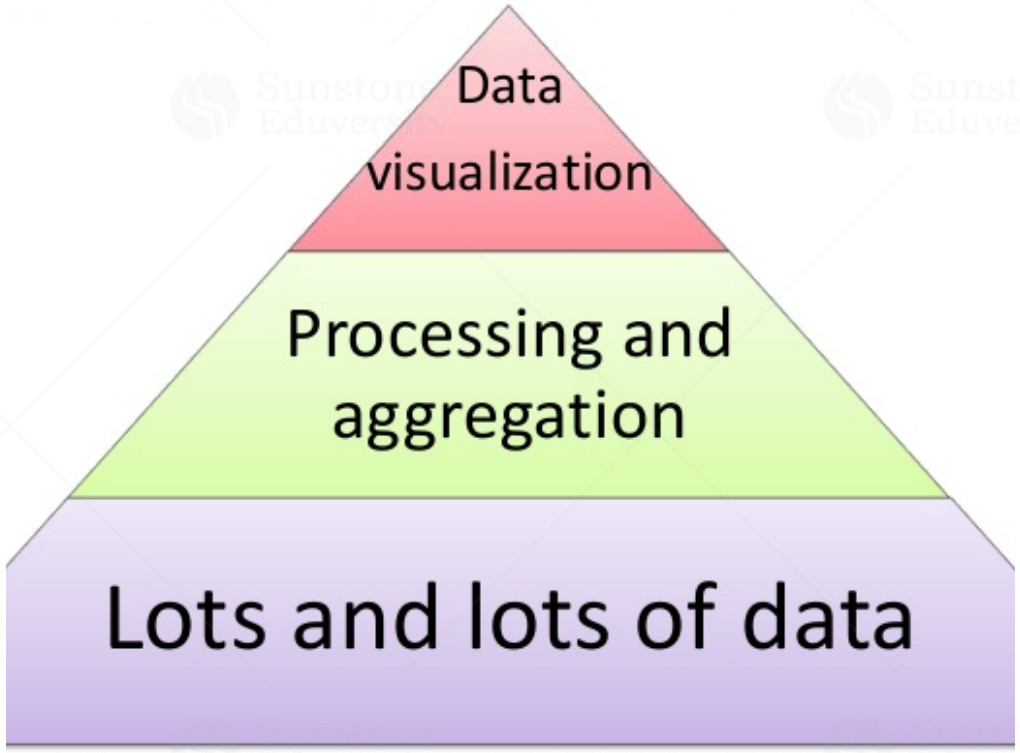
Sunstone Eduversity

What is Tableau?

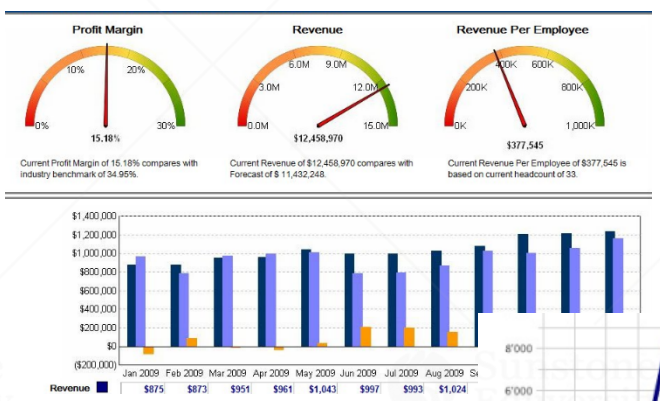
- Tableau software is one of the fastest growing data visualization tools which is currently being used in the BI industry.

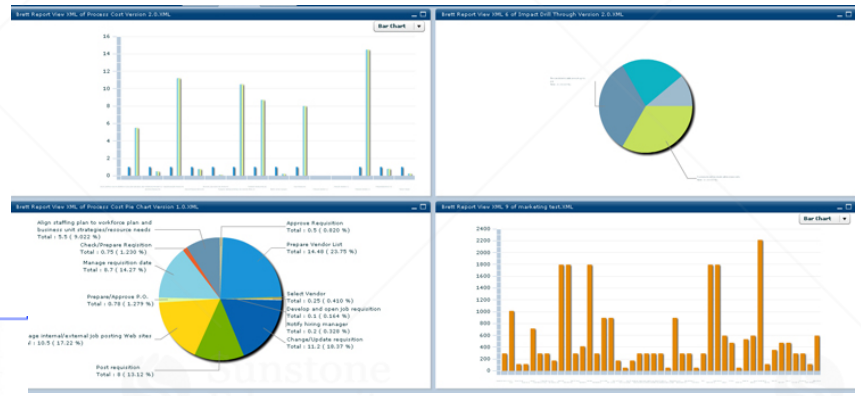
What is BI?

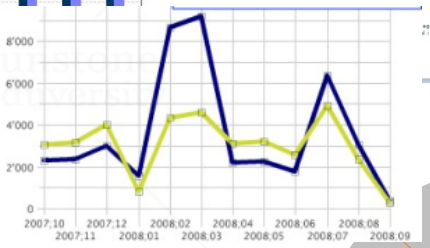
Business intelligence (BI) is a set of theories, methodologies, architectures, and technologies that **transform raw data into meaningful and useful information** for business purposes.



Business Intelligence







Reports

Data repository

Different systems

4

What is Tableau used for?

- Tableau software is used to translate queries into visualization.
- It is also used for managing metadata.
- Tableau software imports data of all sizes and ranges.
- For a non-technical user, Tableau is a life saver as it offers the facility to create ‘no-code’ data queries.

How does Tableau work?

- The major work of Tableau software is to connect and extract the data stored in various places. It can pull data from any platform. Tableau can extract data from any database, be it Excel, PDF, Oracle, or even Amazon Web Services.

Data Analytics of Tableau

- **Developer Tools:** Tools used in development, like designing of charts, dashboards, reports, and visualizations, come under this category. The major Tableau products in this category are Tableau Public and Tableau Desktop.
- **Sharing Tools**: Used for sharing reports, visualizations, and dashboards which are created using the developer tools. Main products that fall in this category are Tableau Online, Tableau Reader, and Tableau Server.

Tableau Product Suite

- Tableau Server.
- Tableau Desktop.
- Tableau Reader.
- Tableau Online
- Tableau Public

What is Tableau Desktop?

- This product allows one to code and modify the reports. Starting from creating reports and charts to combining them to form a dashboard, all this work is done in Tableau Desktop.

What is Tableau Reader?

- It is a tool that allows one to view visualizations and workbooks generated using Tableau Public or Tableau Desktop. This data can easily be filtered, yet modifications are limited.

What is Tableau Server?

- This is mainly used to share visualizations and workbooks which get generated in the Tableau Desktop application throughout the organization. The work will become accessible once it is uploaded on the respective servers.

Tableau Online

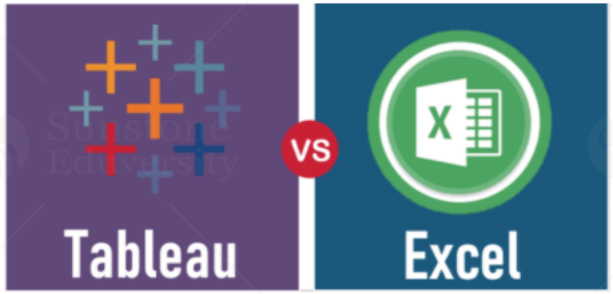
- As the term ‘online’ suggests, Tableau Online is a sharing tool. It has a similar usage as Tableau Server, but the data is saved on servers which are provided in the cloud maintained by the Tableau group.

Tableau Public

- As the word ‘public’ suggests, the created workbooks can’t be locally saved, rather it is sent to Tableau’s public cloud which can be accessed by the general public.

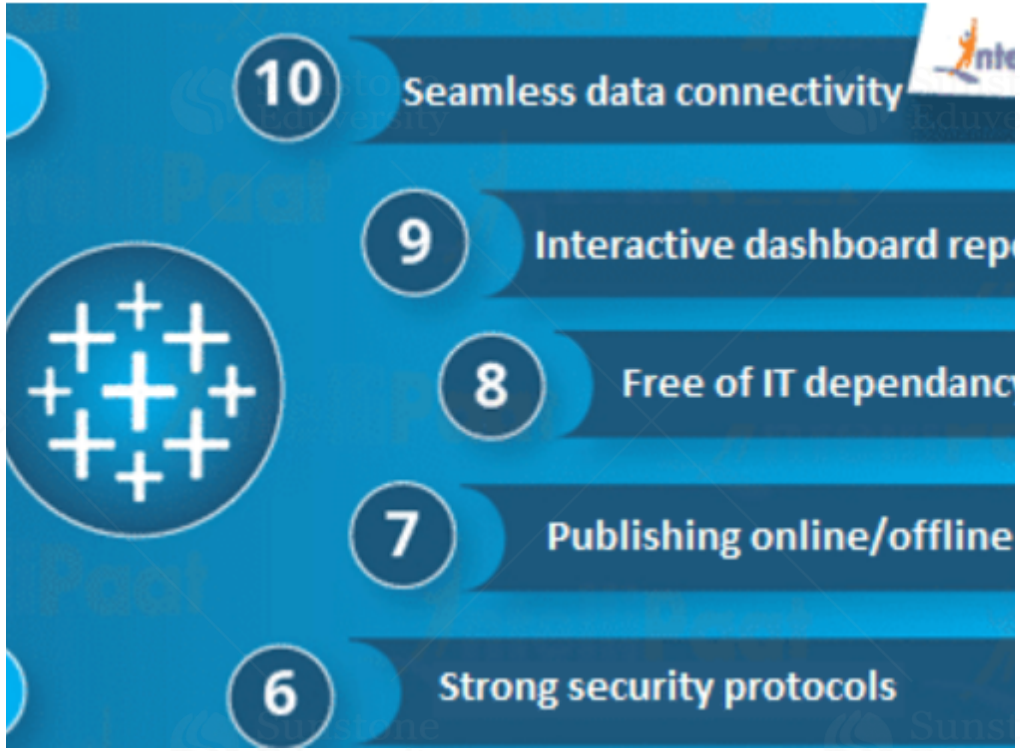
Excel Vs. Tableau

Tableau	Excel
Tableau is basically a data visualization tool which provides pictorial and graphical representations of data.	Excel is basically a spreadsheet for working with data in rows and columns. You need to first represent your data into a tabular format and then you can apply visualizations on top of it.
In Tableau, you can gain insights that you never thought possible. You can play with interactive visualizations, deploy data drilling tools, and explore various data that is available, and you don't need to have any specific knowledge of the insight you are looking for.	When it comes to Excel, you need to have a prior knowledge of the insight that you want and then work with various formulae in order to get there, along with that tabulation is also needed.
With Tableau, it is all about an easy and interactive approach.	In Excel, you need to have some programming in order to come up with real-time data visualization.



Advantages of Using Tableau

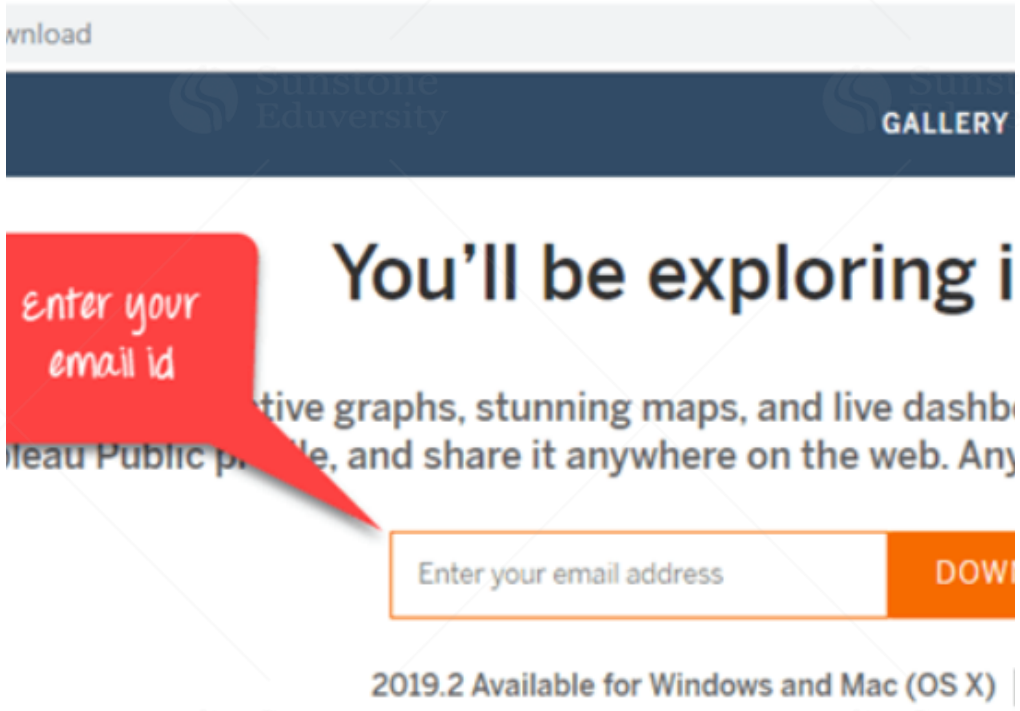
- Fantastic Visualizations
- In-depth Insights
- User-friendly Approach
- Working with Disparate Data Sources
- Adding Datasets



Download and Install Tableau Public

Step 1

- Go to https://public.tableau.com/en-us/s/download on your web browser. Now you need to enter your email id and click on "**DOWNLOAD THE APP**" button.



Step 2

- This will start downloading the .exe file for Windows by default, and you can see the downloading process in the bottom left corner of the website.

Step 3

- Open the downloaded file. Accept the terms and conditions and click on "Install" button.

Step 4

- After installation Start Screen of Tableau is shown

Terminologies

Dimensions and Measures

Dimensions	Measures
•Dimensions contain qualitative values (such as names, dates, or geographical data)	•Measures contain numeric, quantitative values that you can measure (such as Sales, Profit)

Discrete vs Continuous

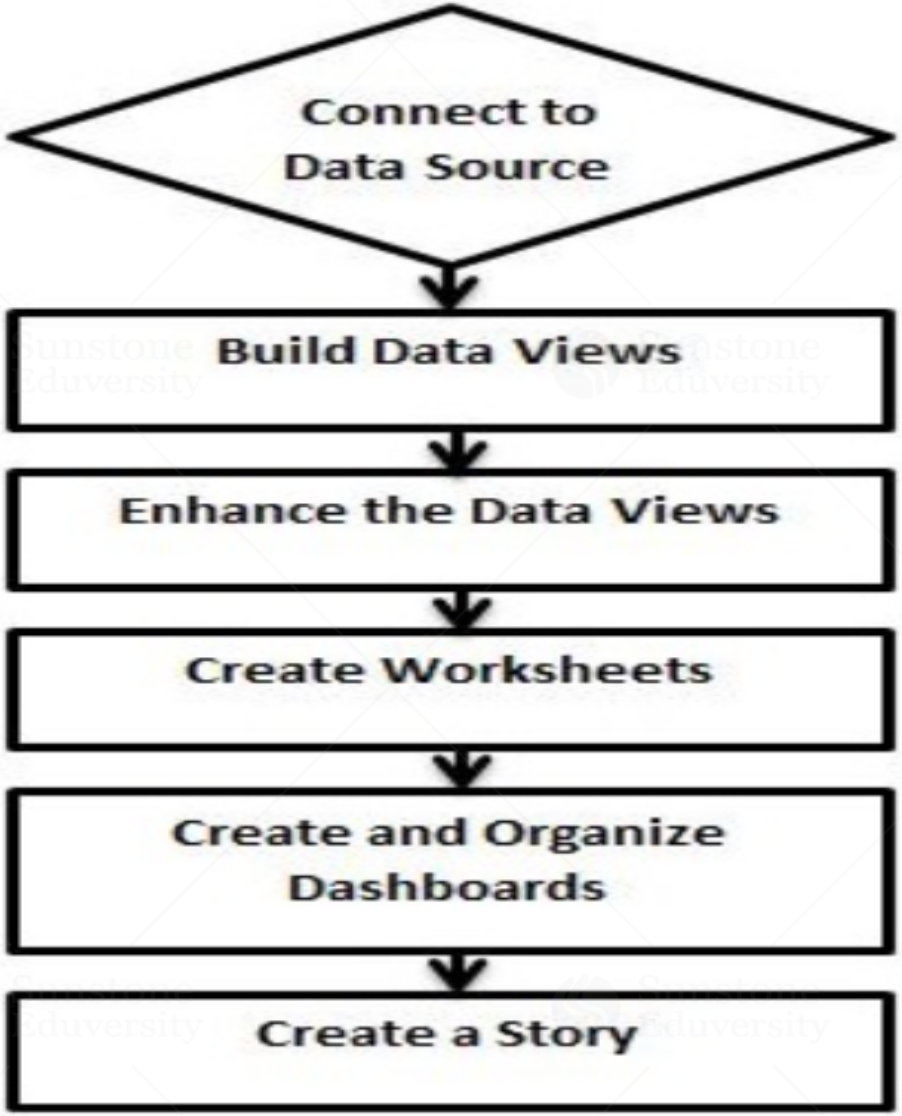
- Tableau represents data depending on whether the field is discrete (blue) or continuous (green).
  - Discrete - "individually separate and distinct."
  - Continuous - "forming an unbroken whole without interruption."
- The values are as shown:

Discrete Dimensions	Product Name
Continuous Dimensions	YEAR(Order Date)
Discrete Measures	SUM(Profit)
Continuous Measures	SUM(Profit)

Data Types

Data Type	Description	Example
STRING	Any sequence of zero or more characters. They are enclosed within single quotes. The quote itself can be included in a string by writing it twice.	'Hello' 'Quoted' 'quote'
NUMBER	These are either integers or floating points. It is advised to round the floating point numbers while using them in calculations.	3 142.58
BOOLEAN	They are logical values.	TRUE FALSE
DATE & DATETIME	Tableau recognizes dates in almost all formats. But in case we need to force Tableau to recognize a string as date, then we put a # sign before the data.	"02/01/2015" "#3 March 1982"

Data Flow


Connect to
Data Source
Build Data Views
Enhance the Data Views
Create Worksheets
Create and Organize
Dashboards
Create a Story

Few More Terminolgies

- Worksheet
- Shelf
- Cards
- Pills
- Show Me
- Cross tab
- Charts
- Workbook(.twb)
- Worksheet
- Data Source(.tds)

Let's get Started.....