

# Microsoft Power BI Certification Training (DA-100)

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*Module 1 – Introduction to Power  
BI*



# Agenda

01

What is Business  
Intelligence?

02

Stages of Business  
Intelligence

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BI Use Cases

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Introduction to  
Power BI

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**13** Creating Reports in Power BI

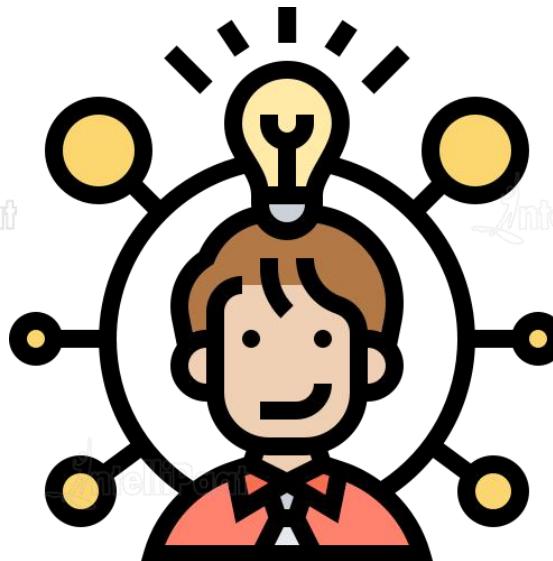


# What is Business Intelligence?



# What is Business Intelligence?

Business Intelligence (BI) is a set of processes, architectures, and technologies that help in the collection, integration, analysis, and presentation of business information. The purpose of Business Intelligence is to enable stakeholders make better business decisions



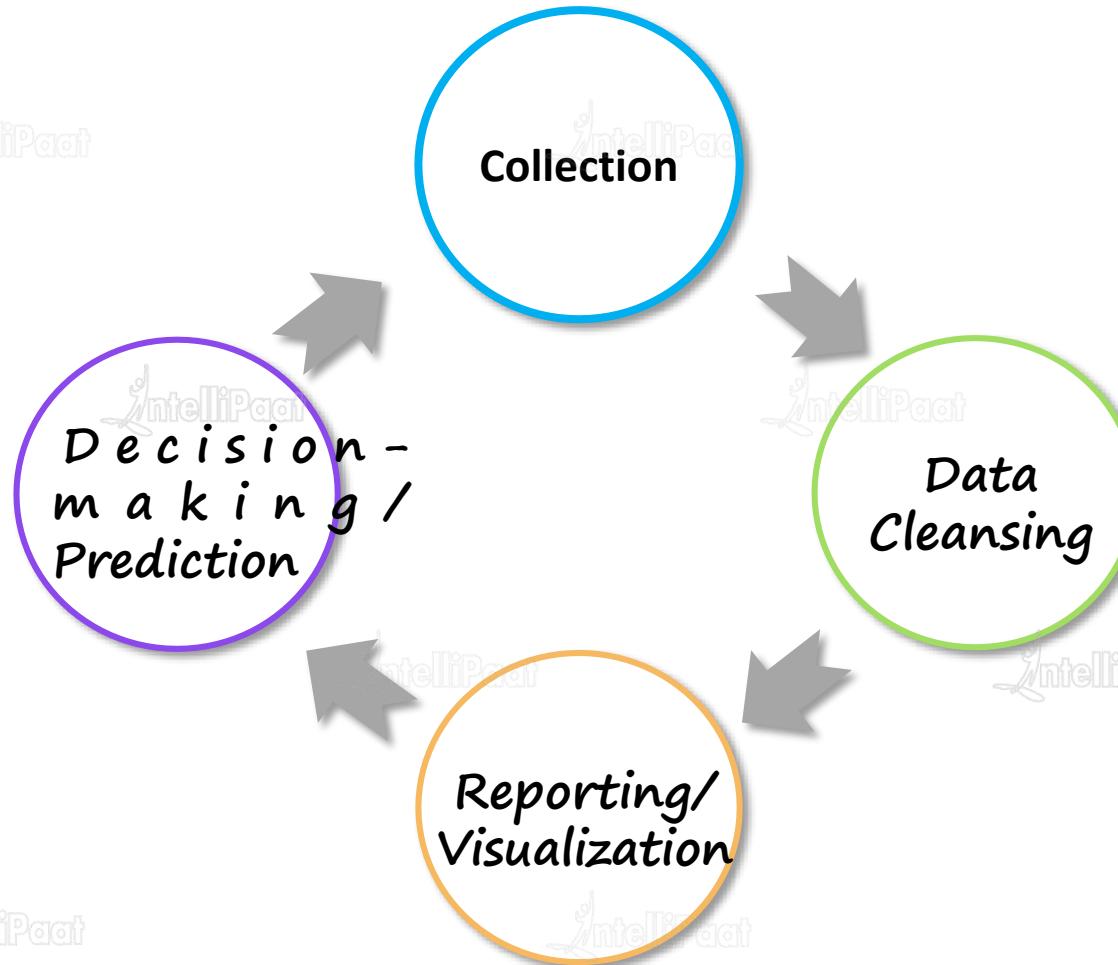


# Stages of Business Intelligence

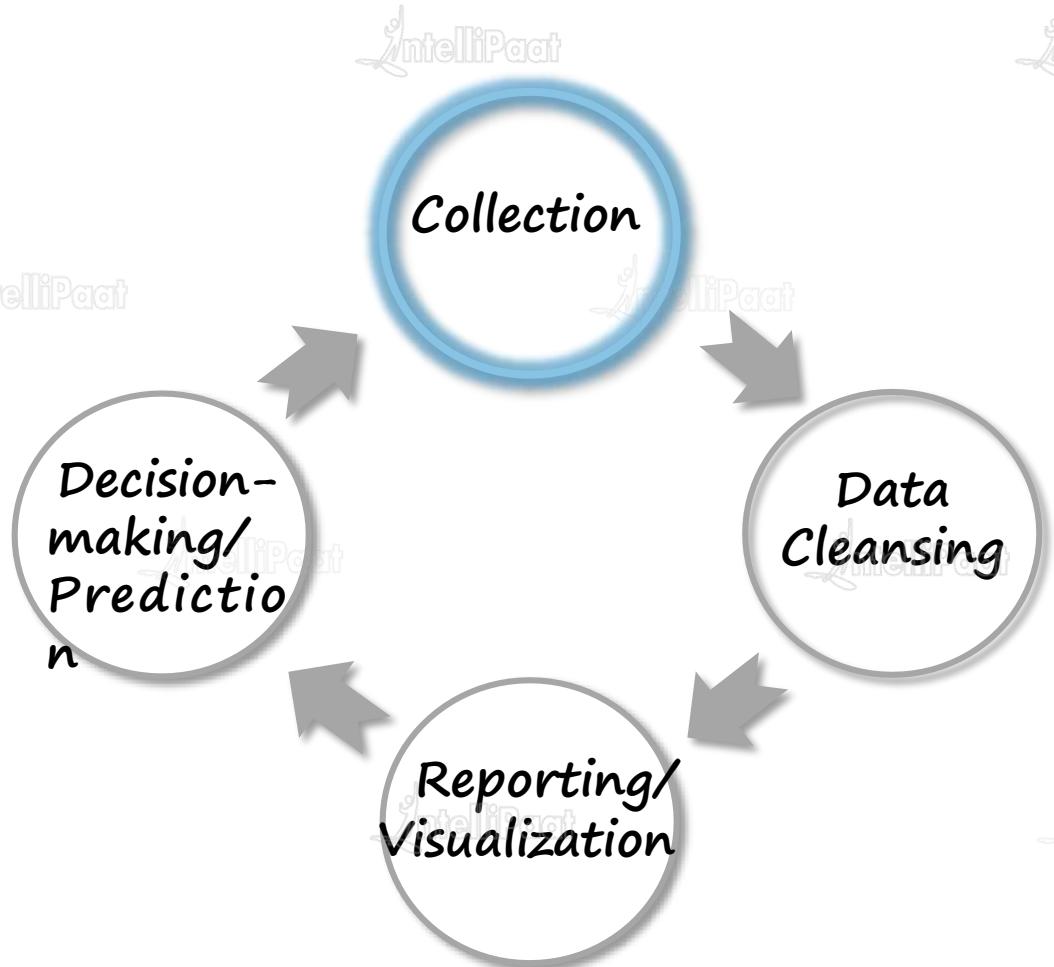


# Stages of Business Intelligence

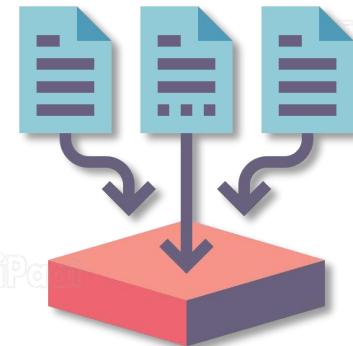
Business Intelligence is generally divided into four stages:



# Stages of Business Intelligence

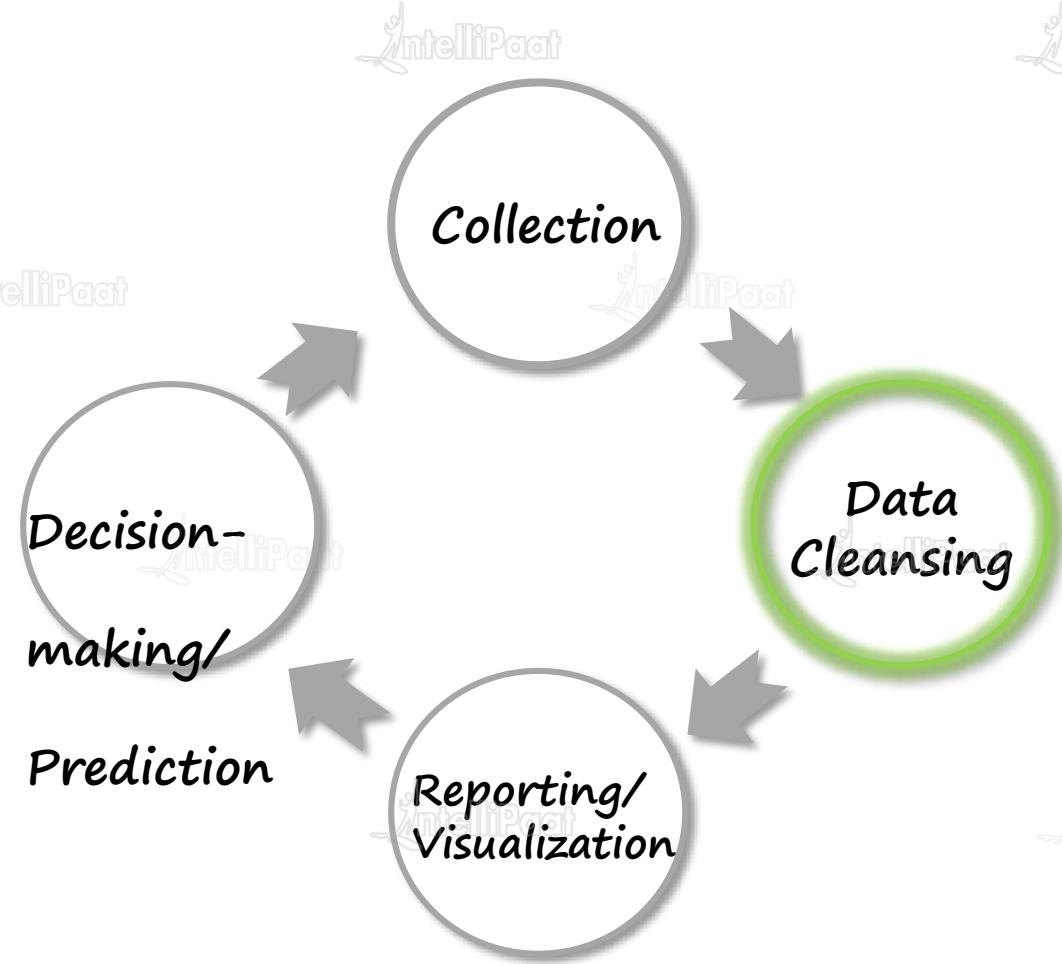


**Collection**



Data is collected either from the existing sources, such as ERP data, company database, etc., or externally through polls, forms, and others

# Stages of Business Intelligence



## Data Cleansing



Identifying irrelevant parts of the data and modifying, deleting, or replacing the coarse data

# Stages of Business Intelligence

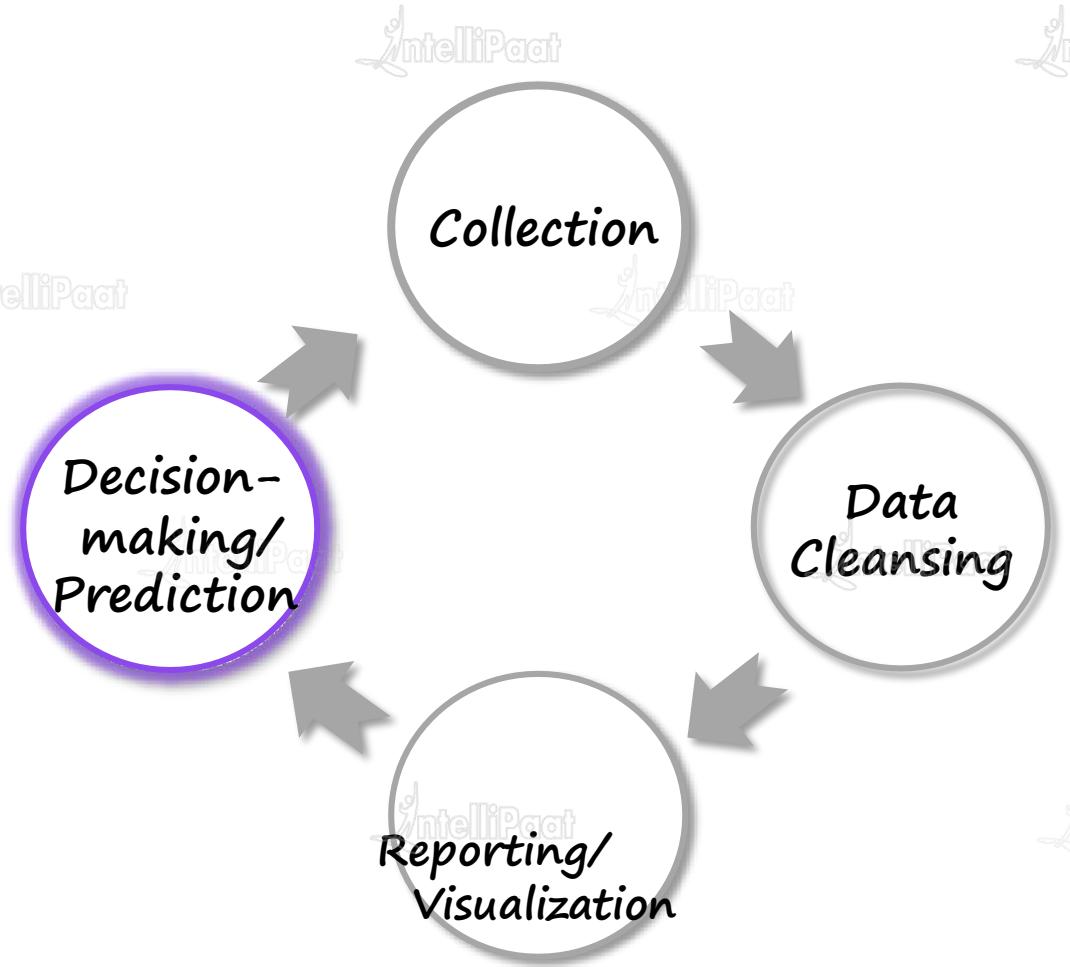


## Reporting/Visualization



Graphical representation of data using visual elements such as charts, graphs, tables, etc.

# Stages of Business Intelligence



Decision-making/Prediction



The last stage is making business decisions and monitoring and predicting business trends based on the report developed



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# BI Use Cases

BI is everywhere!



Performance  
Management



Financial Analysis



Education



## Data Semantics





Data Semantics makes use of BI for sales reporting and sales prediction dashboards

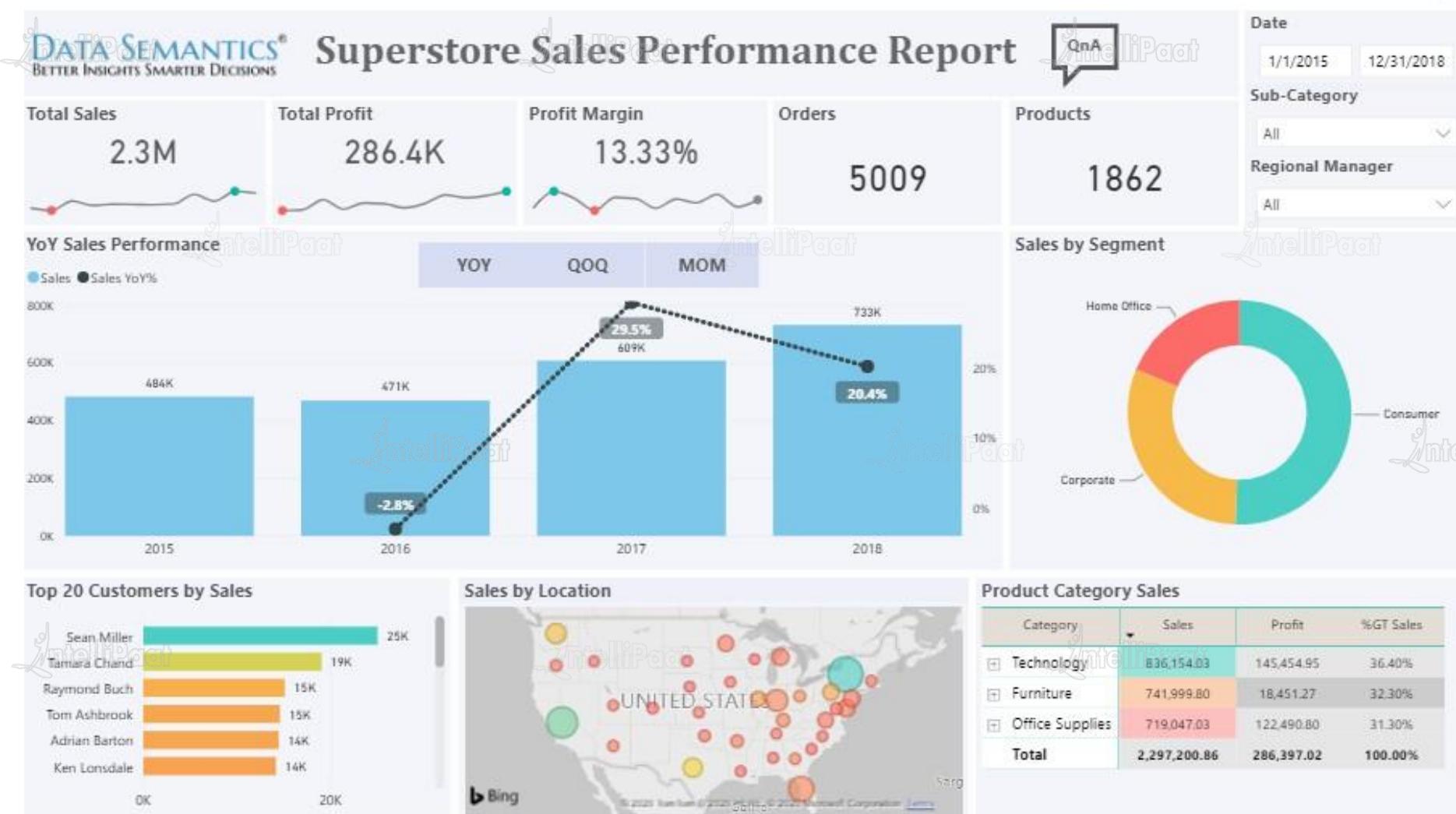


Business Intelligence allows the company to make decisions at the right time

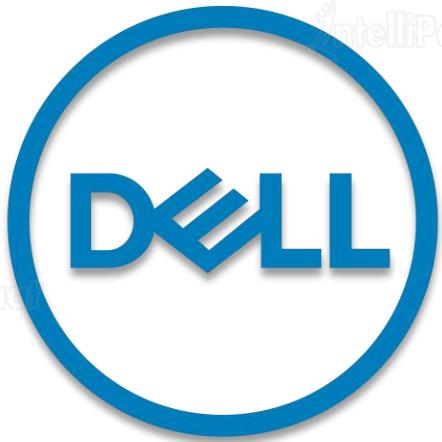


BI also allows the company to discover why its sales are dropping in a particular domain and helps it understand where it needs to perform better

# BI Use Cases



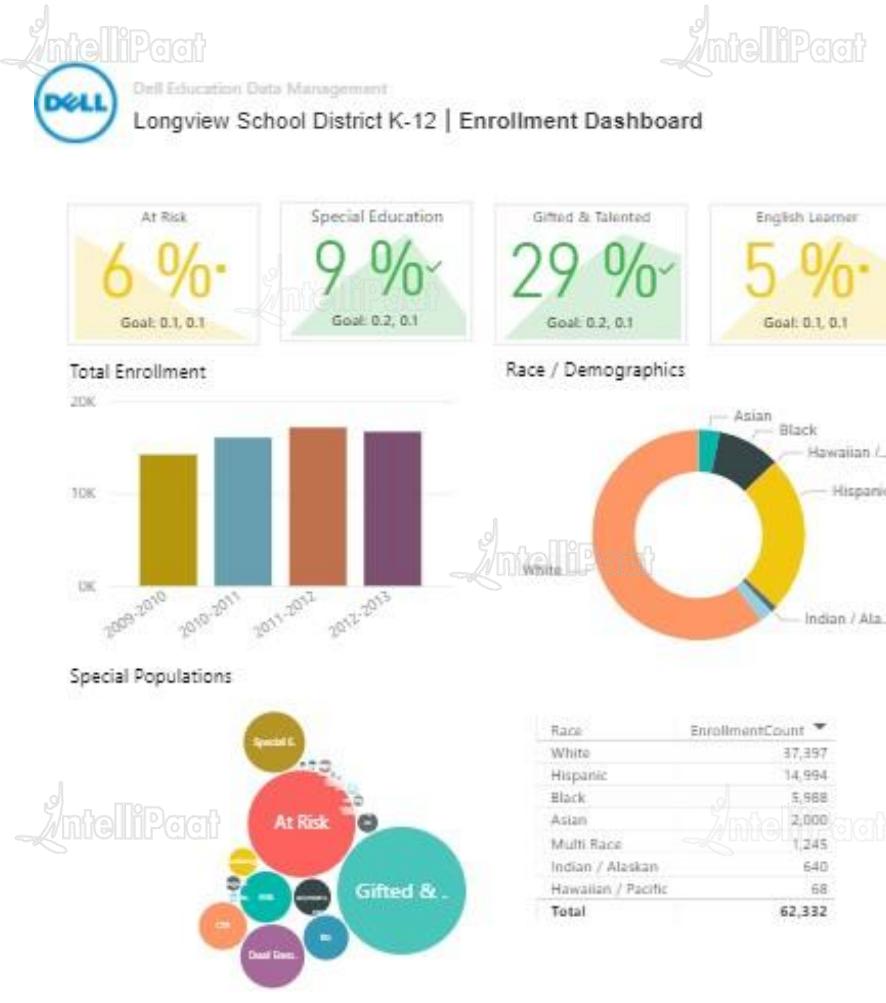
# BI Use Cases



Dell uses Business Intelligence in its education data management

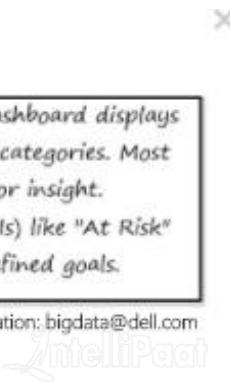
It uses various dashboards and KPIs to improve student performance, monitor the efficiency of programs, and help identify the students who need assistance

# BI Use Cases



The EDM District Enrollment Dashboard displays registration totals by a variety of categories. Most can be used as interactive filters for insight. Key Performance Indicators (KPIs) like "At Risk" direct attention based upon predefined goals.

For more information: [bigdata@dell.com](mailto:bigdata@dell.com)





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# BI Tools



These are the most commonly used BI tools



**zoho** Analytics



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# Why Power BI?



01

Affordability

02

Natural Language  
Query

03

Real-time  
Streaming

04

Custom Visualization

# Why Power BI?

01

## Affordability

02 Natural Language Query

03 Real-time Streaming

04 Custom Visualization

## Affordability

The Power BI Desktop version is available for free, which can be used for report building on a computer. If we want to use more Power BI services, then we can buy Power BI Service at an affordable cost



# Why Power BI?



01

Affordability

02

Natural Language

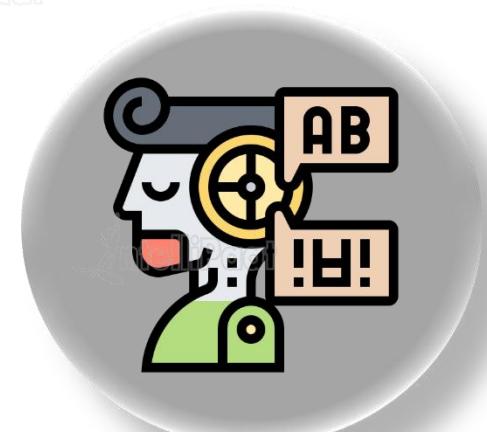
03

Real-time Streaming

04 Custom Visualization

## Natural Language Query

This feature allows users to type questions and get answers in a user-specific format. This is mainly useful in getting quick insights from data.



# Why Power BI?



01

Affordability

02 Natural Language

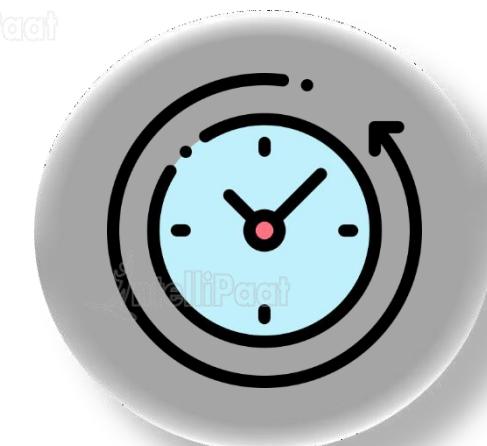
03 Real-time

04 Custom Visualization



## Real-time Streaming

This feature allows users to stream real-time data and update dashboards in real time, which helps them make timely business decisions



# Why Power BI?



01

Affordability

02 Natural Language Query

03 Real-time Streaming

04 Custom Visualization

## Custom Visualization

Power BI has visualizations that are made by developers for specific use cases. These custom visualizations are available in Power BI Marketplace





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# Introduction to Power BI

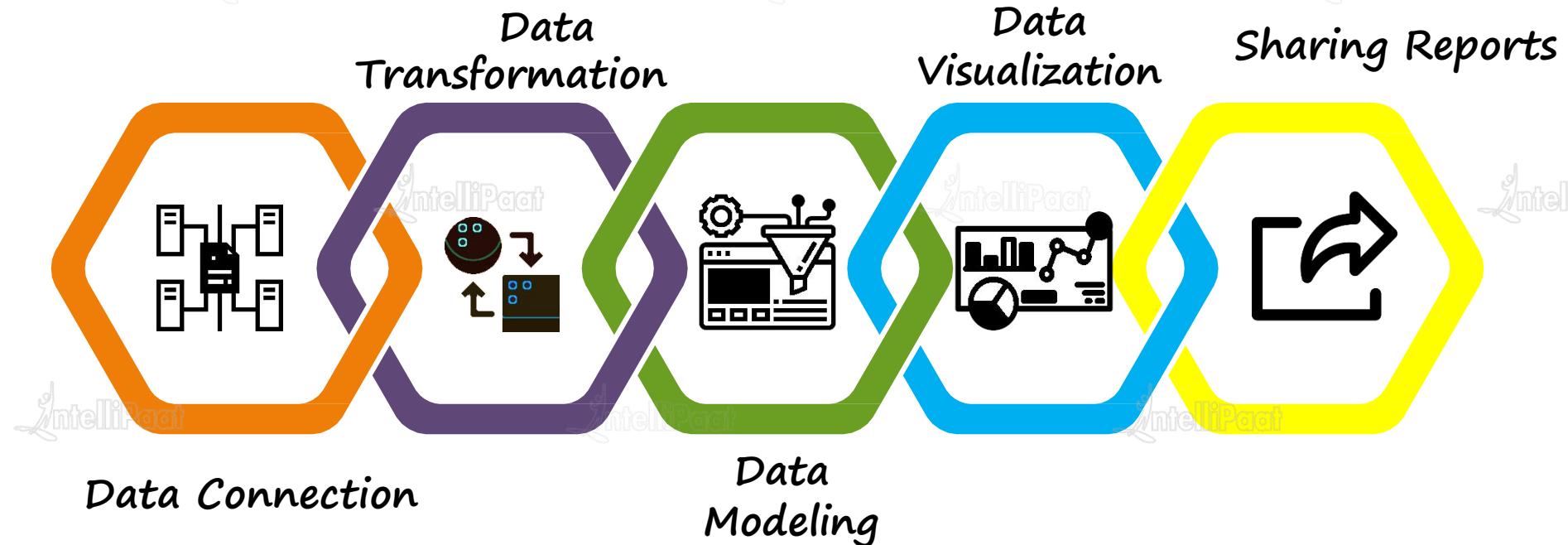


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# Introduction to Power BI

Power BI is a Business Intelligence platform, which provides tools for aggregating, analyzing, visualizing and sharing data





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# Power BI Components

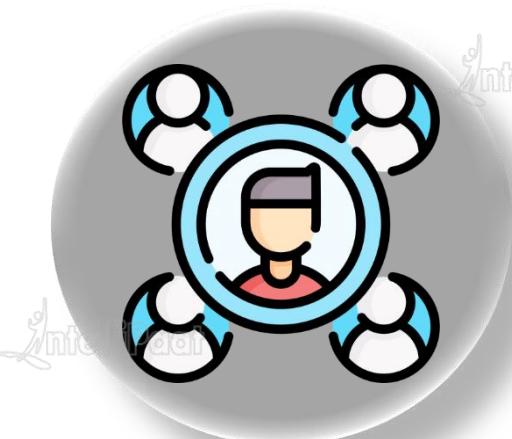
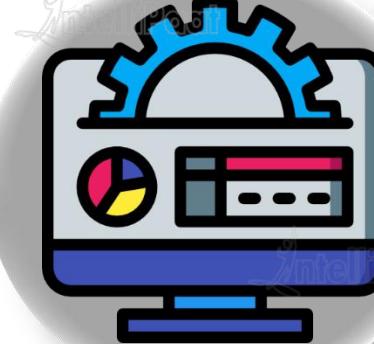
# Power BI Components



# Power BI Components

## Power BI Desktop

It is a free application that helps us connect to multiple data sources and transform and visualize our data



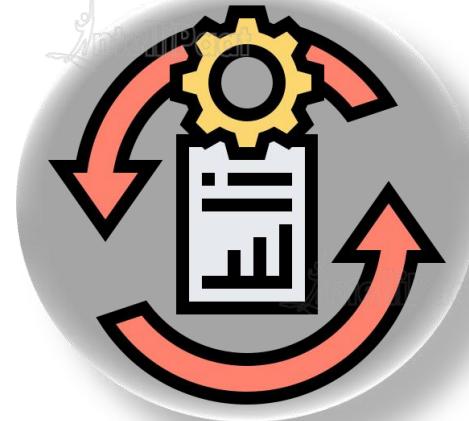
## Power BI Service

It is a cloud-based service where users view and share their reports and dashboards

# Power BI Components

## Power BI Gateway

It is mainly used for scheduled data refresh



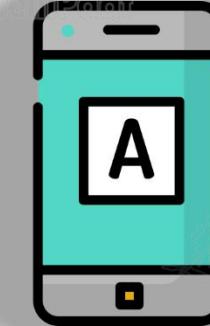
## Power BI Report Server

It is an on-premises web interface and an alternate for Power BI Service

# Power BI Components

## Power BI Mobile App

Power BI offers a set of mobile apps for Android, iOS, and Windows mobile devices through which users can securely access and view their live dashboards and reports



## Power Query

Power BI accepts data from a variety of other data sources such as excel. Power Query allows you to search data from various sources such as social media websites, big data, and so on.

# Power BI Components

## Power BI Report Builder



It helps in developing paginated reports such as invoices, receipts, delivery notes, etc.



API

## Power BI Embedded

It helps in the integration of BI reports with other applications





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# Power BI Pricing

Features	Power BI Free	Power BI Pro	Power BI Premium	Power BI Premium
License	Per user	Per user	Capacity based	Per User
70+ data sources				
Ability to publish reports to share and collaborate				
Cost	Free	US\$9.99/mo nth	US\$4,995/mo nth	US\$20/month
Storage limit	10 GB	10 GB	100 TB	100 TB
Data refresh rate	8/1 day	8/1 day	48/1 day	48/1 day
Ability to export content to Excel and CSV files				

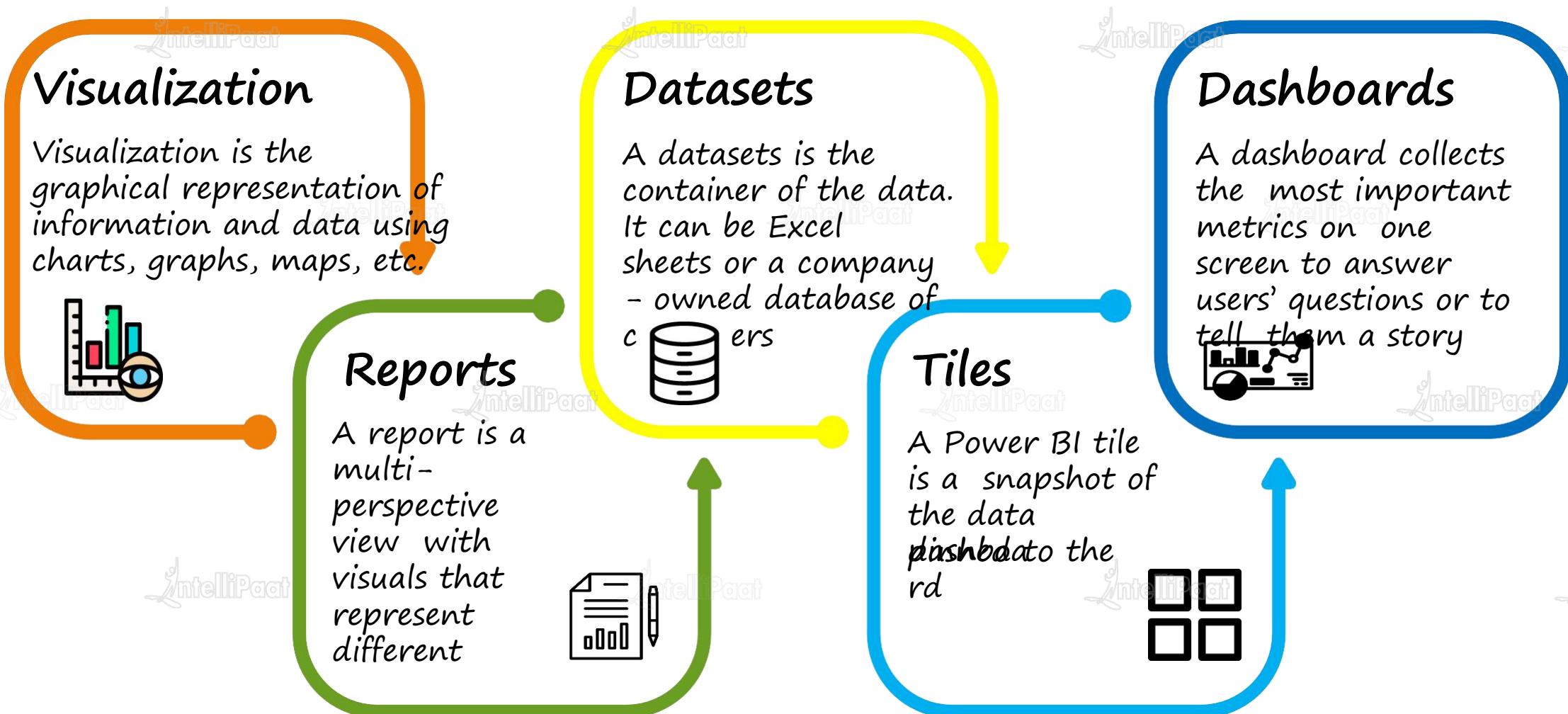


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# Building Blocks of Power BI

# Building Blocks of Power BI





# Architecture of Power BI

## Data Sources



Connect



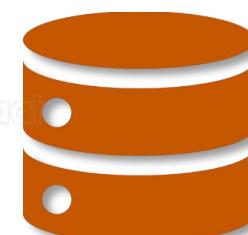
Power BI Desktop



Publish



Power BI Gateway



Access



Multiple  
Devices



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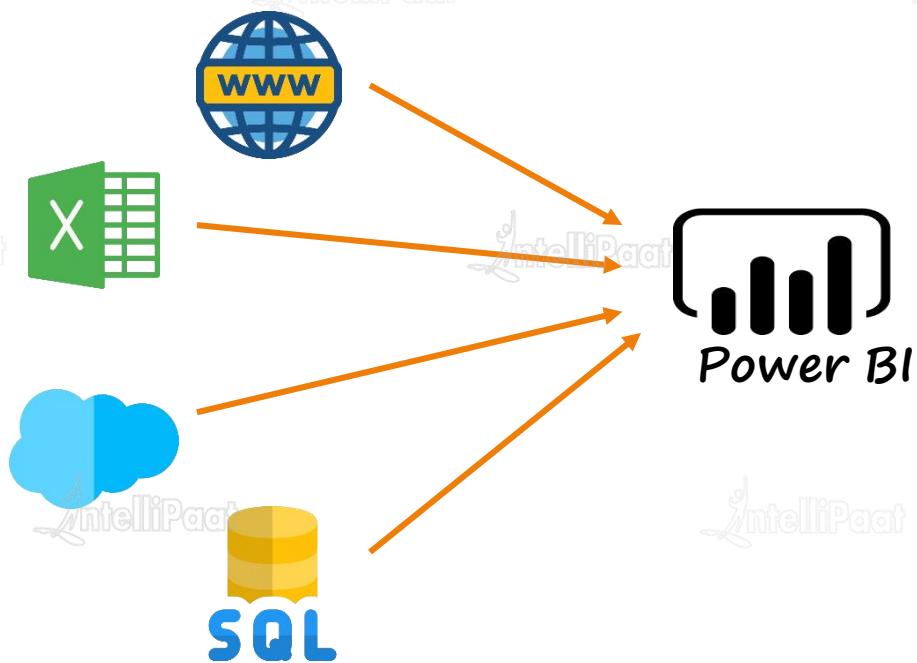
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# Power BI Desktop

Power BI Desktop combines Microsoft Query Engine (M) with visualization and data modeling for creating interactive reports





# Power BI Desktop Installation



# Power BI Desktop Installation



- Go to Microsoft's official website, and select Power BI Desktop
- Select the language of your choice to download Power BI
- Choose the file based on your operating system
- Then, download and install it on your local machine



Power BI



# Demo: Installing Power BI Desktop





# Creating Reports in Power BI



# Creating Reports in Power

BI

The three-step process in creating reports in Power BI are:

Connect to Data Sources

Transform Data into a Model

Add Visualization

# Creating Reports in Power BI

BI

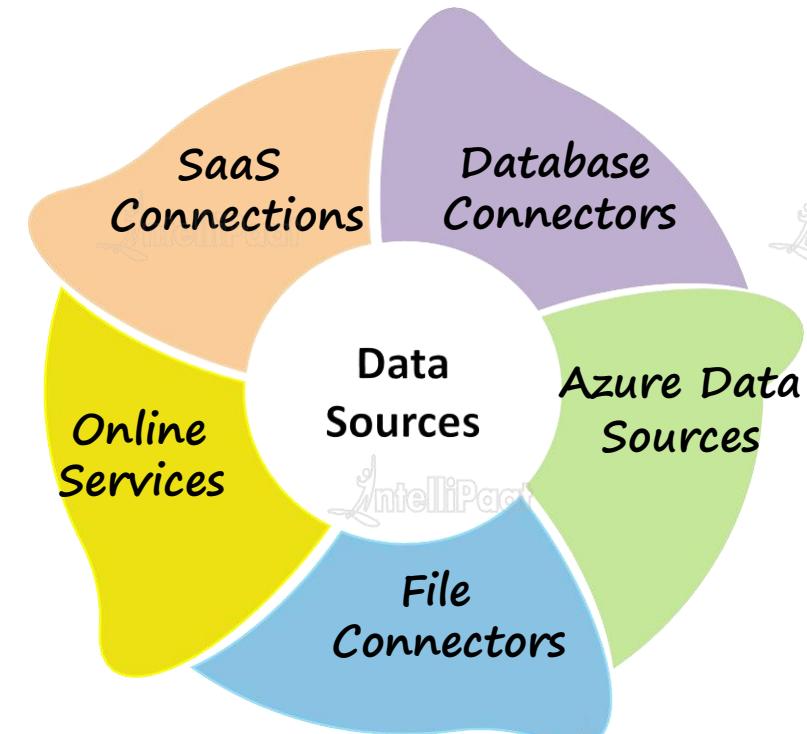
Connect to  
Data  
Sources

Transform Data  
into a Model

Add  
Visualization

Connect to Data  
Sources

With Power BI Desktop, we can connect to many  
different data sources to collect data



# Creating Reports in Power BI

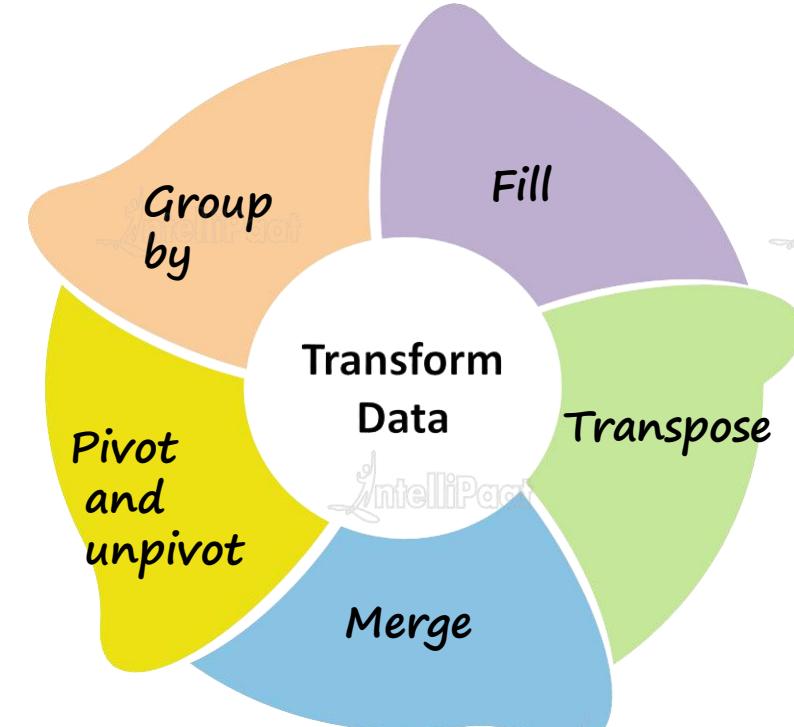
Connect to Data Sources

Transform Data into a Model

Add Visualization

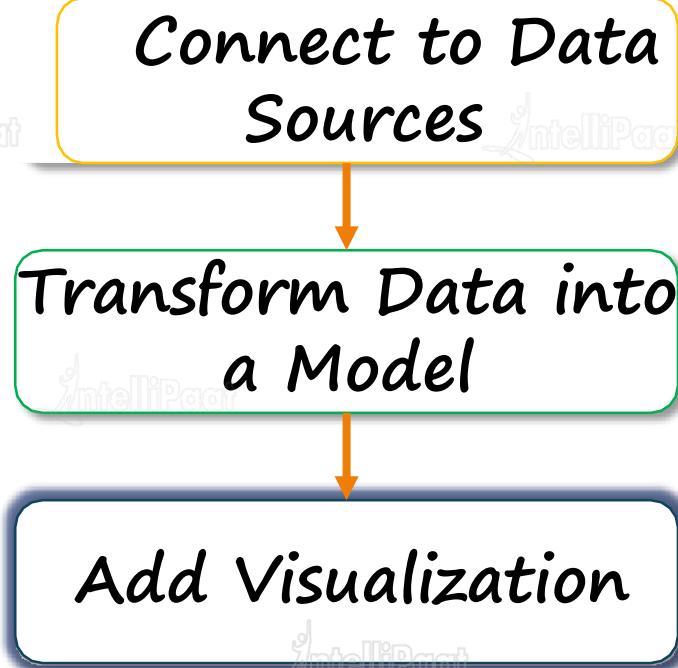
Transform Data into a Model

Power Query Editor in Power BI Desktop helps us transform the data into a model

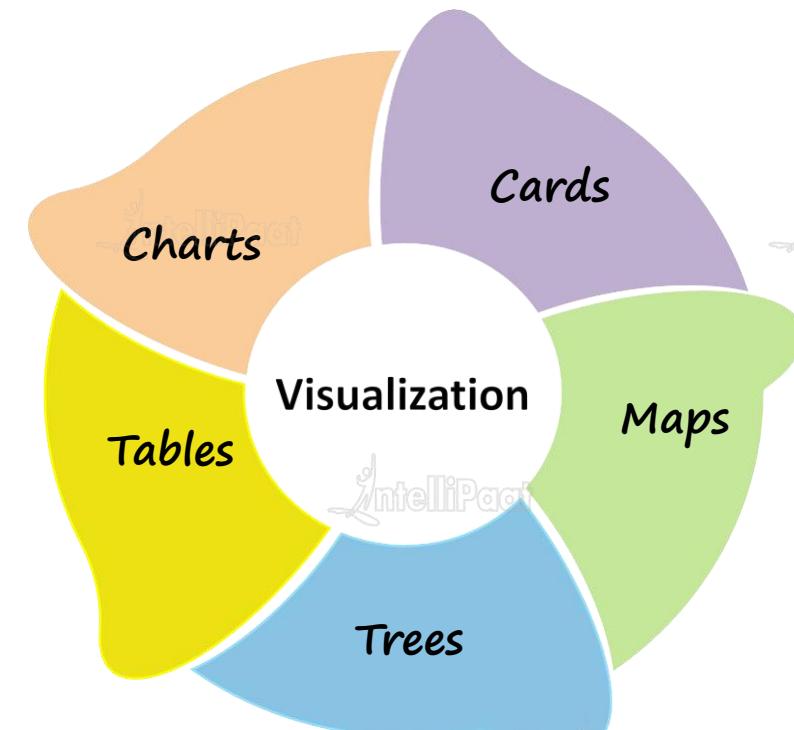


# Creating Reports in Power BI

BI



Data visualizations bring data to life, using colors and shapes





# Demo: Creating a Report in Power BI



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