


**Main differences between Excel and Power BI**

- Excel is used to organize data, transform it and perform mathematical operations and calculations. On the other hand, Power BI was conceived as a business intelligence and data visualization tool for businesses.
- Excel has limitations in the amount of data it can work with. In contrast, Power BI can handle much larger amounts of data. (Update – a single worksheet in Excel is limited to just over 1 million rows of data, but it would be impractical to try to load that many rows of data directly. Instead, Excel's Data Model can hold well over 1 million rows – in fact, with the 64-bit version of Excel, you can load up to 2 Billion rows of data with relatively decent performance rates.)
- Power BI can connect to a large number of data sources, while Excel's connectivity capacity is limited. Also, unlike Excel, Power BI can be easily used from mobile devices.
- Power BI has faster processing than Excel.
- Power BI dashboards are more visually appealing, interactive and customizable than those in Excel.
- Power BI is a more powerful tool than Excel in terms of comparison between tables, reports, or data files.
- Power BI is more user friendly and easy to use than Excel. (Update – this is true but only insofar as creating interactive dashboards is concerned. If the user needs to have a robust calculation engine that can create and manipulate numbers and text for virtually unlimited purposes, e.g. financial projections, what-if scenarios, managing lists of records, etc., then Excel far outweighs Power BI.)

**Summary**

Both Excel and Power BI are very complete platforms to work with, analyze, and process data. However, they have different characteristics and functions.

To claim that one tool is better than the other would be inaccurate, since their potential will depend on what you need to do with your data.

Excel is a better option if you want to manipulate and transform data, do searches, calculations and apply mathematical formulas or create complex tabular reports.

Power BI is more suitable for working with very large data, creating visualizations, working in teams, integrating data from multiple sources and, analyzing data with the intention of getting indicators, drawing conclusions and making data-driven decisions.

Basically, Excel allows more operations with data than Power BI. In other words, it has more diversified functionality and is an ideal program for expert data analysts.

In contrast, Power BI is a more complete application in other ways and is ideal for businesses and companies that need to analyze large amounts of data in a simple way, work collaboratively, transform data into insights, update data regularly and present information visually.

source link

**BOTTOM-LINE:**

There are pros and cons to any software tool but anyone who really knows both tools would have to agree that they complement each other pretty well.

Power BI is for dedicated business intelligence and data visualizations on datasets from disparate sources, which can then be collaboratively shared easily.

Excel can also do BI and data visualizations – not to the extent of Power BI but it can certainly communicate the same info with very effective and stylish dashboards just the same.

Excel doesn't have a lot of the bells and whistles of Power BI such as cross-filtering between charts and row-level security, nor is it as easy to collaboratively share dashboards as Power BI. However, Excel can analyze and report on much larger datasets than most people think, i.e. many believe that Excel is limited to about 1 million rows of data but this is NOT true; Excel's data model can load and process many millions of records of data without much fuss and with dashboard performance that's just as good as with smaller datasets. For instance, Excel can load 4 million records in about 45 seconds with resulting dashboard performance that's lightning quick. Also, don't forget that Excel does so many things that Power BI can't do such as ad-hoc data modelling, financial forecasting, what-ifs, identifying duplicate/missing data, custom conditional calculations and formatting, complex table management, filtering, and calculations, etc., etc.