



Power BI Consultants
and Trainers

MSH CONSULTANCY

Power BI Two-Day Training Course Content

AIMS:

The main aims of this two-day course are to give delegates a good understanding of data analysis using **Microsoft Power BI**. This course includes creating visualisations using **Power BI Desktop** and then publishing them to the **Power BI Service** and learning how to share their reports and dashboards with colleagues.

Objectives:

- ✚ Perform Power BI Desktop imports and various transformations.
- ✚ Create Power BI Desktop visualisations.
- ✚ Publish reports to the Power BI Service.
- ✚ Connect to multiple Excel files.
- ✚ Collaborate with colleagues using the Power BI Service.
- ✚ Understand the difference between Power BI Reports and Power BI Dashboards.
- ✚ Understand how to use Workspaces in the Service.
- ✚ Learn how to use some of the most common DAX functions to create Measures and Calculated columns.

Prerequisites

- ✚ Some basic knowledge of relational databases would be helpful.
- ✚ Some experience of using functions like those used in Excel.
- ✚ An awareness of key business priorities such as revenue, profitability and financial accounting is desirable.

Day One is an Introduction to the Power BI Desktop and Day Two is Power BI Intermediate.

They can be taken back-to-back, or with a short break between. They can also be taken as independent courses depending on delegate knowledge and experience.

Day One – An Introduction to the Power BI Desktop

- ✚ What is Power BI and who is it aimed at?
- ✚ Understand the advantages of Self-service BI over traditional IT lead BI.
- ✚ Understanding the various components of Power BI and how they work together.

Getting Started with the Desktop:

- ✚ Become familiar with navigating around Power BI Desktop and understand the difference between 'design mode' and 'query edit mode'.
- ✚ Learn how to connect to Excel and import data into Power BI Desktop and then perform various transformations.
- ✚ Learn the basic principles of data modelling and relationships.
- ✚ Build a data model using data imported from multiple Excel files.
- ✚ Learn the difference between 'data types' and 'data formats' and how to apply the correct 'data types' to the imported data.
- ✚ Learn about Power BI 'data categories' and default methods of aggregation.
- ✚ Learn about the basics of 'data compression' and understand the importance of removing unwanted columns from the data model.
- ✚ Learn about the various methods of filtering data in Power BI Desktop.

Working with the Data Model:

- ✚ Understand the difference between a Measure and a Calculated Column and when to use them.
- ✚ Learn some best practices when creating Measures and Calculated Columns.
- ✚ Create various Measures using some of the most common DAX functions to manipulate the data model.
- ✚ Create several Calculated Columns to extend tables in the Data Model.
- ✚ Learn the difference between 'Filter Context' and 'Row Context'.
- ✚ Learn how Power BI compresses data and how to maximise compression so the data model remains fast & efficient.

Working with Dates:

- ✚ What is a dates table & why you need one?
- ✚ Construct a dates table from scratch using a 'M' script provided.
- ✚ How to format and configure the dates table to ensure information is presented correctly.
- ✚ Make sure the dates table spans the period(s) of transactions in the data model.
- ✚ How to modify the dates table so you can easily report on periods such as: yesterday, today & tomorrow.

An Introduction to DAX Functions & Expressions:

- ✚ Understand the difference between a measure and a calculated column and when to use one over the other.
- ✚ Learn about DAX object naming & syntax.
- ✚ Learn about '**implicit & explicit**' measures.
- ✚ Learn how to use some of the most common DAX functions to calculate common business measures such as: total sales, gross profit, gross margin & cost of sales.

Building Reports:

- ✚ Learn how to create various charts and tables using Measures and Calculated Columns.
- ✚ Learn about the default range of Power BI charts and tables available in the 'Visualisations library'.
- ✚ Learn about the 'Field Well' in Power BI Desktop and how to manage tables and fields as the data model grows.
- ✚ Experiment with searching the data model for fields and how and when to hide tables and fields.
- ✚ Moving Measures that reside in the incorrect table.
- ✚ Learn about the difference between a 'standard table' and a 'matrix' and how to use drill-down as a method of seeing data at a more granular level.
- ✚ Learn how to use simple methods of conditional formatting in Power BI Desktop such as data bars.

Day Two – Power BI Intermediate

Power BI Under the Hood:

- ✚ Learn how the Power BI engine performs its various calculations using **Evaluation Context, Filter Context & Row Context**.
- ✚ By learning the above, delegates will be able to understand the principles of many DAX functions and how to use them.
- ✚ Learn how Power BI differs from Excel.
- ✚ By learning the above delegates will be able to create more complex calculations & diagnose problems.

Using DAX Functions & Expressions to Solve Day-to-Day Reporting Needs:

- ✚ Learn about **DAX Time Intelligence** functions and how to use them in financial reports.
- ✚ Learn how to report using a range of categorical calendar periods such as: Year, Quarter, Month & Week.
- ✚ Learn how to use more advanced DAX functions to solve common finance reporting needs, such as: calculating YTD, year-end (calendar), year-end (fiscal) and learn more about how to use CALCULATE, often referred to as the 'Swiss Army Knife' of DAX functions.

AN Introduction to the Power BI Service:

- ✚ Learn about the relationship between the Desktop & Service.
- ✚ Learn how to navigate the Service environment.
- ✚ Learn how to manipulate reports and create new ones from new & existing data sets.
- ✚ Learn how to build a dashboard using reports published to the Service.
- ✚ Learn how to share reports & dashboards with colleagues & partners.
- ✚ Learn how to analyse a data model in the Service and show the results in an Excel pivot table.

The information above is correct as of April 2021. We reserve the right to update / change course content, so it is in line with the latest versions of Microsoft Power BI without notice.