

## Topic 6: Digital world and data

12th July, 2022

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August 2nd, 2022

**¡Bienvenida al curso de transformación digital para la internacionalización!**

This is the sixth topic of the programme - "**Digital World and Data**", which aims to understand the concepts involved in managing data for analysis and strategic business guidance, as well as understanding how to approach digital channel development and best practices for developing a successful digital campaign.

**Contents:** data analytics, business intelligence, Power BI

The **aim** of this document is to present the main relevant concepts that will guide you to enhance the digital transformation of your company.

**Take up the challenge! Let's keep learning together**

## About data analytics...



[What Is Data Analytics? - An Introduction \(Full Guide\) – YouTube](#)

## Business intelligence evolution



[Evolution of Business Intelligence – YouTube](#)

## Online courses and certifications on data analytics

[Curso gratis en Data Analytics \(bdatainstitute.com\)](#)

[Best Data Analysis Courses Online \[2022\] | Coursera](#)

[Learn Data Analytics with Online Courses, Classes, & Lessons | edX](#)

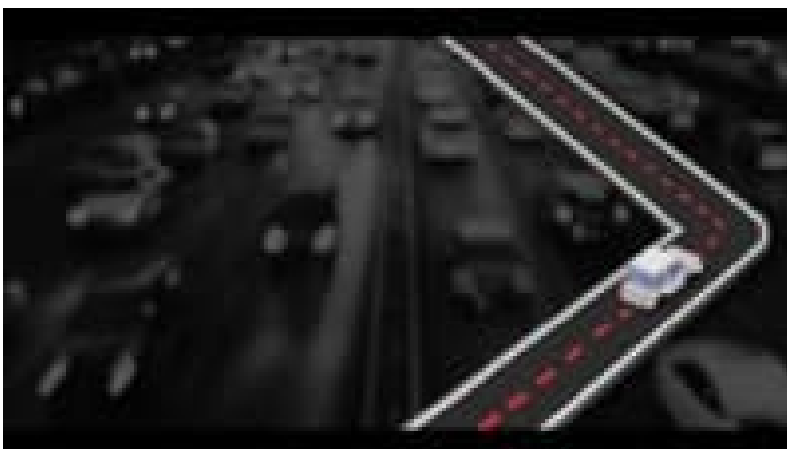
## More videos...



[A Beginners Guide To The Data Analysis Process – YouTube](#)



[Step-by-step Data Presentation Example | Google Data Analytics Certificate - YouTube](#)



[How Does Uber Uses Data Analytics | Demand Positioning & Segmentation | Success Story | UpGrad - YouTube](#)

## **BUSINESS INTELLIGENCE**

Over the past few years, business intelligence has evolved to include more processes and activities to help improve performance. These processes include:

- ✓ **Data mining:** Using databases, statistics and machine learning to uncover trends in large datasets.
- ✓ **Reporting:** Sharing data analysis to stakeholders so they can draw conclusions and make decisions.
- ✓ **Performance metrics and benchmarking:** Comparing current performance data to historical data to track performance against goals, typically using customized dashboards.
- ✓ **Descriptive analytics:** Using preliminary data analysis to find out what happened.
- ✓ **Querying:** Asking the data specific questions, BI pulling the answers from the datasets.
- ✓ **Statistical analysis:** Taking the results from descriptive analytics and further exploring the data using statistics such as how this trend happened and why.
- ✓ **Data visualization:** Turning data analysis into visual representations such as charts, graphs, and histograms to more easily consume data.
- ✓ **Visual analysis:** Exploring data through visual storytelling to communicate insights on the fly and stay in the flow of analysis.
- ✓ **Data preparation:** Compiling multiple data sources, identifying the dimensions and measurements, preparing it for data analysis.



## All you need to know: Power BI

- Power BI is a business analytics solution that lets you visualize your data and share insights across your organization or on a website/app. Connect to hundreds of data sources and bring your data to life with live dashboards and reports. Interface is simple enough for end users to create their own reports and dashboards.
- Power BI Provides cloud-based BI services, know as “Power BI services”, along with a desktop based interface, called “Power BI Desktop”. It offers data warehouse capabilities including data preparation, data discovery and interactive dashboards.
- Power BI provides the option of creating, designing and distributing the content as per the choice and need to the user. One can also extend the data models with DAX formulas.

### Key components

**Power BI Desktop** : The Windows-Desktop-based application for PCs and Desktops, primarily for design and publishing report to the service.

**Power BI Services** : Online service (Now referred to as PowerBI.com or simply Power BI).

**Power BI Mobile Apps** : The Power BI mobile apps for Android and iOS devices, as well as for windows phones and tablets.

**Power BI Gateway** : Gateways used to sync external data in and out of Power BI. In Enterprise mode, it can also be used by flows and PowerApps in office 365.

**Power BI Embedded** : The Power BI REST API can be used to build dashboards and reports into the custom application that serves Power BI users, as well as non-Power BI users.

**Power BI Report Server** : An On-Premises Power BI Reporting solution for companies that won't or can't store data in the cloud-based Power BI Service.

**Power BI Visuals Market** : A marketplace of custom visuals and R-powered Visuals.

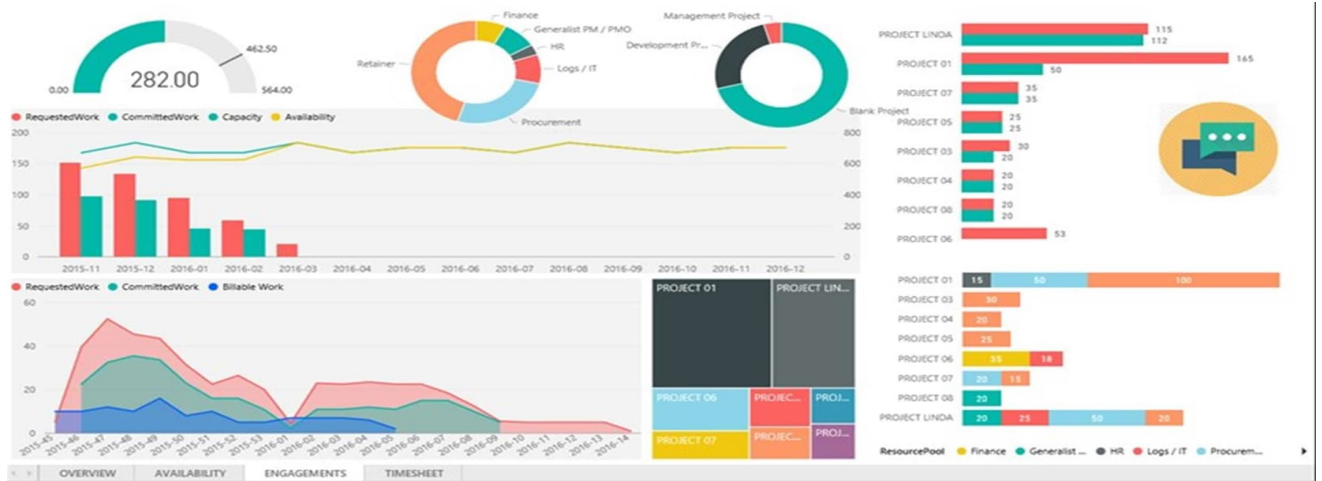


# All you need to know: Power BI

## Features of Power BI

### 1. Interactive Power BI desktop

This interactive Power BI desktop tool allows you to build reports by accessing the data quickly. One doesn't need to have advanced skills to create a report with this powerful tool, it is quick and easy to learn to use. Also, the best thing about this tool is that it is free.



### 2. Datasets Filtration

Dataset is a single set of data created as a result of taking data from multiple data sources. You can use the datasets to create visualizations of different kinds. A dataset can be made of data taken from a single source like an Excel workbook or from more than one data source. You can filter the datasets and have smaller subsets containing only the important data and contextual relevance. Power BI provides the users with a wide range of in-built data connectors such as *Excel, SQL database, Oracle, Azure, Facebook, Salesforce, Mail Chimp*, etc. Users can easily connect to such data sources and create datasets by importing data from one or more sources.

### 3. Customizable Visualization

Every organization functions differently, and they have their own way of getting things done. The Power Bi tool has a default standard, which sometimes is not sufficient for the organizations due to complex data. Under such circumstances, organizations can easily access the custom library of visualization and design visualizations that serve its needs.



# All you need to know: Power BI

## Features of Power BI

### 4. Flexible Tiles

A tile is a single block containing a visualization in a Power BI dashboard. Tiles segregate each informative visualization properly to provide a clearer view. These tiles can be adjusted and the size can also be changed. Also, they can be placed anywhere on the dashboard as per the users' convenience.

### 5. Navigation Pane

The navigation pane has options of *datasets*, *dashboards*, and *reports*. Users can conveniently work in Power BI and navigate between datasets, dashboard they are working on, and reports they are creating.

### 6. Informative Reports

Reports in Power BI are a combination of dashboards having a different kind of visualizations relevant to a particular business topic. A report shows a complete and structured presentation of data represented in different ways and revealing important insights from the data. Users can easily share reports created on Power BI with other users.

### 7. DAX Data Analysis Function

The DAX functions are the *Data Analysis Expressions* found in Power BI. These analysis functions are predefined codes to perform analytics specific functionalities on data. There are about 200 functions in the Power BI function library as of now. The creators keep on adding new ones.

### 8. Power BI- Top Three Components

- **Power Pivot:** This component imports and integrates different datasets from different sources to develop in-memory data models. Such integration makes it easy for any functional user to improve the overall value by combining various data sources.
- **Power Query:** This component searches for data in various corporate data sources or online, and the picked dataset is then seamlessly imported into an Excel table, which serves to be a game-changing feature for many analysts. The native data connectivity feature offered by this component enables quicker and simpler access to the data.
- **Power View:** When it comes to visualizing the data and making it even more interactive, Power View is the go-to component. It is supposed to cross-filter and highlight the data. Working with the data in the Power view component feels almost the same as working with Excel and PowerPoint tools.

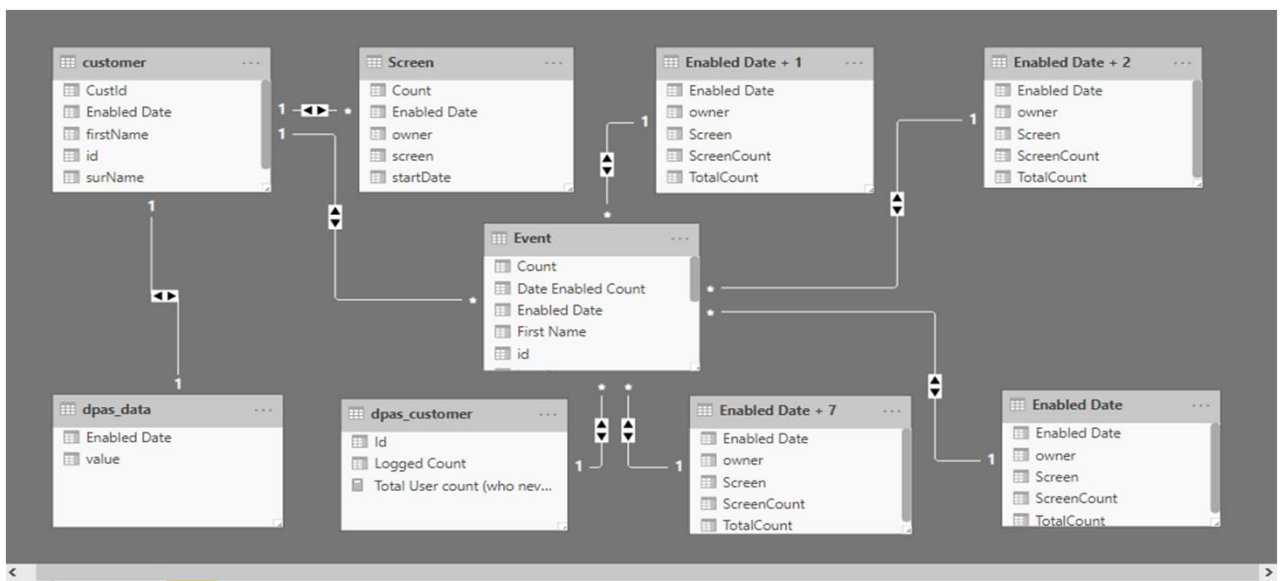


# All you need to know: Power BI

## Features of Power BI

### 9. Creating And Managing Relationships In Power BI

As the name suggests, Relationship in Power BI is used to define the connections or the relation between two or more tables. The relationship is used when we want to perform an analysis based on multiple tables. Relationship helps us to display the data and correct information between



### 10. Data Visualization (Dashboards)

Once we have the dataset ready with all the manipulations done, we can proceed for the Dashboard creation process. A Power BI dashboard, also known as canvas, consists of many visualizations on a single page which helps to tell a story.

