



## Course Outline Business Intelligence using Excel Power Tools & Power BI

### Contents

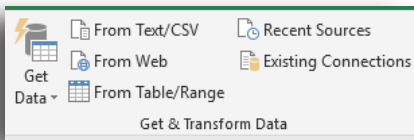
### Business Intelligence

- What is BI?
- Main Concepts
- Power Query
- Power Pivot
- Power BI Desktop
- Power Query



### Introduction to Power Query

- Query Concepts
- ETL
- Get & Transform



### Creating and editing Simple Query

- Get from Folder
- Query vs Source Data
- Writing 'Robust' Queries

### Common Data Import Sources

- Working with CSV files
- Working with Text Files
- Working with Excel Files (mini meta data)

### Working with other data sources

### Understanding the Query

- Meta Data Query
- File Content Query

### Filtering and Sorting Rows

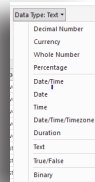
- Filtering out unwanted Data
- Using Auto-Filter (problems)
- Using Number, Text and Date Filters
- Removing Duplicate Values
- Filtering out Rows with Errors
- Sorting

### Working with Columns

- Moving / deleting Columns
- Splitting Columns
- Merging Columns

### Changing Data Types

- Text
- Number
- Date/Time
- Locale
- Table



### Transformations

- Unpivoting Columns to Rows
- Transposing a Table
- Creating Custom Column
- Loading Data
- Loading Data into a Worksheet
- Loading Data into the Excel Data Model
- Refreshing Queries Manually and Automatically

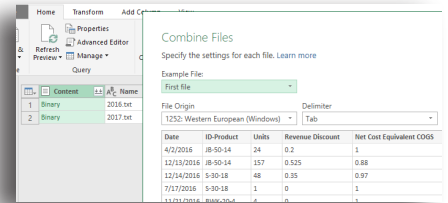
### Power Pivot

### Understanding Power Pivot

- What is Power Pivot
- Pivot Table Examples with Excel Data
- Power Pivot Examples with a Data Model

### Working with Data

- Working with Excel files
- What is in an Excel file?
- Working with Excel Tables
- Working with Data Ranges

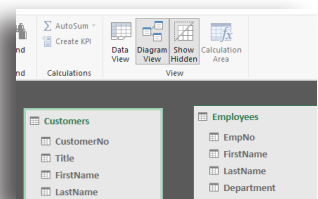
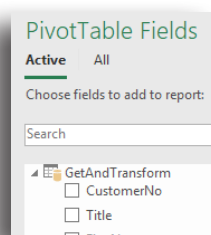
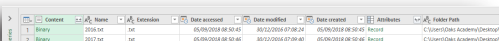


### Importing Data into Power Pivot

- Understanding Acceptable Data Types
- Adding Excel Tables to Power Pivot
- Adding and Maintaining Data in Power Pivot

### Creating a Data Model

- What is a Data Model
- Understanding Key Fields
- Relationships in a Data Model
- Data Hierarchies





## Using Calculations in Power Pivot

Types of Calculations in Power Pivot

Creating a Calculated Column

Creating a Calculated Field (Measures)

Understanding DAX Measure Rules and Best Practices

Choosing Between Calculated Columns and Measures

## Using DAX (Data Analysis Expressions)

Understanding Data Analysis Expressions (DAX) Formulas

Where to use DAX formulas

Understanding the DAX syntax

How to create DAX formulas

Types of operations you can perform with DAX

## Time intelligence

Why a Date (Calendar) Table is required

Generate a Date Table

Mark as a Date Table

Grouping dates for time analysis

Time Intelligence functions

## Data Visualisation

### Excel Visualisation Tools

Dashboard & Report principles

Filtering Data using Slicers

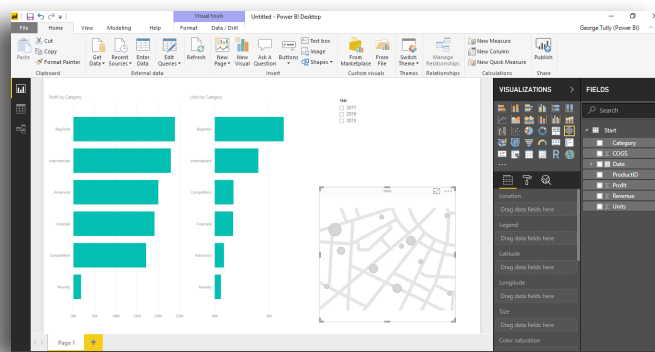
Creating Pivot Charts

Formatting Pivot Charts

Using Multiple Charts and Tables

Connecting Slicers

## Power BI Desktop



## Getting Data

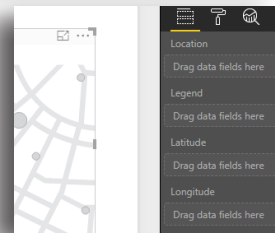
Data Model

Time Intelligence

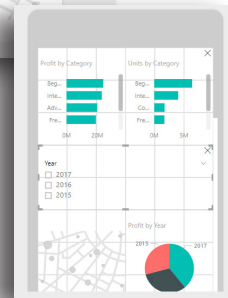
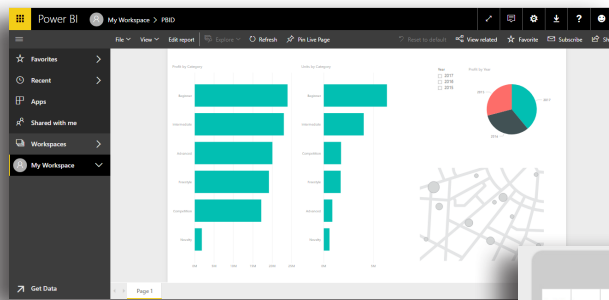
Visualisations

Spatial Intelligence

Sharing Reports



## Power BI (.com)



## Workshop

Analyse typical user file, tasks, outcomes

Set up data model based on real life file

Discuss and create analytics for the model