Excel, PowerQuery and Power BI Desktop

Audience

This **two-day** course is an introduction to the Microsoft power tools found within Excel and Power BI and is for those who need to analyse, process and connect to with data in order to produce reports, interactive dashboards and visualisations at all levels within an organisation. It is assumed that attendees on the course are already working with data, are familiar with charts and PivotTable concepts. Delegates will be using Excel 2016/2013 Professional Plus or Excel Office 365 with access to Power BI Desktop

Objectives

At the end of the course delegates will be able to:

Excel and Get and Transform Data (PowerQuery)

- ✓ Create Pivot Tables from related tables using a data model within Excel
- ✓ Connect to a variety of data sources from Excel using queries to extract, transform and load data (Power Query)
- ✓ Merge and Append multiple data sets
- ✓ Manage relationships between data sources
- ✓ Transform data using Calculated columns

Power BI Desktop

- ✓ Connect to a variety of data sources using Query Editor
- ✓ Create Visualisations (Charts, Tables, Gauges, Maps)
- ✓ Introduction to basic DAX language to create calculated columns and measures
- ✓ Create Charts with Interactivity
- ✓ Filter data with various tools
- ✓ Drill down and use Hierarchies
- ✓ Apply advanced formatting and visualisations with conditional formatting, matrices, cards, gauges and KPIs

Course Content for)

DAY 1

Excel and Power Query

Pivot Tables and data models

- Importing tables
- Filtering rows/columns
- Data and diagram view
- Hiding from client view
- Relationships
- Using Excel tables, creating and naming tables
- Adding tables to data models

- Drill-down
- Slicers and timelines

Getting data (Power Query)

- Querying databases
- Web pages and XML files

Transforming data (Power Query)

- Splitting columns
- Merging and inserting columns
- Other transforms

Calculated columns

- Creating calculated columns
- BLANK and SWITCH

Power BI Desktop

Overview of Power BI Desktop

- Overview of a pbix file and introduction to:
  - Views : Reports (visualisations); Tables and Relationships
  - Visualisations: Treemap; Funnel; Map; Clustered Column Charts
  - Page Tab
  - Focus Mode
  - Tool tips

Creating a Basic report

- Getting data
- Basic visualisations
- Shapes, text boxes and images

Data sources and Query Editor

- Connecting to:
  - Access databases
  - Excel / text files
  - Websites and web services
- Pasting data
- Filtering rows
- Manipulating columns
- Working with data types

Multiple tables

- Connect and load multiple workbook tables
- Merging data sources
- Append Data tables
- Relationships
- Filter directions

Calculated columns in Power BI

- Adding columns
- IF and SWITCH
- The RELATED function

Filtering data

- Slicers
- Visualisation level filters

Formatting visualisations

- The formatting panes
- Conditional formatting

Charts

- Working with charts
- Specific chart type issues
- Grouping and binning

Other types of visualisations

- Working with matrices
- Working with cards

DAY 2

Dashboard visualisations

- Gauges
- KPIs

Advanced Filters and Views

- Grouping and pivoting
- Grouping with Bins
- Filter combinations
- Creating new columns
- Role Based Views

Measures/DAX

- How measures work/tuples
- Adding measures
- Basic DAX

Drill-down

- Interactions
- "See records" feature
- Hierarchies and re-usable Hierarchies
- Drill with Dates

Parameters

- Creating parameters
- Filtering by parameter

Maps

- Geo Data
- Data Categorisation and Maps
- 2-page map based report