Power BI for Project Management

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What is Business Intelligence?

Business Intelligence

Using Data to make

"SMART & INFORMED DECISIONS"

Business Intelligence
you will gain?

Make Smart & Informed Decisions

How to use data to make informed and smart decisions.

Having Control of your business

Have a quick view of your entire business in a report or dashboard to make a better control.

Tell a story using Data

Tell a story from your data using report and dashboard.

Why you Should Learn BI

1. Better control of your project
2. Reduce in-efficiencies
3. Better allocation of resources
4. Career Growth
5. Stay ahead of the curve
6. Make an Impact

Job landscape

By 2025, new jobs will emerge and others will be displaced by a shift in the division of labour between humans and machines, affecting:

97 million
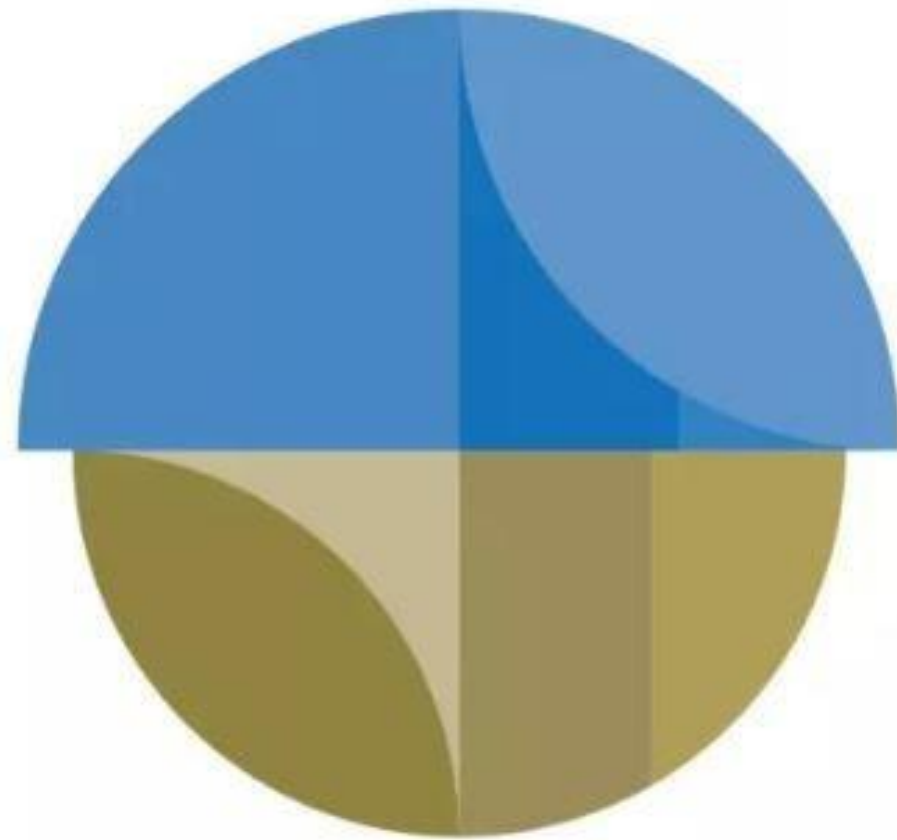
85 million

Growing job demand:

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. Big Data Specialists
4. Digital Marketing and Strategy Specialists
5. Process Automation Specialists
6. Business Development Professionals
7. Digital Transformation Specialists
8. Information Security Analysts
9. Software and Applications Developers
10. Internet of Things Specialists

Decreasing job demand:

1. Data Entry Clerks
2. Administrative and Executive Secretaries
3. Accounting, Bookkeeping and Payroll Clerks
4. Accountants and Auditors
5. Assembly and Factory Workers
6. Business Services and Administration Managers
7. Client Information and Customer Service Workers
8. General and Operations Managers
9. Mechanics and Machinery Repairers
10. Material-Recording and Stock-Keeping Clerks

Source: Future of Jobs Report 2020, World Economic Forum.

Institute of Public Accountants/Institute of Financial Accountants - General

Why Microsoft Power BI?

2022 Gartner® Magic Quadrant™ for Analytics and Business Intelligence Platforms

Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms
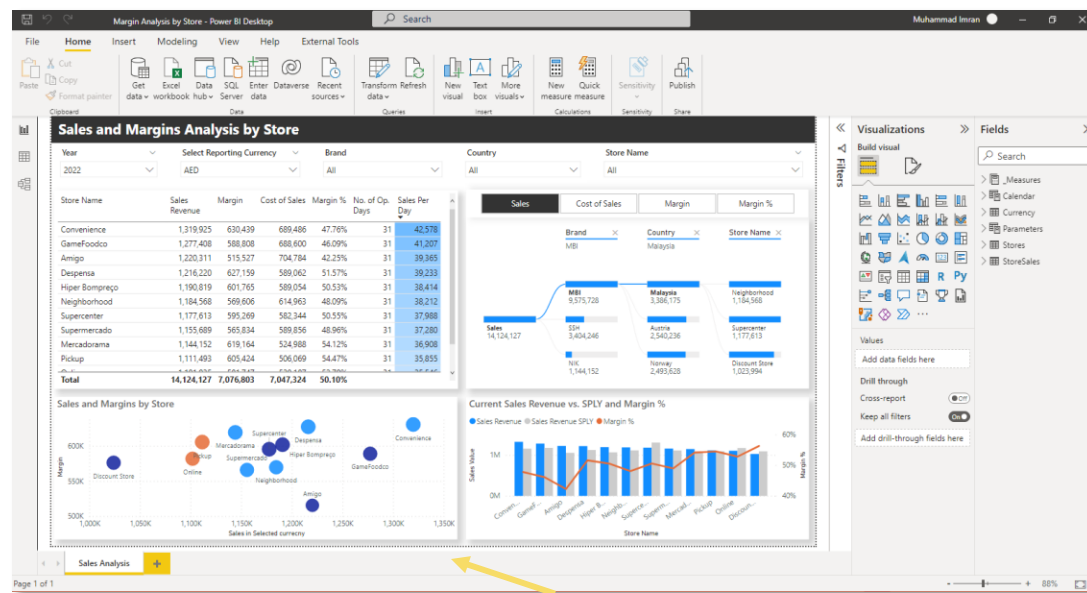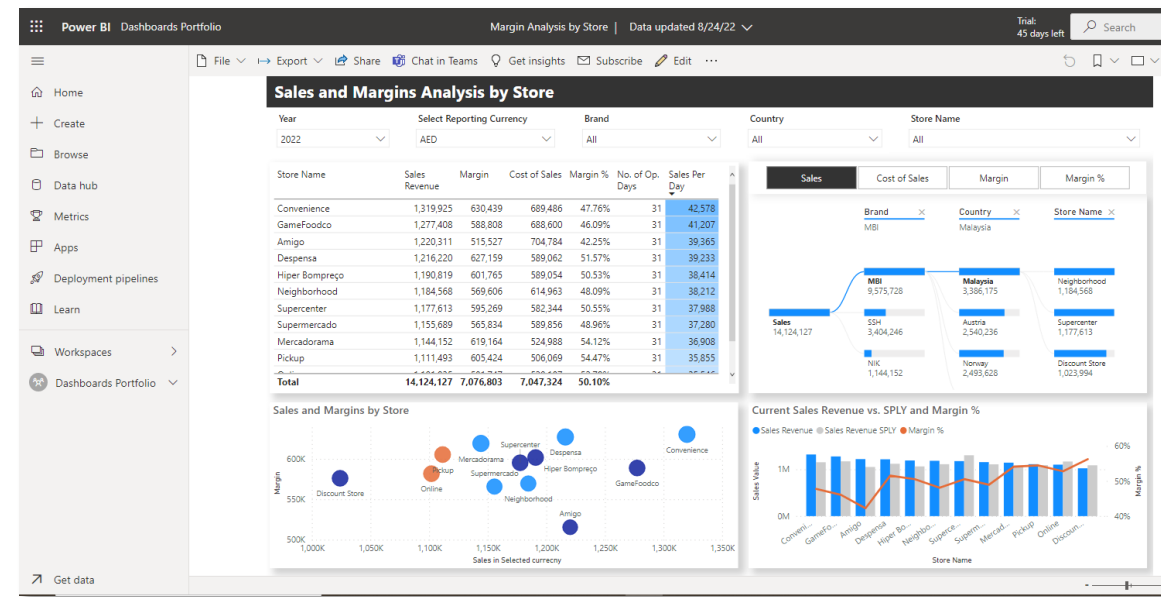
Power BI Major Components

Power BI Desktop

Only available on Windows

- **Power Query** *(Get & transform)*
- **Power Pivot** *(Data Modeling)*
- **Power View** *(Data Visualization)*
- **Power Map** *(Geo-spatial data visualization)*
- **DAX** *(Data Analysis Expressions)*
- **Power Q&A** *(Natural language Q & A)*

Power BI Service

Web based application

- Sharing and Collaboration
- Scheduling data refresh
- Setting up alerts
- Creating "Dashboards"
- Power BI Administration

Power BI Mobile app

Available for both android and iOS

- Viewing and consumption

BI Workflow

Data Capture → Data Prep → Data Analysis → Data Visualization

Data Capture	Data Prep	Data Analysis	Data Visualization
Tagging, sensors, manual entry etc.	Power Query & Data Modeling	Data Analysis Expressions (DAX)	Power BI desktop, web service and mobile app

Connecting & Transforming

- Connect Data using multiple data Connectors.
- Consolidating
- Cleaning Messy Data
- Making data ready for Data Analysis

Data Modeling & Analyze

- Creating relationship with multiple data sources
- Analyze data using DAX
- Creating Measures
- Implicit and Explicit Measures
- Add Calculated columns
- Time Intelligence Features

Visualization

- Creating Powerful dashboards
- Artificial Intelligence (AI) Visuals & Features
- Integrated reports
- Making informed decisions using insights
- Data story telling

Power Query

Power Query

Extract,
Transform,
Load
(ETL)
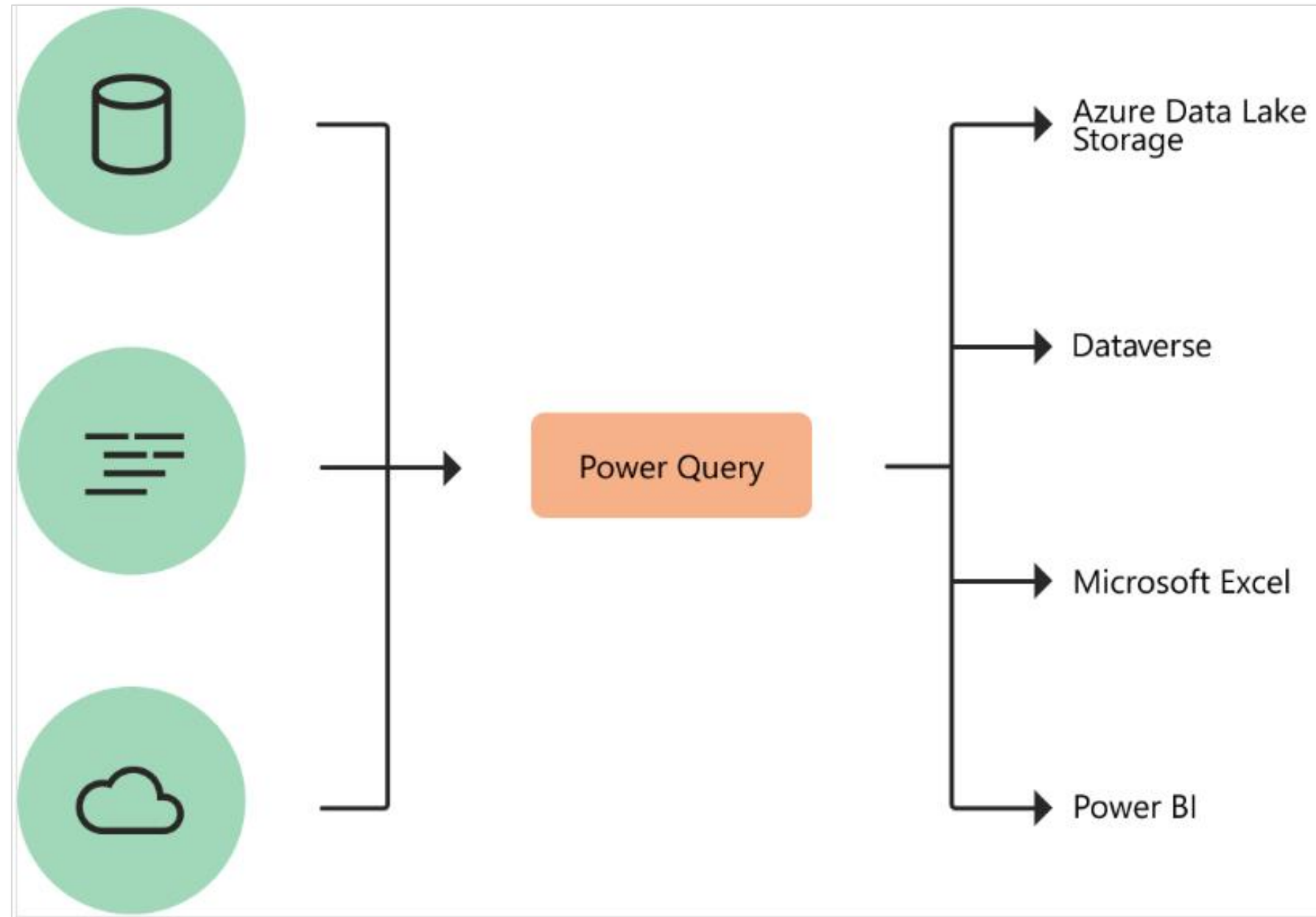
Power Query user experience is provided through the Power Query Editor user interface

Data Connectors

Data Modeling

Data Modeling

* Data modeling is the process of creating relationships between multiple tables

* The relationships are made on the basis of:
- **Primary Keys**
- **Foreign Keys**

Dimension Table
(Lookup Table)

Fact Table
(Data Table)

Foreign Key

Primary Key

Sales_Data
- channelKey
- DateKey
- ProductKey
- Σ SalesKey
- Σ SalesQuantity
- StoreKey
- Σ UnitCost
- Σ UnitPrice

Collapse ∧

Products_Lookup
- BrandName
- ClassName
- Manufacturer
- ProductDescription
- ProductKey
- ProductName
- ProductSubcategoryKey
- Σ UnitCost
- Σ UnitPrice

*   1
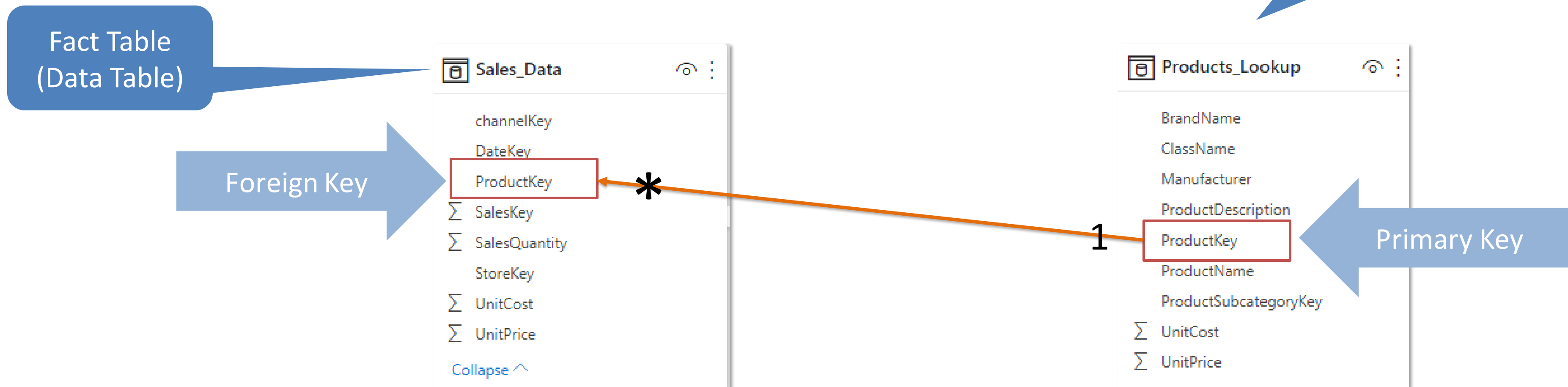
Data Model
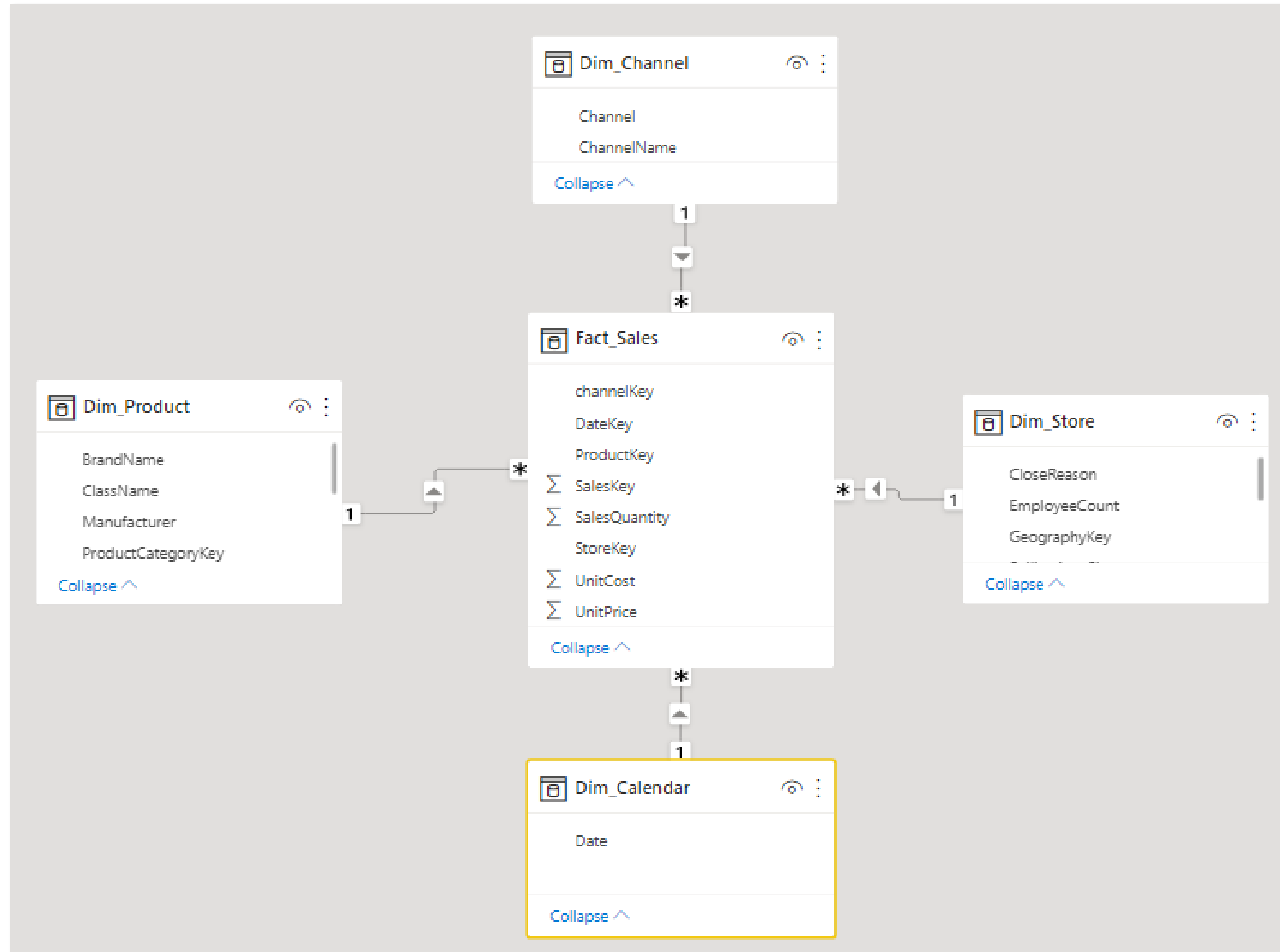
Data Analysis Expressions (DAX)

Increase the analytical power of the model by adding calculations

Excel vs. DAX Functions

Excel: SUMIF, SLOPE, INDEX, MATCH, SUMIFS, DEC2BIN, DEC2HEX, COUNTIFS, SUMPRODUCT, LOGNORMAL.DIST, MULTINOMIAL, AVERAGEIFS, INTERCEPT, VLOOKUP, XLOOKUP
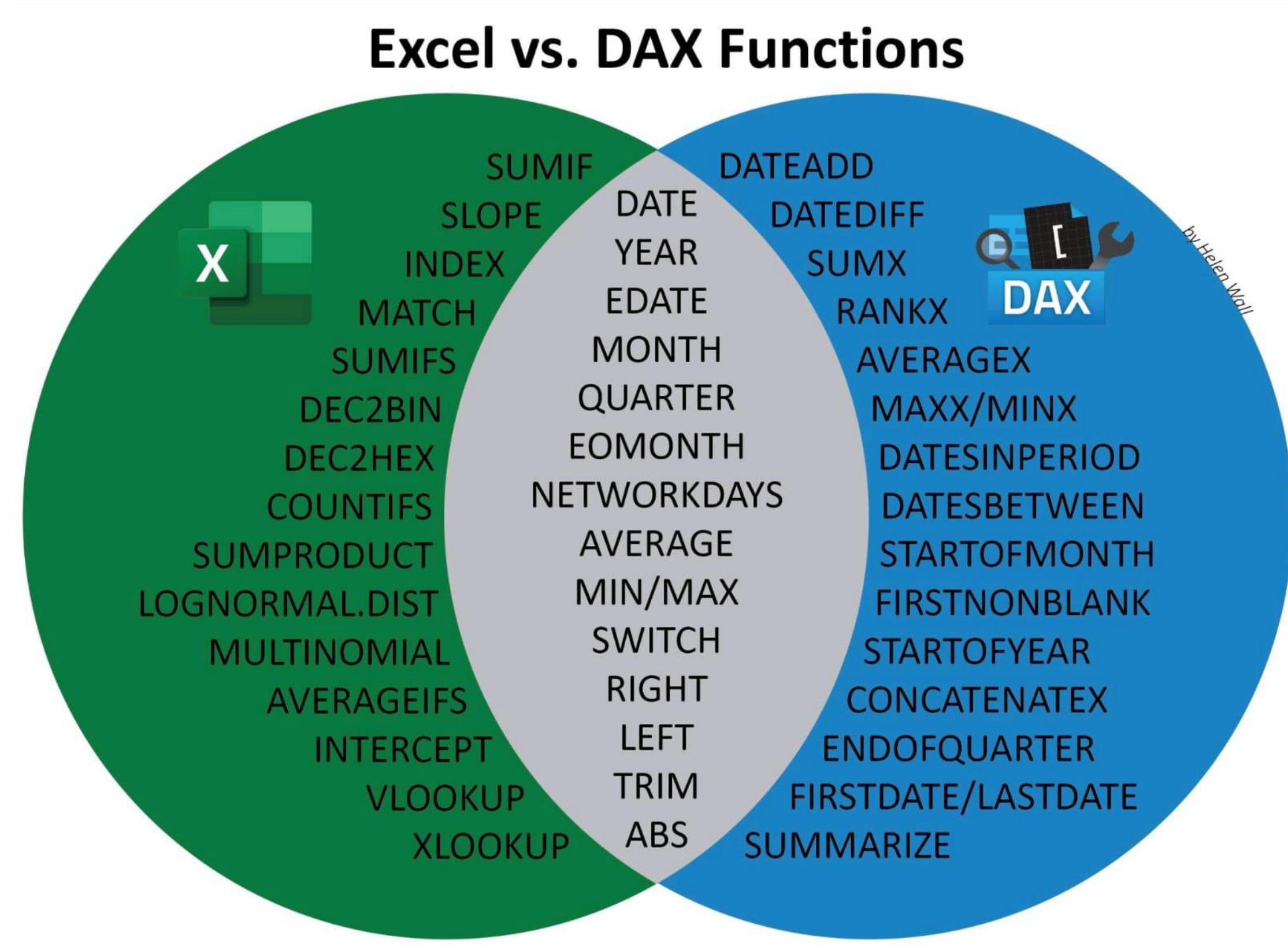
Both: DATE, YEAR, EDATE, MONTH, QUARTER, EOMONTH, NETWORKDAYS, AVERAGE, MIN/MAX, SWITCH, RIGHT, LEFT, TRIM, ABS

DAX: DATEADD, DATEDIFF, SUMX, RANKX, AVERAGEX, MAXX/MINX, DATESINPERIOD, DATESBETWEEN, STARTOFMONTH, FIRSTNONBLANK, STARTOFYEAR, CONCATENATEX, ENDOFQUARTER, FIRSTDATE/LASTDATE, SUMMARIZE

by Helen Wall

What is Dashboard?

What is DASHBOARD?

Dashboard is a **VISUAL DISPLAY** with the following features:

➢ Designed with a specific **OBJECTIVE**

➢ For a specific **AUDIENCE**

➢ Shows only the **MOST IMPORTANT INFORMATION**

➢ Can be monitored at a **GLANCE**

➢ Displayed on **SINGLE SCREEN**
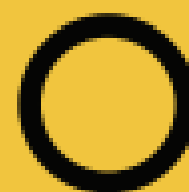
➢ Nice to use **EVERYDAY**

1
Design
for a target
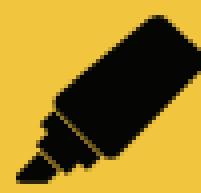
2
Keep everything
at a glance

3
Keep it simple

4
Align elements

5
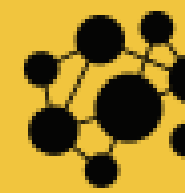Be consistent

6
Highlight the most
relevant information

7
Be clear

8
Start from zero

9
1M
Shorten the
numbers

10
Show the
context

11
Choose the
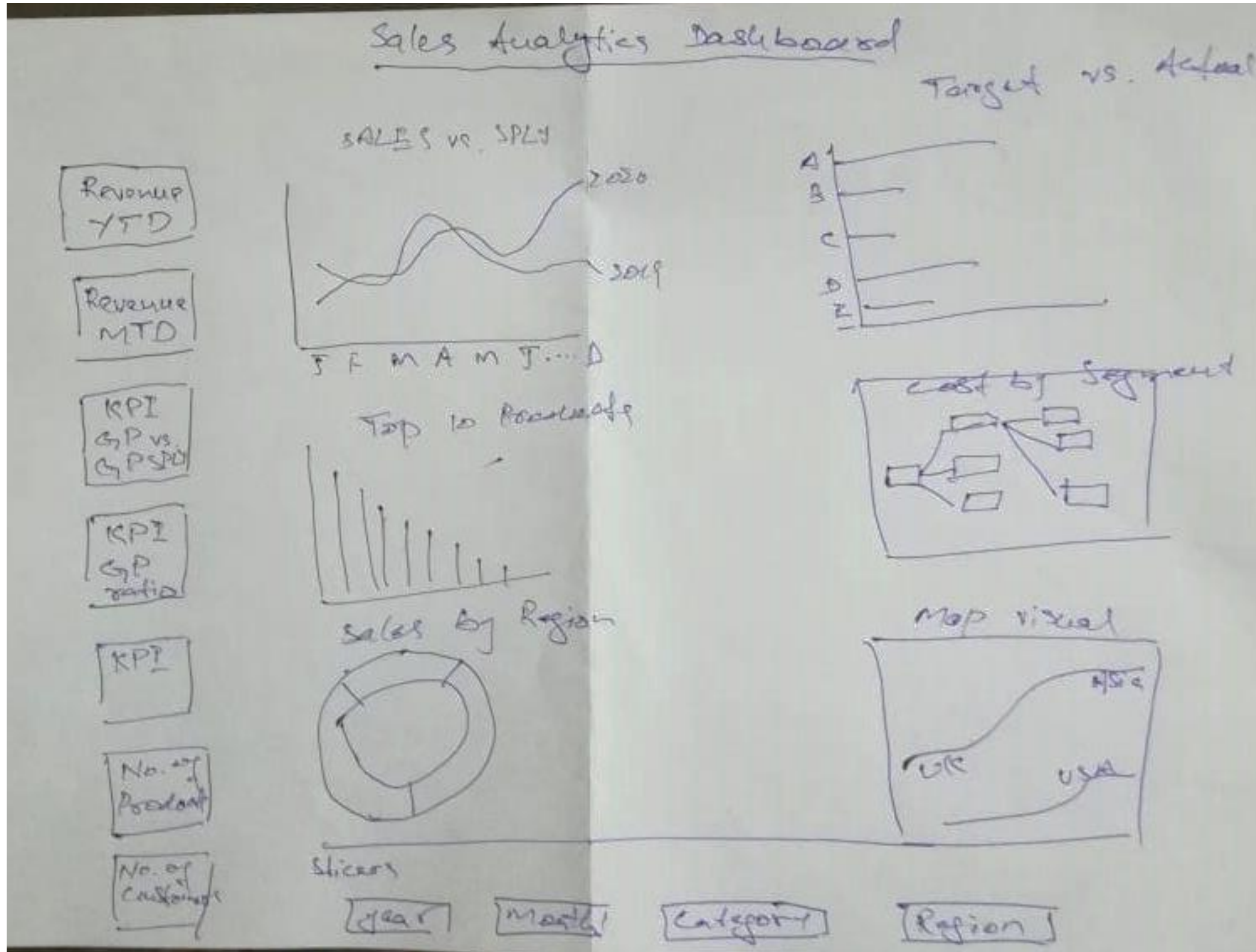right colors

12
Design dashboards,
not reports
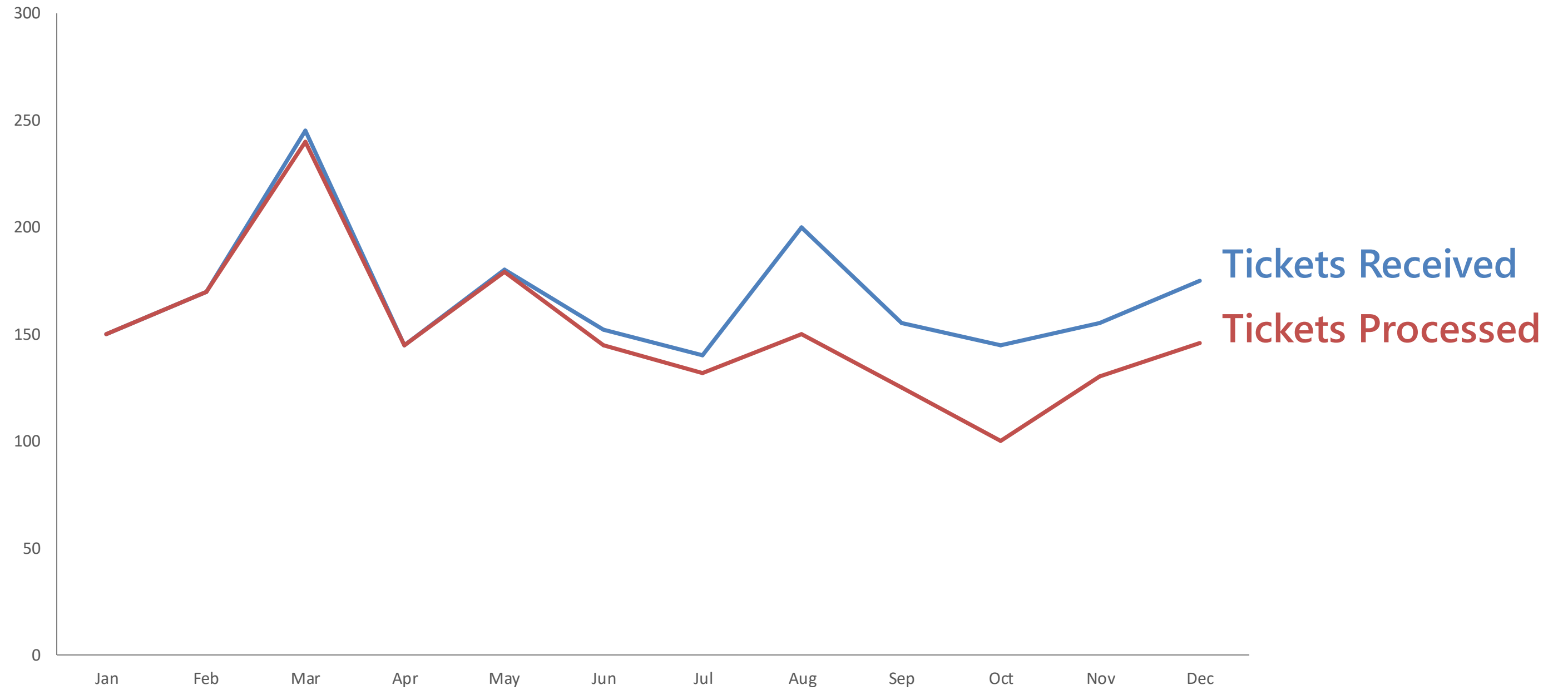
13
Show variations

14
Leave the
noise off

15
Pick the
right charts

Start with a Dashboard Layout

Story Telling

Tickets Received

Tickets Processed

Demonstration

Skills/Tools you should focus on.

1. Continues Professional Development – Shelf Life

2. Microsoft Excel-a Must

3. Microsoft Power BI – a Plus

4. Personal Branding

5. Networking

Q&A

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