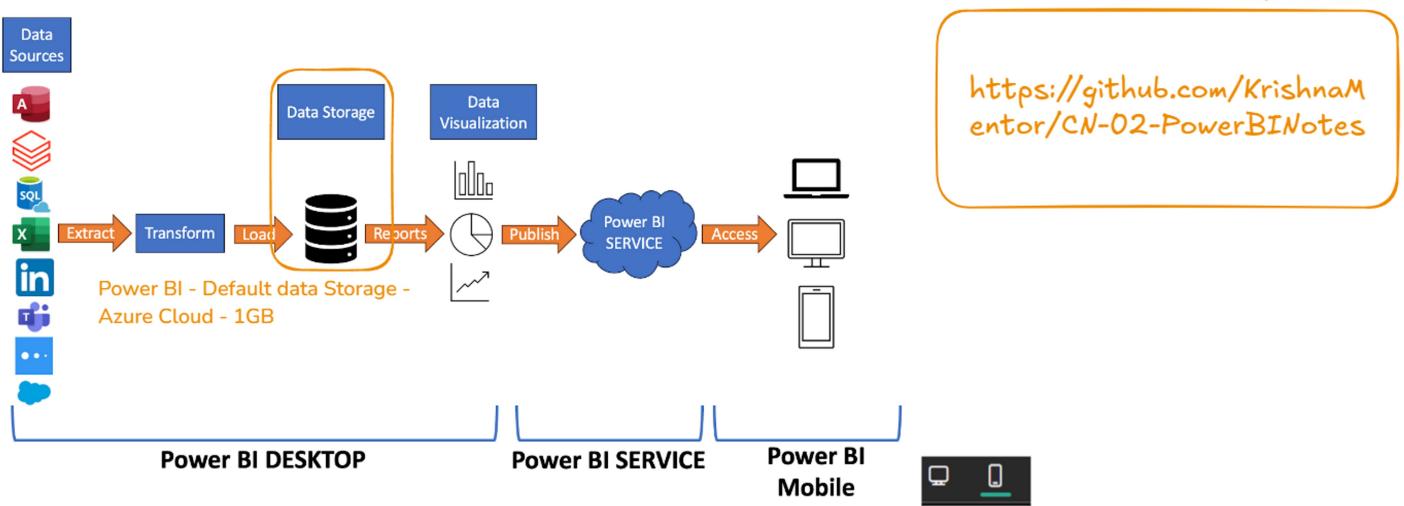


## Basic functionality of PowerBI and Data Transformations

- Features of Power BI.
- Workflow of Power BI.
- Power Query Editor.
- Get Data Source.
- Data Transformation Process.
- Transform / Add Column Tab.
- Create Your own Data.

	Product ID	Product Name	Product Rank	+
1	1	Pen	2	
2	2	Pencil	3	
3	3	Pen Set	1	
4	4	Desk	5	
5	5	Binder	4	
+				



## FEATURE OF POWER BI?

### 1. Connect, transform and load millions of rows of data

- Access data from virtually anywhere (database tables, flat files, web, cloud services, folders, etc.), and create fully automated workflows to extract, transform and load data for analysis

ETL

### 2. Build relational models to blend data from multiple sources

- Create table relationships to analyze holistic performance across an entire relational data model

### 3. Define complex calculations using Data Analysis Expressions(DAX)

- Enhance datasets and enable advanced analytics with powerful and portable DAX expressions

### 4. Bring data to life with interactive reports and dashboards

- Build professional-quality reports and dashboards with best-in-class visualization tools

### 5. Develop a versatile, in-demand skill set

- Power BI is the industry leader in self-service BI, and the skills you build in this course will be highly transferrable

## Why We Use Power BI

---

### 1. Data Visualization:

- Power BI helps transform raw data into interactive and visually appealing reports and dashboards. It makes complex data easy to understand.

### 2. Integration:

- Power BI integrates seamlessly with various data sources like Excel, SQL Server, cloud services, and more, allowing you to consolidate and analyze data from different platforms.

### 3. Business Intelligence:

- With Power BI, you can gain insights into your business performance, track key metrics, and make data-driven decisions..

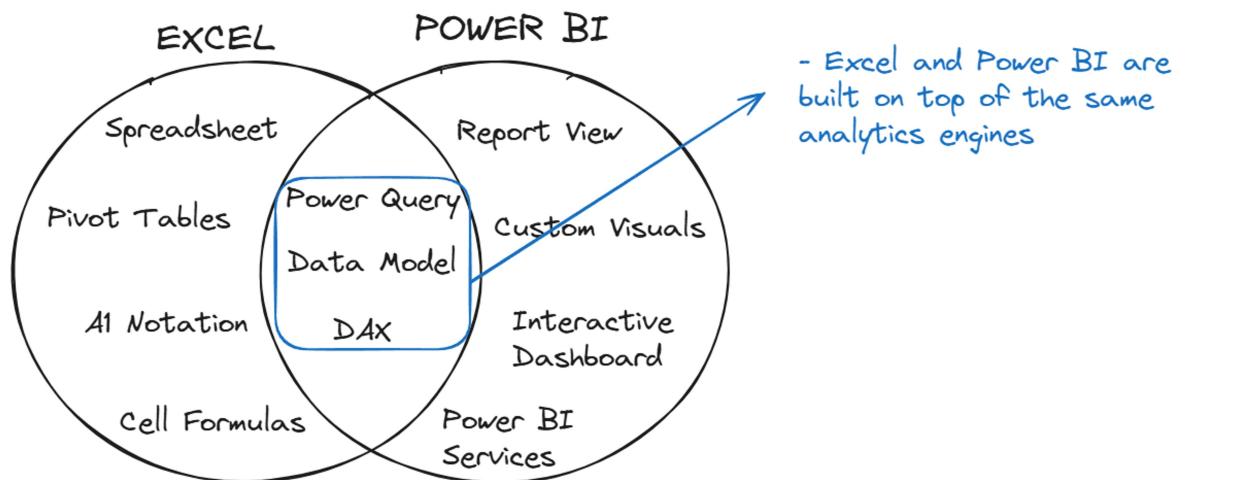
#### 4. Real-time Data:

- You can connect to real-time data sources to ensure your reports and dashboards reflect the most up-to-date information.

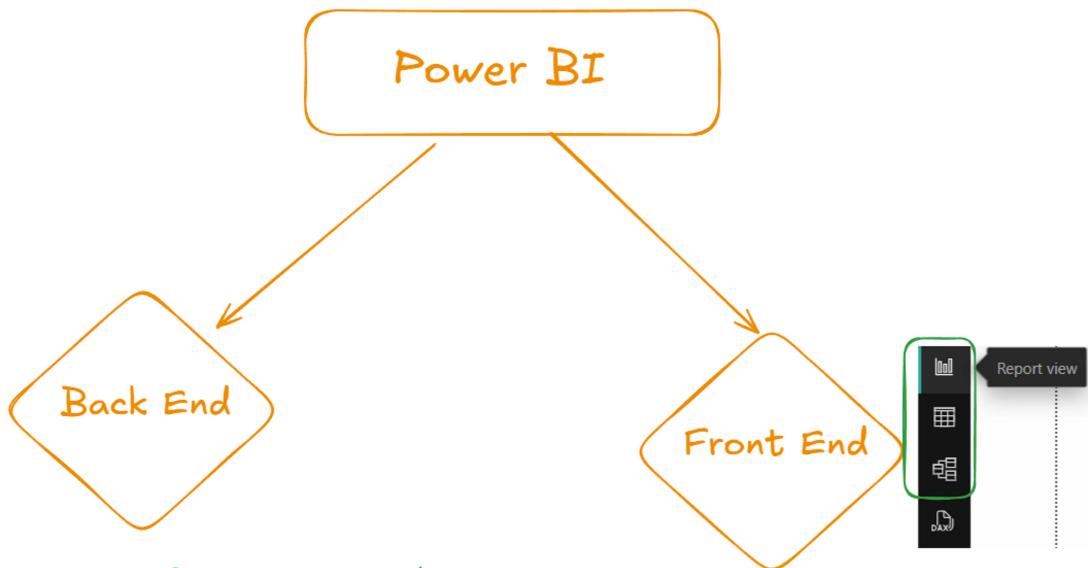
#### 5. User-Friendly Interface

- The intuitive interface makes it accessible for users of all skill levels, from beginners to advanced analysts.

### EXCEL VS. POWER BI



- Power BI takes the same data transformation and modeling capabilities and adds powerful visualization and publishing tools
- Transitioning is easy; you can import an entire data model directly from Excel!



Raw Data ----- Transformation -----> Clean  
**[Power Query Editor]**

### Measures Vs Calculated Columns

Price	Quantity	Sales
100	10	= 100 * 10 = 1000
200	20	= 200 * 20 = 4000
500	30	= 500 * 30 = 15000
300	40	= 300 * 40 = 12000
200	50	= 200 * 50 = 10000
100	100	= 100 * 100 = 10000

Calculated Column  
 ↗ 'row Context'

- Report View - Dashboard [Visualization]
- Data View / Table View [Review your Table]
  - DAX [Data Analysis Expression]
  - DAX is generally used for calculating measures / CC which is not being present before.

ItemPrice , Quantity for 1000 records.

→ SUMX( 'Table Name', Expression)  
 Total Revenue = ItemPrice \* Qty.

- Model View - Is being used to build a relationship between tables.

Measures - Aggregation

Calculated Column - Conditions or basic Formula [IF,IFs]

		Calculated Columns		
A	B	C	D	E
Qty	Price	Sales Value		
10	100	1000		
20	200	4000		
30	300	9000		
40	400	16000		
50	500	25000		
60	600	36000		
70	700	49000		
80	800	64000		
90	900	81000		
100	1000	100000		
		385000		

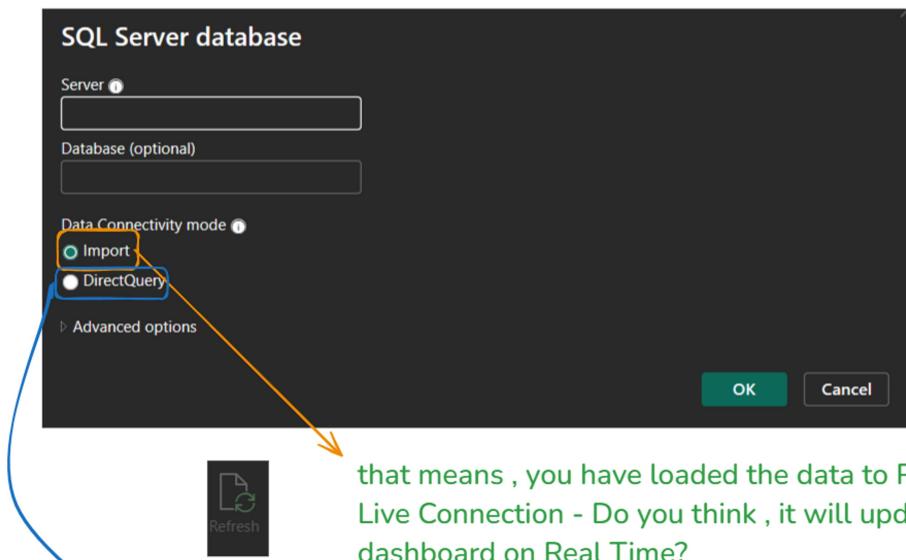
SUMX - Iterative Functions.

(10 \* 100) + (20 \* 200) + (30 \* 300) + .....  
 .... to get 3,85,000.

Calling Sum Function - Measure

## Work Flow Of Power BI

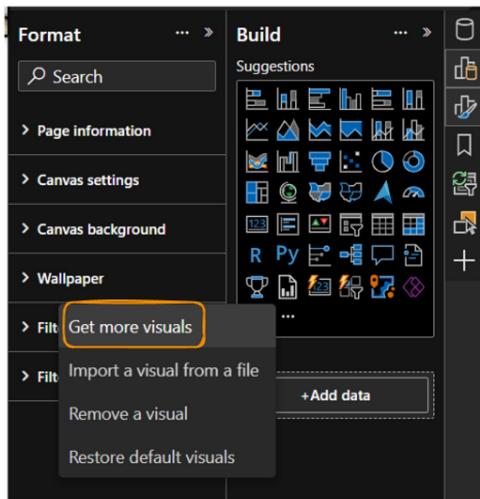
- Step 1 : Get Data > Connect Source > To fetch Data.
- Step 2 : Bring the data to backend for the Transformation.
- Step 3 : Load the data back to Front End.
- Step 4 : To build a relationship , if possible between multiple tables.
- Step 5 : Try to get more insightful figures using DAX [Data View].
  - DAX are largely being used to calculate columns based on some conditions or to calculate measures for finding Total Profit, Revenue, Return Rate, Profit Margin, etc.
- Step 6 : Build your Visuals with Visualization Tool or with 3rd Party Visuals. [Report View]
- Step 7 : Publish your Dashboard for other people to engage.



that means , you have loaded the data to Power BI,  
Live Connection - Do you think , it will update your  
dashboard on Real Time?

Here , your dataset will always be present outside of Power BI,  
So, there is no control of Power BI.  
SQL database itself update[refresh] the data automatically,  
which will directly update your dashboard on real time.

## Exploring the interface



**Power BI visuals**

By clicking 'Add' and/or 'Download Sample' and downloading a visual, you agree to the provider's Terms and Conditions and Privacy Policy on the visual's page and agree Microsoft can share your account details to provider for their transactional purposes. Use of Microsoft's AppSource is subject to the Microsoft Commercial Marketplace Terms and Privacy Statement.

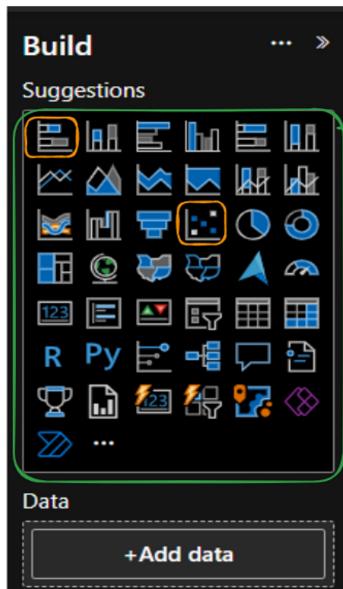
All visuals    Organizational visuals    AppSource visuals     Search

Explore all available visuals to magnify your business insights [Learn more](#)

Filter by All Sort by: Popularity

Zebra BI Tables 7.0	Performance Flow	Icon Map Pro	Sunburst by Power...	Water Cup
Zebra BI ★★★★★ (12)	xViz LLC dba Lumel ★★★★★ (16)	Tekantis ★★★★★ (2)	TRUVIZ INC ★★★★★ (5)	Daniel Szentimrey-Harrach
Drill Down Pie PRO...	Inforiver Writeback...	hi-chart Reporting ...	Enlighten Storyteller	Text Filter
ZoomCharts ★★★★★ (13)	xViz LLC dba Lumel ★★★★★ (1)	CP Corporate Planning G... ★★★★★ (1)	ENLIGHTEN DESIGNS	Microsoft Corporation ★★★★★ (184)

Animated Bar Chart...	Scroller
Wishyoulization ★★★★★ (44)	Fredrik Hedenström ★★★★★ (47)



Build a Visual

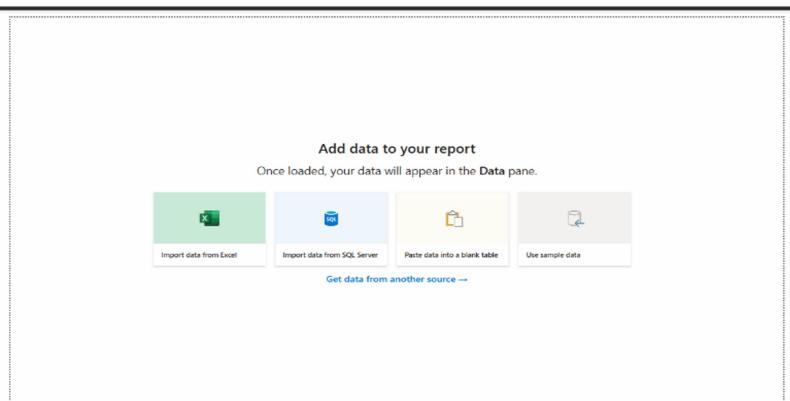


Source path of recent loaded file

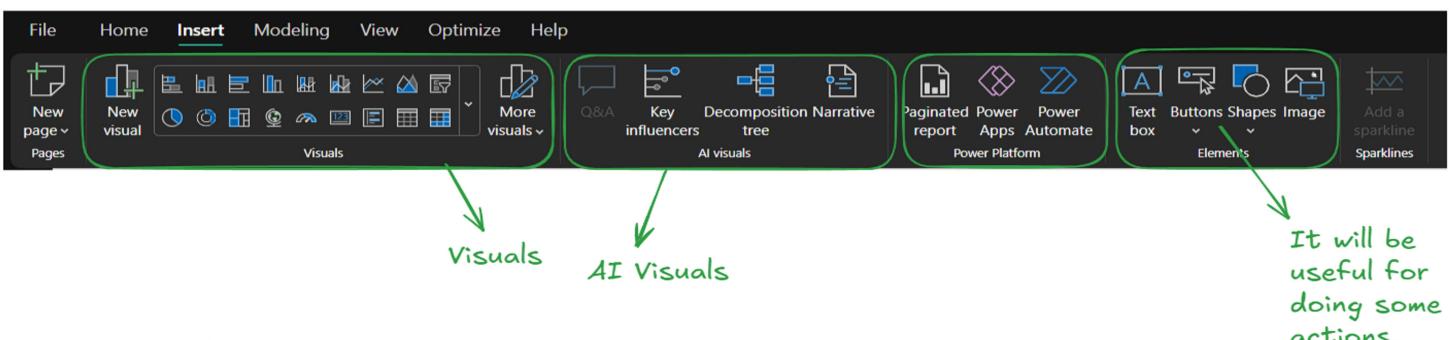
Power Query Editor

Fetch the data from multiple platform

Visuals



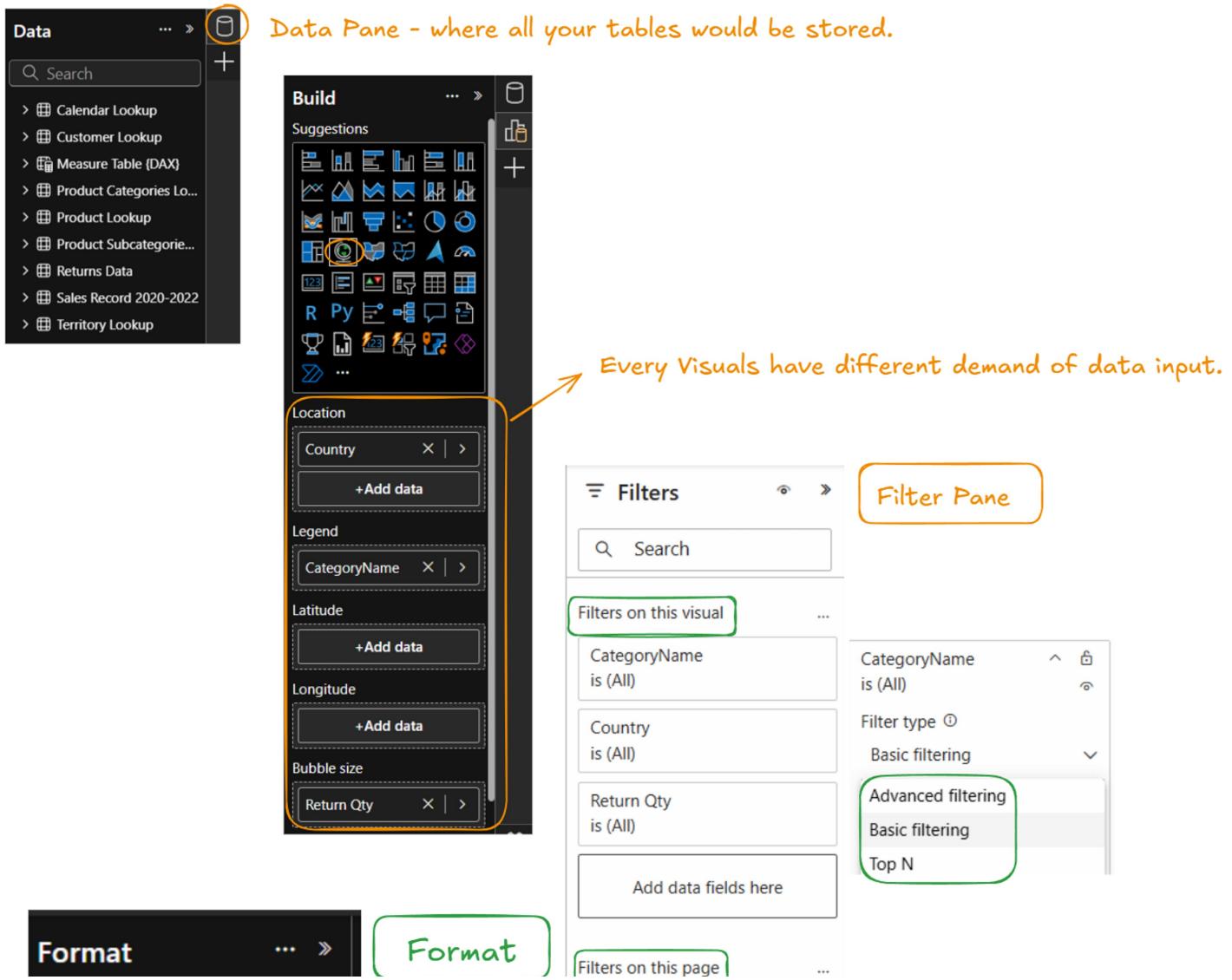
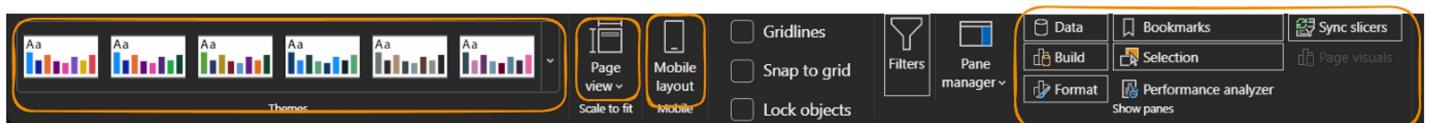
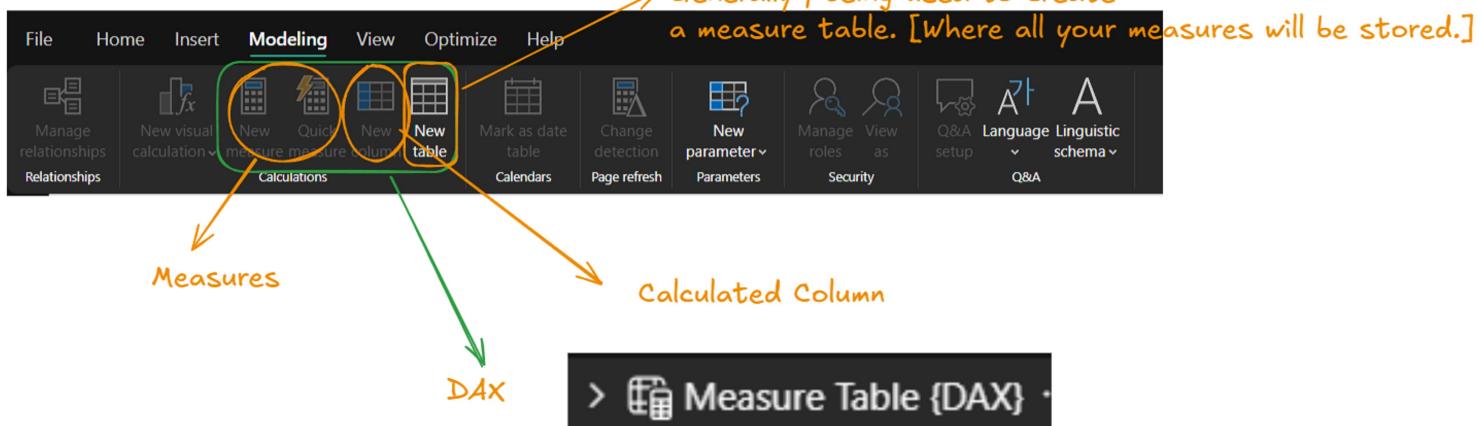
dotted line , is the plot area  
for Canvas [Dashboard]



Visuals

AI Visuals

It will be  
useful for  
doing some  
actions.



The screenshot shows the 'Format' pane in Microsoft Power BI. On the left, a sidebar titled 'Format' has tabs for 'Search' and 'Visual Properties'. The 'Visual Properties' tab is selected, showing a list of options:

- > Size and style
- > Title (On)
- > Map settings
- > Legend (On)
- > Bubbles
- > Category labels (Off)

To the right of this sidebar, there are two main sections:

- Format** (highlighted with a green rounded rectangle):
  - Filters on this page ...
  - Add data fields here
- Filters on all pages** (highlighted with a green rounded rectangle):
  - ... (ellipsis)
  - Add data fields here

A blue arrow points from the text "It all depend on what visuals you have selected." to the 'Title' option in the sidebar.

*It all depend on what visuals you have selected.*