

WORKSHOP:
POWER BI
FOR BEGINNER

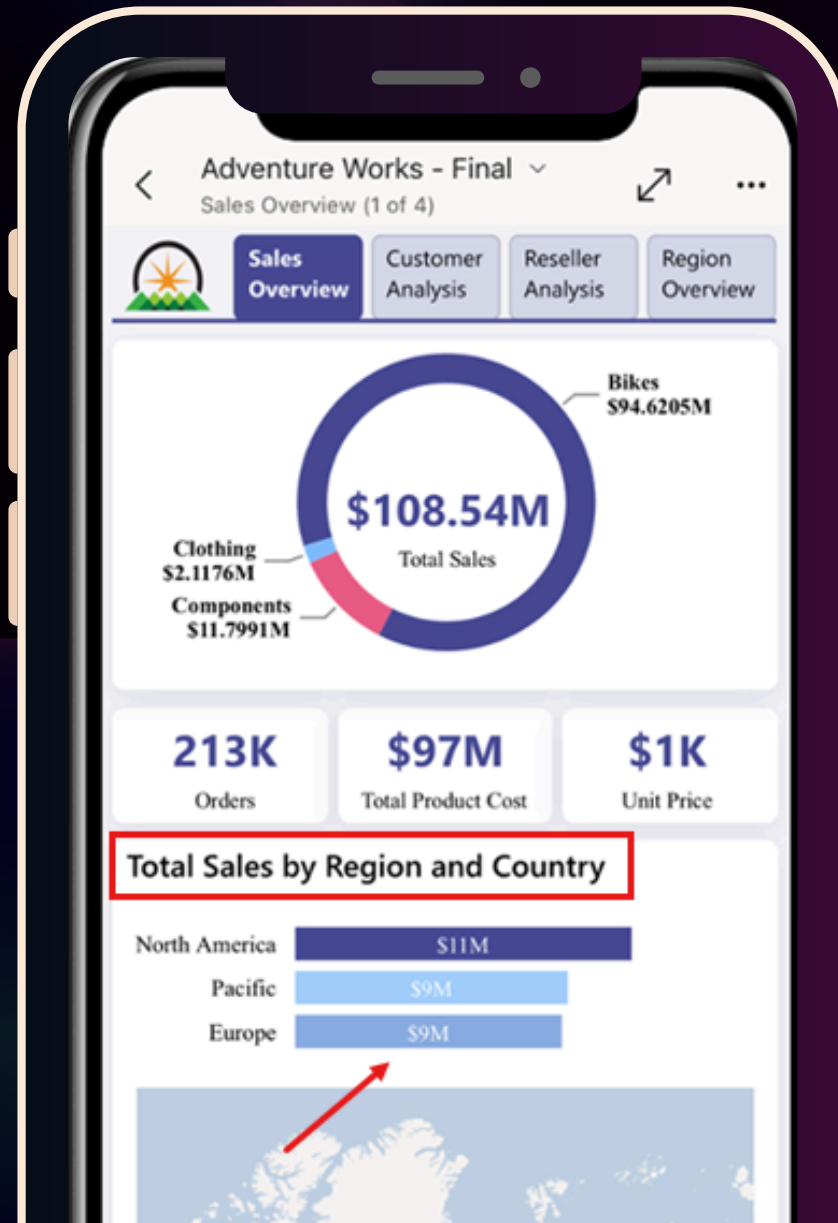
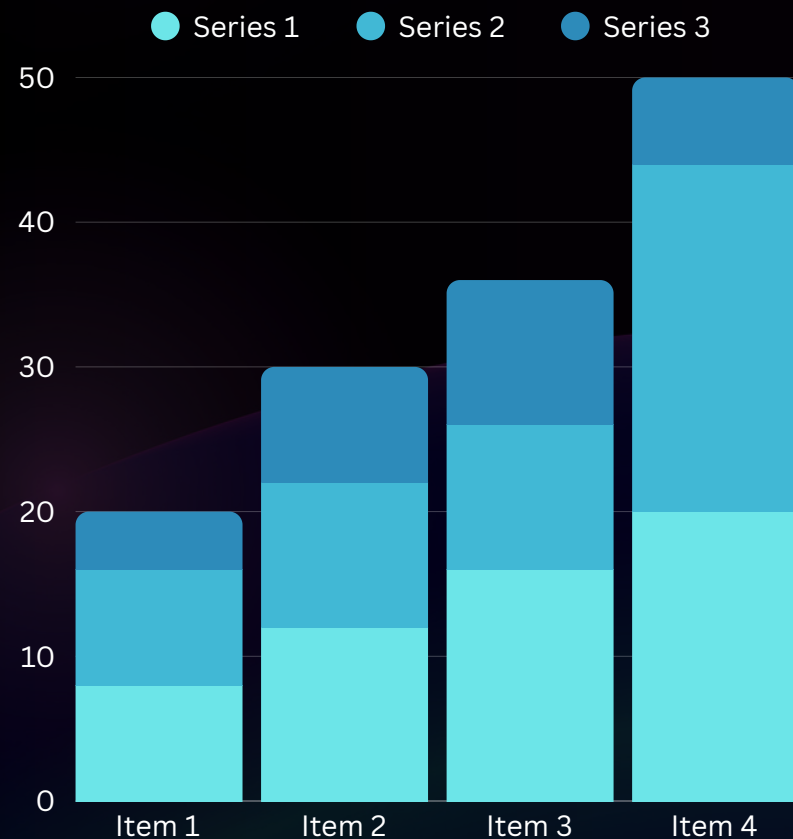
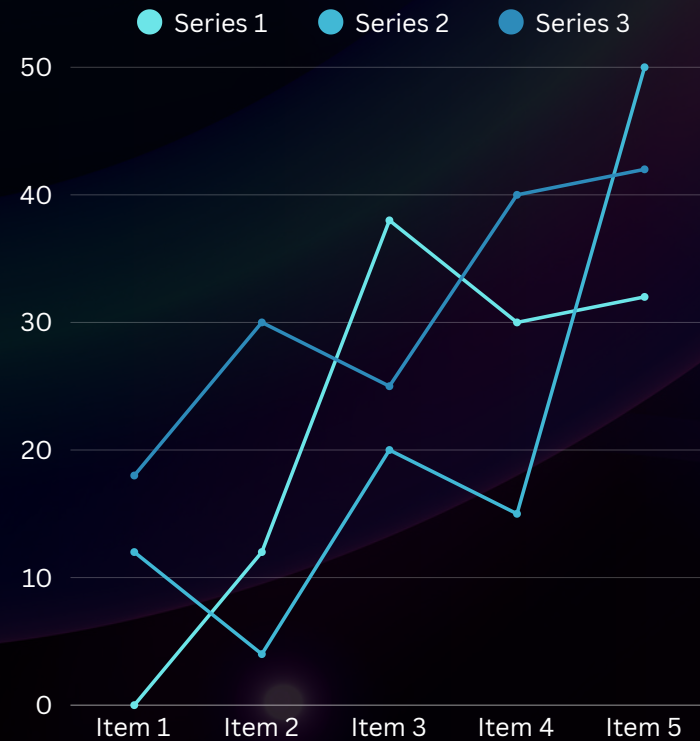
WHAT IS POWER BI ?



- Power BI is a Business Intelligence (BI) and data visualization tool developed by Microsoft. It helps organizations analyze their data, share insights, and make data-driven decisions.
- Power BI allows users to create interactive reports, dashboards, and visualizations from various data sources, making it an essential tool for modern business analytics.
- Tableau, Metabase, Apache Superset, Zoho Analytics, IBM Cognos Analytics and etc



TYPE OF POWER BI



Power BI Desktop

Windows-based application for creating reports and visualizations. Used by data analysts and developers to connect to data sources, clean data, and design detailed reports.

Power BI Service (Cloud-Based)

A cloud platform where users can publish, share, and collaborate on reports and dashboards.

Power BI Mobile / Apps

Mobile apps for iOS, Android, and Windows devices to access Power BI dashboards and reports on the go.



STEP TO CRETE DASHBOARD

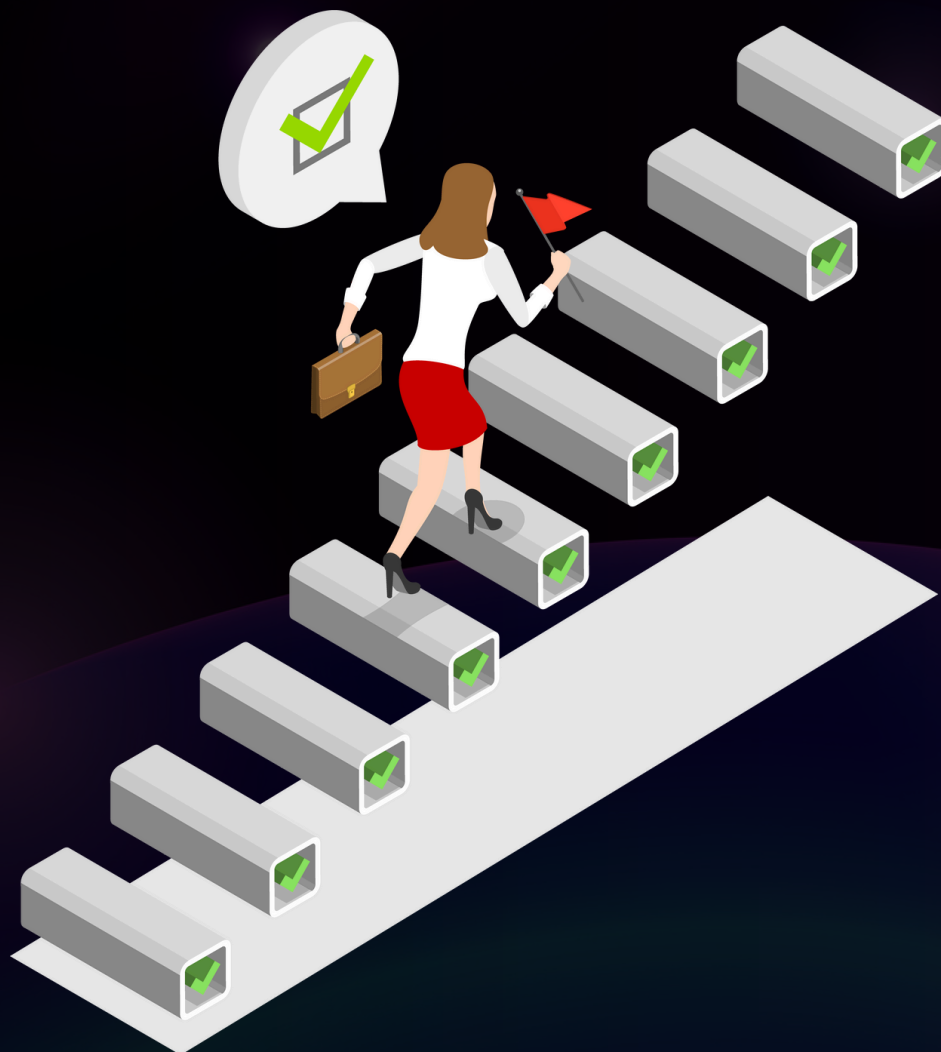
Connect to the
data source

Use different visual
to create a report

Publish the report
on the Web

Combine reports to
make a Dashboard

Share the
Dashboard



OPTIONS AVAILABLE IN DATA CONNECTIVITY MODE

IMPORT

Data is loaded into Power BI and stored in-memory

DIRECT QUERY

Queries are run directly on the source database

Push/Streaming

Data pushed via API or streaming services into Power BI

Live Connection

Connects live to data models like SSAS, Power BI dataset, or Azure AS.

Composite Models

Combines Import and DirectQuery in one model



DATA TRANSFORMATION

Query Editor is a robust feature within Power BI that allows users to prepare, clean, and transform raw data into a structured format suitable for analysis. It eliminates the need for external preprocessing tools.

Cleaning

Effective cleaning techniques include removing duplicates and fixing formatting issues in datasets.

Preparation

Preparation steps involve transforming data types and creating calculated columns for analysis readiness.

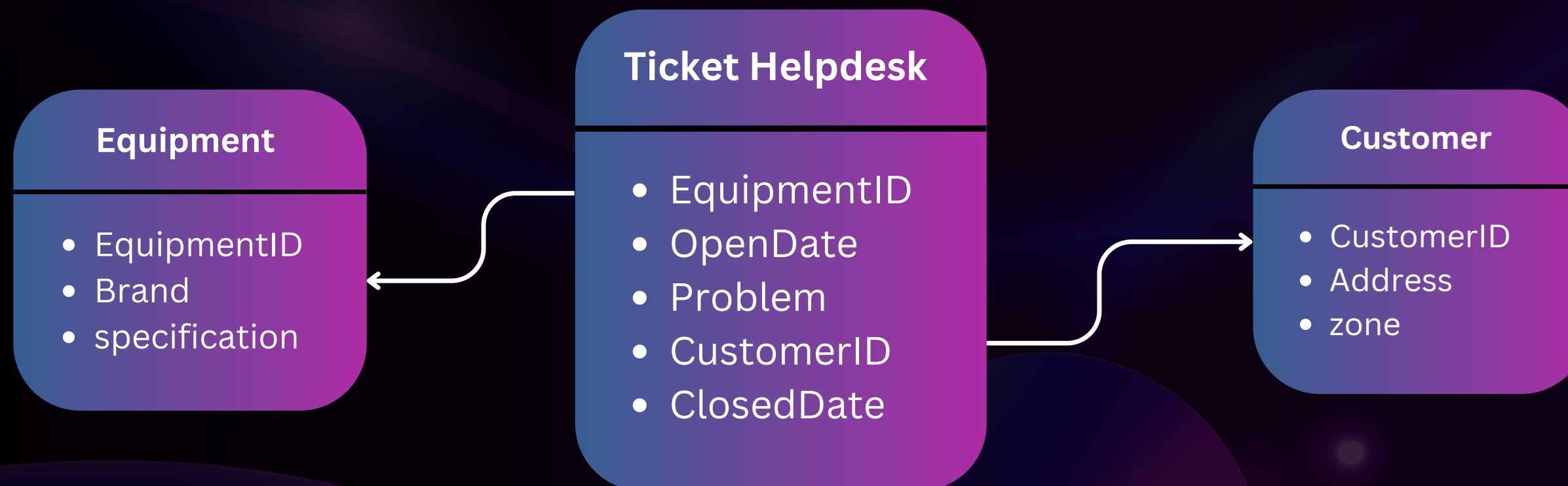
Analysis

Properly prepared data ensures accurate analysis and insightful reporting, leading to better decision-making



DATA MODELING

Data modeling in Power BI refers to the process of defining relationships between different tables to create a cohesive and meaningful dataset. It is foundational to performing complex analyses and generating insightful reports.



Why is Data Modeling Critical?

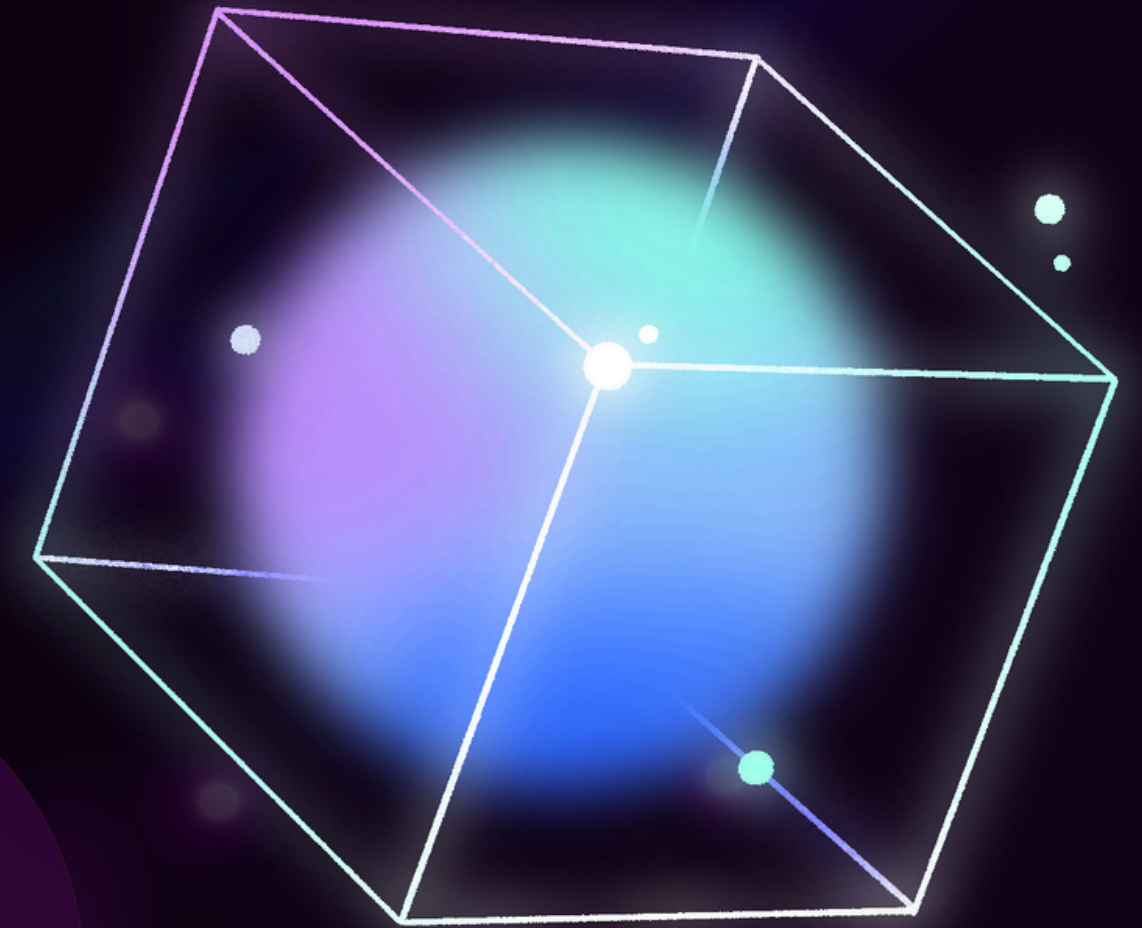
- Facilitates seamless integration of data from various sources.
- Enables multi-dimensional analysis and enhances report accuracy.

DAX (DATA ANALYSIS EXPRESSIONS)

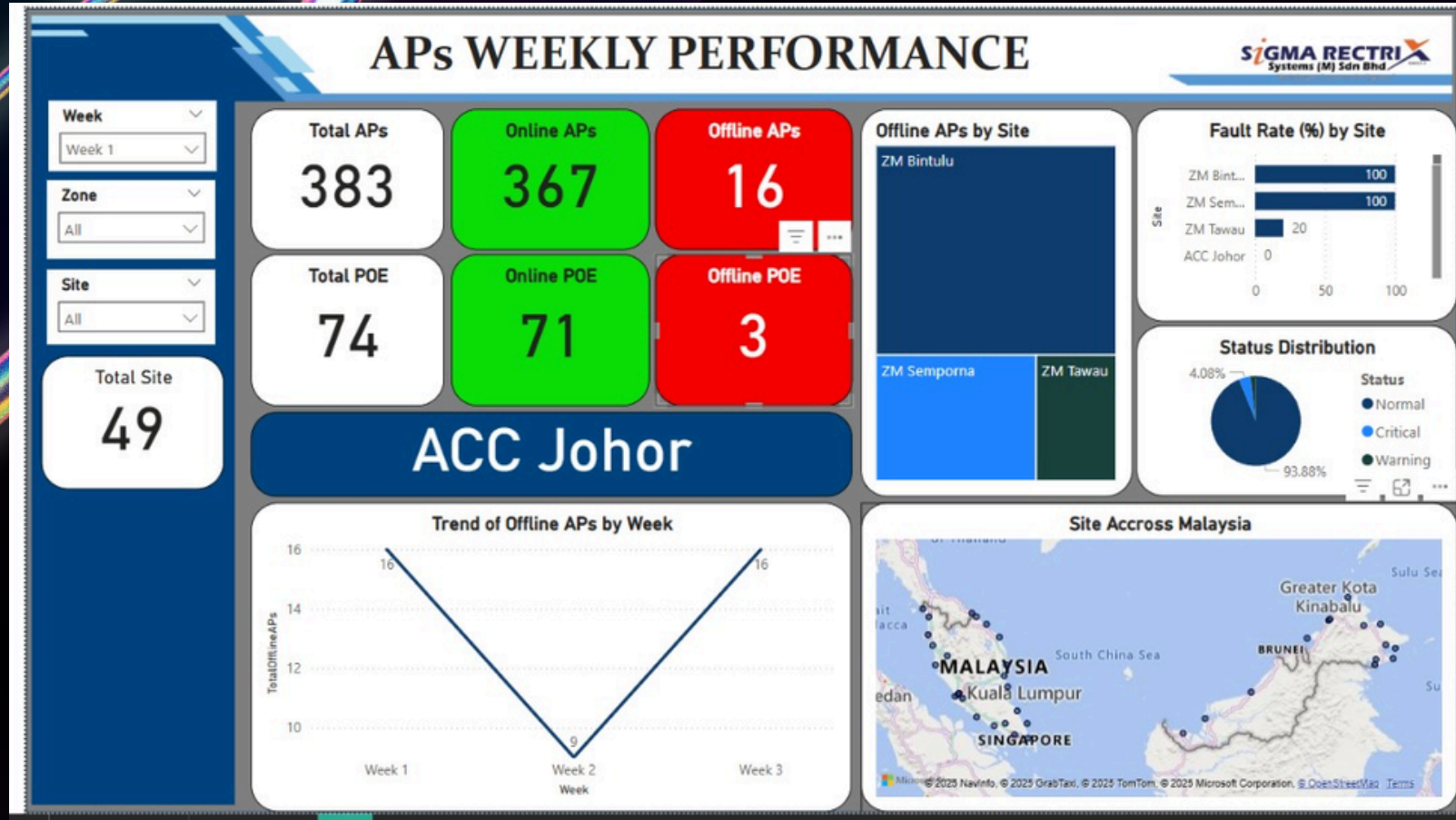
DAX is a powerful formula language used in Power BI to create custom calculations and aggregations. It allows users to go beyond pre-defined options and tailor analyses to meet specific business needs.

DAX functions allow you to perform various operations on data, such as:

- **Aggregation** (e.g., summing, averaging)
- **Mathematical operations** (e.g., addition, subtraction)
- **Time intelligence** (e.g., calculating year-over-year growth)
- **Filtering and condition-based logic** (e.g., conditional sums)
- **Text manipulation** (e.g., concatenating strings)



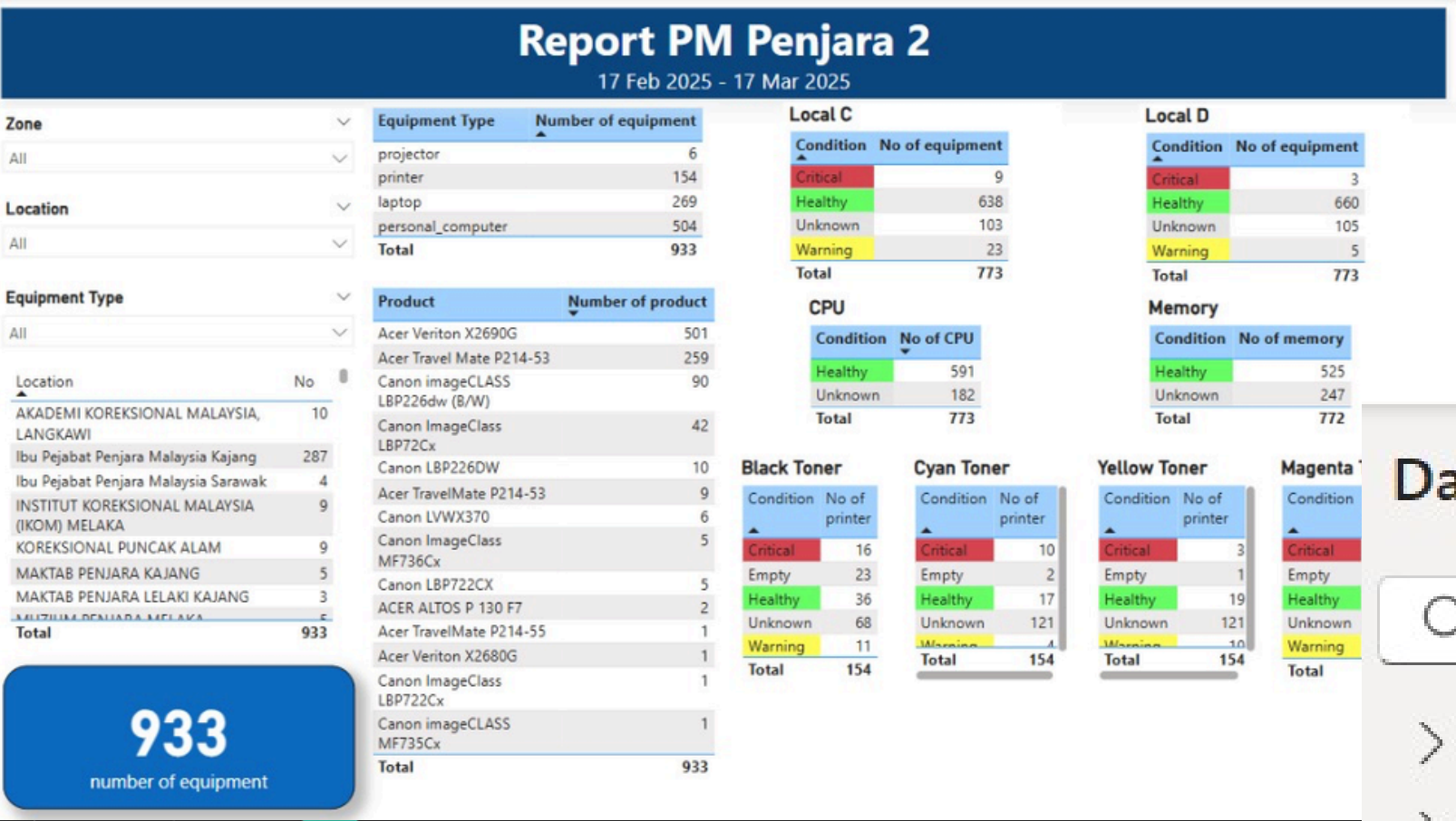
EXAMPLE DASHBOARD



	D	E	F	G	H	I	J	K	L	M	N	O
	Site MN Johor MN Kedah dan Perlis MN Kedah dan Perlis (Operasi)) MN Kelantan Status Critical Normal Warning											
	Site	Total APs	Online APs	Offline APs	Total POE	Online POE	Offline POE	Fault Rate (%)	Status	Remark	Latitude	Longitude
	ACC Johor	1	1	0	0	0	0	0	Normal		1.4922	103.7416
	ACC Klang	1	1	0	0	0	0	0	Normal		3.0028	101.3967
	Ibu Pejabat APMM	101	101	0	14	14	0	0	Normal		2.924	101.6964
	MN Johor	12	12	0	2	2	0	0	Normal		1.9373	103.3666
	MN Kedah dan Perlis	5	5	0	1	1	0	0	Normal		6.121	100.367
	MN Kedah dan Perlis (Operasi))	4	4	0	2	2	0	0	Normal		6.121	100.367
	MN Kelantan	7	7	0	1	1	0	0	Normal		6.1254	102.2381
	MN Melaka dan Negeri Sembila	8	8	0	3	2	1	0	Normal		2.1896	102.2501
	MN Pahang	14	14	0	3	3	0	0	Normal		3.8126	103.3256
	MN Perak	12	12	0	2	2	0	0	Normal		4.5975	101.0901
	MN Pulau Pinang	9	9	0	2	2	0	0	Normal		5.4164	100.3327
	MN Sabah	15	15	0	3	3	0	0	Normal		5.9804	116.0735
	MN Sarawak	21	21	0	6	6	0	0	Normal		1.5533	110.3592
	MN Selangor	9	9	0	2	2	0	0	Normal		3.0738	101.5183
	MN Terengganu	13	13	0	3	3	0	0	Normal		5.329	103.137
	PB Aceh	1	1	0	0	0	0	0	Normal		4.2328	100.6294
	PB Kuala Kedah	1	1	0	0	0	0	0	Normal		6.121	100.367
	PB Kuala Perlis	2	2	0	0	0	0	0	Normal		6.4333	100.1333
	PB MN Kelantan	1	1	0	0	0	0	0	Normal		6.1254	102.2381
	PB MN Pulau Pinang (Batu Ubi)	1	1	0	0	0	0	0	Normal		5.4164	100.3327
	PB MN Sabah Sipanggar	1	1	0	0	0	0	0	Normal		6.0323	116.13
	PB MN Selangor	1	1	0	0	0	0	0	Normal		3.0738	101.5183
	PB ZM Kuala Kedah	1	1	0	0	0	0	0	Normal		6.121	100.367



EXAMPLE DASHBOARD



Data

Search

- > public maintenance_request
- > public preventive_maintenance
- > public res_partner
- > public res_zone



PLEASE SCAN FOR THE FEEDBACK



THANK YOU!

