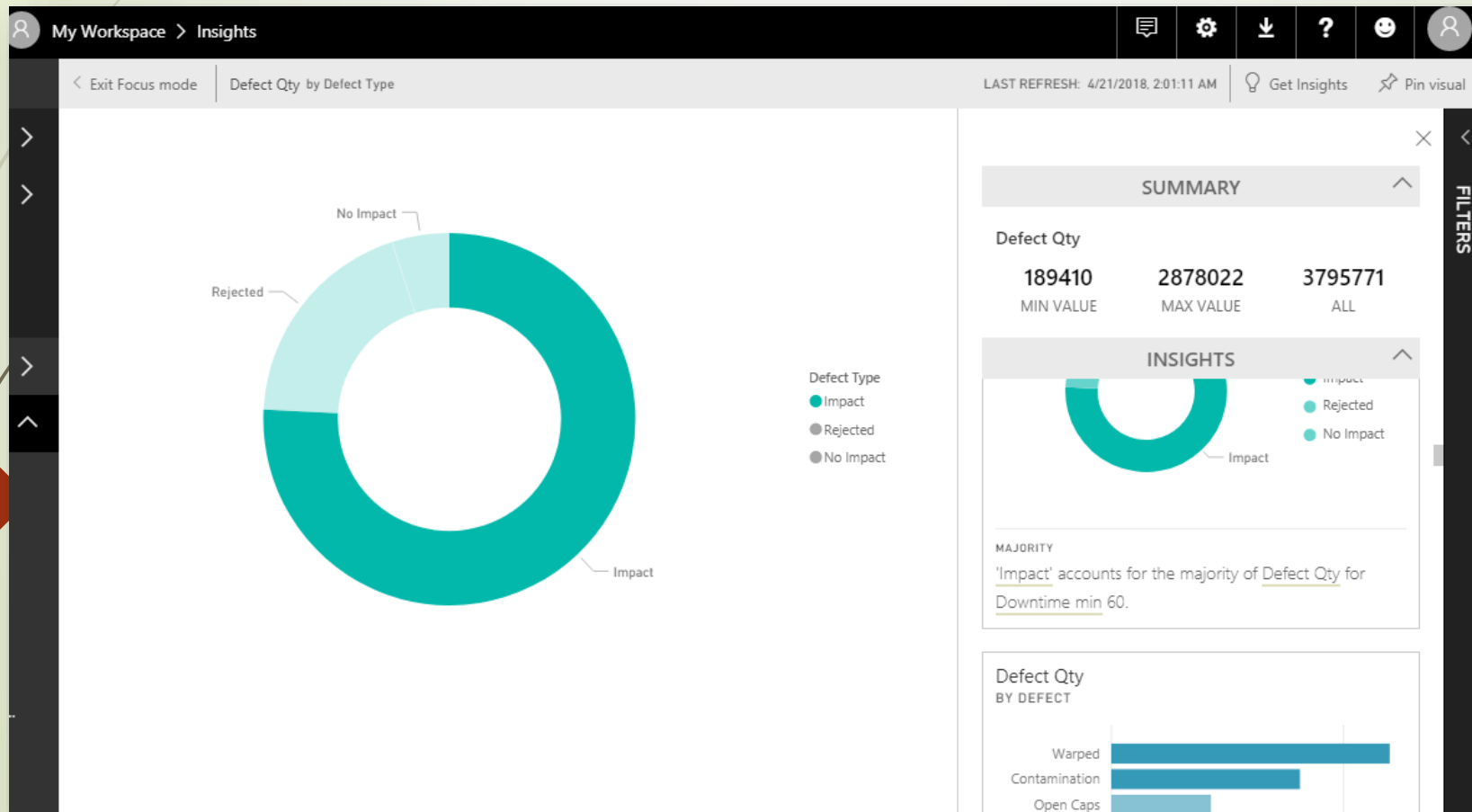
New Visuals - click it - for a better view - run insights again :-) - No end to it - Pin it when you want it. So no complex analysis required - it works like a charm. No queries - No Code. Scary ? ;-)



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Quick Insights

Let's randomly play around with the Quick Insights Data



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Create Dashboard – New

Hover over the visual you want in a Dashboard - select the Pin –

A Dialog will show you preview of the chart - how it will look on the dashboard - you will have the option to pin to an existing dashboard / create a new one.

Click the new dashboard in the left nav. Add more files.

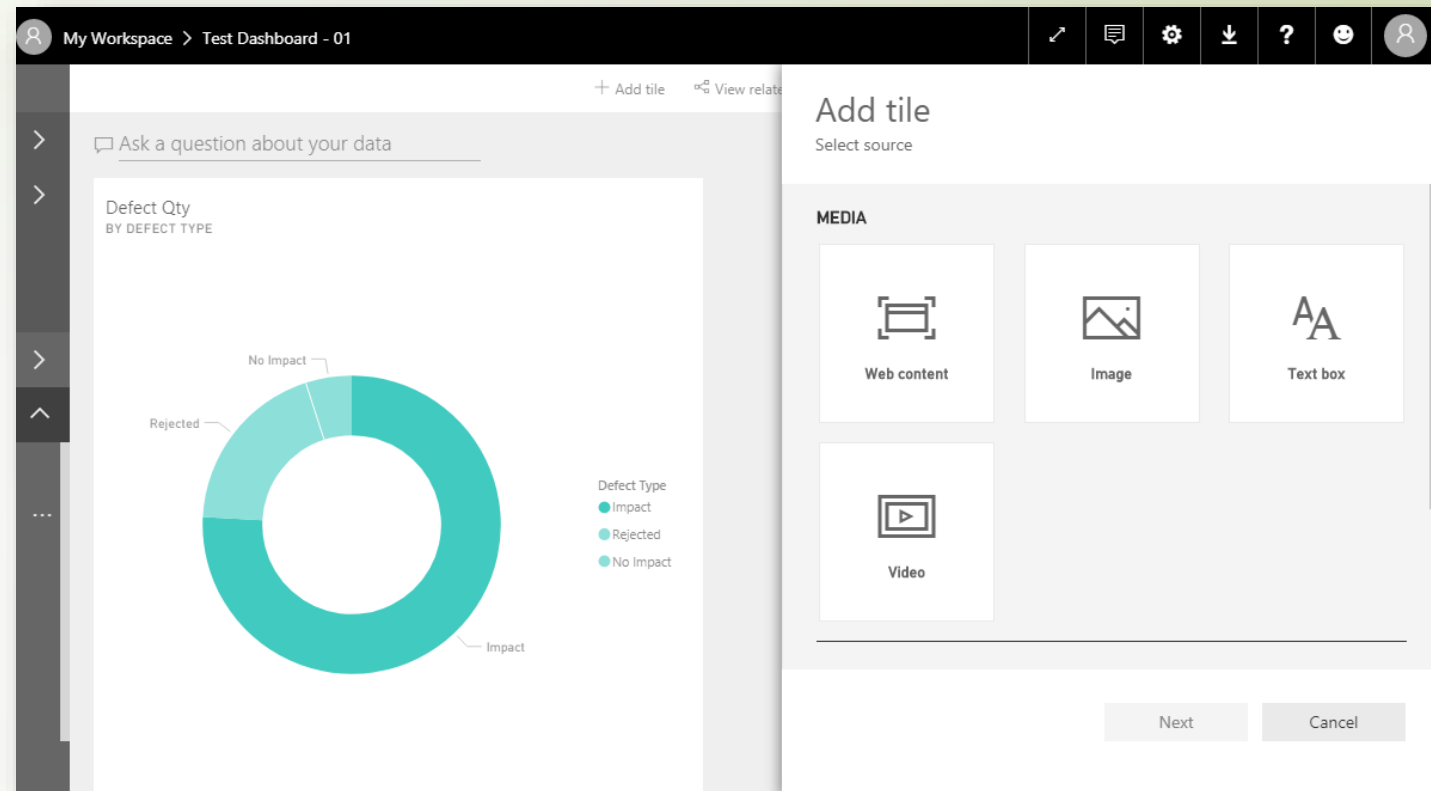
You can move the tiles around, resize . Once you are ok with the placements. Go ahead - make the changes to the Titles, SubTitles etc.

We can even change where the tile points to - by default it points to the underlying source.

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Add Tiles – Non Report

You can add non-report tiles to your dashboards Add Tile -> Media Section . Add a text tile. Resize etc.



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Navigation – How to Navigate Easily

My Workspace, Workspaces [are Shared with you].

Navigate between DASHboards, DATasetS and reports in a workspace

Shared with Me - Dashboards shared with you.

Recent Tab - recently accessed and what time. Click on it.

You can also mark Dashboards as favorite.

Set a Dashboard as Featured one - it will be like your home page - you will first land on that directly.

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Small introduction to Q&A Natural Language

This is the fun part actually.

Joins - how many know how to do join queries? Not everybody has the time and inclination.
Ask question in - Ask question box.

You can change the visualization by the way. And even pin them.

Two other ways –

1. you can enhance the data actually. Users might tend to ask questions that are not relevant.
2. Or they are not sure how to use this feature well. What can be done as a first step is that we can specify some options here - that are default. Some samples show up automatically - let's see how we can add manually.

Dashboard - Settings - Datasets - Featured Q&A questions.

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Power BI Settings

Refresh history.

Gateway connection

To use a data gateway, make sure the computer is online and the data source is added in [Manage Gateways](#).

☒ Use your data gateway (personal mode)

☐ Use an on-prem data gateway

Apply Discard

Data source credentials

Parameters

Scheduled refresh

Q&A and Cortana

Featured Q&A questions

Featured questions are shown as suggestions for this dataset in Q&A.

Please enter a featured question

[Add a question](#)

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Live Pages

When you pin a report it is more like a snapshot - and it doesn't change with the associated filters being changed in the actual report.

So in order to do that and keep the whole report interactive - we can use the Pin Live Page feature.

Changes are reflected accordingly.

