Power Query

Power Query is a tool used to manipulate data and is commonly used for data analysis and business intelligence. Power Query is available in both Microsoft Excel and Microsoft Power BI.

High-quality analysis relies on well-organized data that is free from errors and that draws data from a single source of truth. Whilst many analysts spend hours of time manipulating data, combining data, and performing look ups, Power Query allows all of these steps to be automated with simple, repeatable steps.

Power Query is one of the most transformative tools available to any analyst working with data in Excel. Not only will it save analysts hours of time, but it will result in reduced manual errors and a better ability to source data from a single source of truth.

Uses and Benefits of Power Query:

1. **Transforming data:**

The core purpose of Power Query is to transform data. This means modifying the layout, removing errors, and generally making the data more usable for analysis.

Common data transformations performed in Power Query include:

1. Pivot / Unpivot
2. Splitting / Merging Columns
3. Filtering Data
4. Creating custom columns
5. Deleting header / blank / error rows
6. Changing data types
7. Fill down values

2. **Repeatable steps:**

Power Query also remembers each of the steps that were taken to transform the data. This means that when reports are refreshed or changes are made, model inputs can be refreshed in seconds, with no need to re-do the whole process from scratch.

3. Combining multiple tables:

Power Query allows us to combine multiple tables of related data. Excel users would achieve the same task using lookup formulas. They'd be limited to 1 million rows and find their models became increasingly slow with the addition of so many formulas.

Instead, Power Query joins the tables efficiently using matching columns, does not require any formulas, and is achieved for the entire dataset in seconds.

4. Combining multiple files:

Power Query includes functionality to seamlessly combine data from multiple similar files.

5. Connection to central data sources

Power Query includes many connectors that allow you to pull data from SQL databases, web pages, cloud storage, and local files. By always referencing central sources of data, analysts can ensure they are all working from the one version of the truth.

Using the Get Data menu, it's easy to customize queries to source data from each data source type.