

# MS Excel - Power Query -advanced data retrieval and transformation



## Training recipients

The training is intended for the people who would like to know additional possibilities of downloading data to Excel (for example from web sources), automation and transformation using M language.



## Benefits

- You will know what Power Query is used for.
- You will learn how to download data from different local and web sources.
- You will be able to consolidate data from several files (for example Excel, Csv, Access etc.).
- You will get to know the possibilities of working with data consisting of even 50 000 000 rows.
- You will learn how to perform operations on data with tools which so far have been unavailable in MS Excel.
- You will be able to use the query list in Power Query.
- You will see how to create query steps in Power Query.
- You will find out what is M language and why it is worth using it in Power Query.
- You will learn how to create your own functions using M language.



## Training program

1. Introduction
  - What is Power Query and its role in preparing data for Power Pivot model
  - Discussing available sources
2. Sourcing data - importing external sources
  - From files (among others Excel, CSV, TXT)

- Relational databases (among others MS SQL Server, MS Access)
  - Online services (among others SharePoint, WWW websites)
  - Folders
  - API keys downloaded from different web services
  - PDF – only Office 365 version
3. In-built tools for data transformation
- Dividing columns into different arguments
  - Deleting/keeping verses
  - Converting data to a heading
  - Changing value/errors
  - Transposition
  - Grouping
  - Merging columns
  - Filling in empty cells
  - Unpivot / Pivot of columns
  - Data tranformation (among others the last day of the month, of the week, quarter, name of the month, names of days, year)
  - Number transformation (among others, count unique values, divide completely, the absolute value, rounding)
  - Text transformation (among others trim, clear, letter size, intelligent extraction)
4. Operations on queries
- Refreshing
  - Grouping
  - Downloading options
  - Editing
  - Dependencies between queries
5. Combining several data sources
- From several locations, files and sheets
  - Merging queries
  - Fuzzy merging – only Office 365 version
  - Adding queries
6. Adding columns
- Conditional
  - From examples
  - Non-standard
  - From index
7. Query parametrisation
8. M language
- What is a language in Power Query editor used for
  - M language syntax
  - Ways of using the most popular functions

- Defining your own variables
  - Converting queries to functions
  - Creating new queries using advanced editor
9. Non-standard solutions
- Consolidating structurally complex files
  - Creating a calendar of dates with a possibility to use a displayed language of the names of the months and days
  - Multi-parametric queries
  - Using API keys which allow for example to download current data from Internet services (among others, banking services, weather forecast services, social services)



### Expected preparation of the participant

Successful navigation through MS Excel interface. The knowledge of basic tools and formulas, as well as basic functions.



### Duration

2 days / 14 hours

### Language

English