



**Aspect Training**

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YOUR COURSE, YOUR WAY - MORE EFFECTIVE IT TRAINING

# Introduction to Power BI

**Duration: 3 days**

## Overview:

This course is aimed at anyone who wishes to get started with designing, creating and publishing a Power BI Business Intelligence solution.

The course covers the loading and transforming of source data, the building of a tabular data model that provides a collection of related tables of data offering common hierarchies and measures used in the day to day analytics of business data and performance, the creation of reports, the publishing of datasets and reports to Office 365 Power BI, the creation of Dashboards presenting key visualisations, and the sharing of Dashboards and Reports to those that need them.

Power BI employs the functionality of Power Query, Power Pivot and Power View behind the scenes so if you have used any of these add-ins from within Excel you may have met some Power BI features and tools already. This course is also suitable for those who intend to use the individual components as Excel Add Ins.

## Prerequisites:

There are no specific technical pre-requisites for this course, but a familiarity with Excel and/or Relational Database Technologies may be beneficial. The main pre-requisite is to have a basic understanding of your business's need to collect, cleanse, analyse and deliver insights and visualisations of your business data.

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## Topics:

### 1 - Introduction To Power BI

Microsoft SelfService Business Intelligence

Importing data

Modelling Data

Creating Dashboards & Reports

Installing Power BI Desktop

Creating Your First Power BI Project

Discovering & Loading Data with Power BI Desktop

Data Sources: Files, Databases, Azure, Web Pages, Other Sources

Refreshing Data & Queries

### 2 - Transforming datasets

Power BI Desktop Queries

Transforming Source Data:

Cleansing, Deduplicating, Merging

Deriving New Columns, Removing Rows and Columns

Transposing Columns, Unpivoting Columns

Filtering Rows

Data Cleansing

Query Editor Context Menus

Data Typing Columns

Replacing Values

Filling Down

Using First Rows as Headers

Grouping Records

### **3 - Data Mashup**

Power BI Desktop View Ribbon

Duplicating Columns

Splitting Columns

Merging Columns

Creating Custom Columns

Adding Index Columns

Merging and Adding Data

Aggregating Data on Merging

Appending Data

Unpivoting & Pivoting Data

Transposing Rows and Columns

Removing Error and Blank Rows

Duplicating Queries

Managing The Transformation Process with Applied Steps

Applying Changes to Queries

### **4 - Creating a Data Model**

Data Modelling in the Power BI Desktop Environment

The Power BI Desktop Data View

How Do We Decide Whether To make Changes in the Data Model or Query

The Modelling Ribbon

Manipulating Tables

Manipulating Columns

Data Types

Formatting

Categorising

Default Summarisation Function: Sum, Count, Max, Min, Average, etcâ€¦

Column Sort Orders

Relationships

Data View and Relationship View

## **5 - Extending the Data Model with Calculated Columns**

Types of Calculations

New Columns

Naming Columns

String Expressions

Arithmetic Expressions

Calculating Across Tables

Refreshing Data

Using DAX Functions

Simple Logic: IF() Function

## **6 - Adding Measures to the Data Model**

Basic Aggregations in Measures: Sum, Count, Max, Min, Average, etcâ€¦

CrossTable Measures

Advanced Aggregations: CALCULATE

Filtering Data in Measures: Column Filters, ALL, ALLEXCEPT, ALLSELECTED, FILTER

Ranking

## **7 - Analysing Data Over Time**

Simple Date Calculations

Date & Time Formatting

Calculating Age and Difference

Adding Time Intelligence to a Data Model

Date Tables

Time Intelligence DAX Functions

Data as a Ration Over Time

Comparisons With Previous Periods

Rolling Aggregations

## **8 - TextBased Visualisations**

Power BI Desktop Dashboards

Switching to Report View

Creating Tables

Enhancing Tables: Totals, Formatting, Titles, Fonts, Colours, etc.

Creating a Matrix

Row Matrix

Column Matrix

Creating Cards

Switching Between Table Types

## **9 - Charts in Power BI Desktop**

Creating Charts

Basic Chart Modification

Basic Chart Types: Line, Pie, Column, Bar

Enhancing Charts

Other Chart Types: Donut, Funnel, Stacked Column and Bar, Scatter, Bubble, Waterfall, DualAxis, Clustered

Drill Down

## **10 - Other Types of Visuals**

Maps

Bing Maps

Using Geographical Data Types

Enhancing Maps

Tree Maps

Gauges

Additional Visuals: The Power BI Visuals Gallery

## **11 - Filtering Data**

VisualLevel Filters

Page Filters

Report Filters

Text Filters

Numeric Filters

Date Filters

## **12 - Using Slicers**

Adding Slicers

Applying Slicers

Formatting Slicers

Using Charts as Slicers

Cross Chart Highlighting

Charts as Filters

### **13 - Enhancing Dashboards**

Adding Text Boxes

Adding Hyperlinks

Adding Images

Adding Shapes

Layering Visuals

### **14 - PowerBI.com**

Publishing Reports to PowerBI.com

Creating a Power BI Account

Interacting With Reports in PowerBI.com

Creating PowerBI.com Dashboards

Adding Tiles to Dashboards

Sharing Dashboards

App Dashboards

Creating New Reports in PowerBI.com

PowerBI.com Gateways

Adhoc and Scheduled Data Refresh