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## Excel or BI -

When is it just better to stick with Excel?



Microsoft Excel has been a pillar of business since the late 1980s, and since then, it's only grown in its usefulness and relevance to modern business. Today, this ubiquitous spreadsheet program can be found filling roles from simple calculations to advanced financial modelling to time-sheeting and reporting functions.

But, as businesses have begun digitalising more systems and embracing the digital world, the market has responded with more specialised software. Collectively, these are known as business intelligence (BI) tools.

Despite what evangelists from both sides preach, both Excel and BI tools have their place in modern business. Knowing when to leverage each toolset can save time, effort and cost – leading ultimately to better, faster, and more accurate decision-making.

In this paper, we look at both sides of the story and highlight when switching to BI tools can improve business outcomes and when it's best to stick with Excel.

## What are BI tools?

Excel is the multitool of business. It's capable of everything from figuring out how many kilometres you drove last week to analyse new markets for your product. It's also easy to learn, at least for basic functions; in fact, your first experience using Excel was likely in high school. However, as businesses deal with more and more complex data from more and more sources, the inadequacies of the multitool become apparent.

This is where business intelligence (BI) tools like Power BI, Qlik and Tableau find their place. BI tools are designed with specific, more advanced uses of Excel in mind, making complex and repeated data analysis tasks faster and more efficient than Excel could ever hope to.

Of course, the trade-off is that BI tools often take longer to learn and more time to implement for each task – but over the long term, the returns far outweigh the steeper learning curve. Once set up to complete a specific job, BI tools are designed to complete it as often as necessary, with incredible speed and little to no further human intervention.



# When is Excel just better?

All that being said, there are many times when Excel outshines its more complex BI cousins, such as:



## Straightforward reporting

While Excel was never designed to be a reporting tool, its simple pivot tables and graphs make it an excellent way to produce simple reports. Where tools can export data in a standard format, Excel is great for quickly incorporating that data and adding easy charts and graphs. For example, if you have a list of sales and need to visualise how many were made in each month of the year, Excel is easily the fastest way to create a simple bar graph and identify if sales are trending up or down.



## Simple, uncomplicated tasks

As we mentioned, Excel is known for its ease of use and its broad usability amongst office workers. Because of this, Excel is the best tool for quick tasks, like totalling a list of numbers or analysing a simple pivot table. There are also many functions outside data analysis for which BI tools simply aren't designed: task tracking, project planning, registers, and more. Even organisations with large BI implementations and in-house BI experts will still use Excel for jobs like these.



## One-off analysis

Because of the speed at which Excel can be set up for simple calculations and data modelling, it's often the best choice for analysis that will only be done once. Tasks such as a one-off commercial model, checking for discrepancies between two different outputs or creating a quick report from a dataset will usually be faster and easier in Excel.

While BI tools are powerful, building and analysing models with them for the first time usually takes much longer. So, when you won't be rerunning these reports or analyses in the future, Excel is generally the better choice.



## What-if analysis

A key difference between Excel and BI tools is that Excel is designed for users to input data. In contrast, BI tools are designed for automated data collection. While both tools can perform both functions, Excel's primary use case is user-entered data.

This is invaluable when building models that analyse the impact of changing various input values. For example, a company might want to see how decreasing unit costs and increasing sales volumes affect its business forecast. In Excel, this is a simple case of typing a new value in the relevant cell, while in BI tools, analysing these changing variables can be much more challenging.

# When are specialised BI products the right tool for the job?

What sets BI tools apart is their focus on solving challenges modern businesses face in data-heavy environments. They emphasise data collection and transformation, automation, and repeatability. These have several real-world applications for businesses:



## Complex and ongoing analysis

Most reports and analyses start as simple one-off tasks, but as management sees their value, they become regular activities. Over time, more metrics and data are added, and soon that 'simple one-off task' is taking up a few hours of employee time every week. This is exactly the situation BI tools were designed to handle. They're designed to automate the process of collecting data and turning it into actionable reports and metrics. Often, businesses can save significant resources by taking repeated and complex Excel-based reporting and automating them with BI tools.



## Multiple data sources

Modern business use many different systems. From HR systems to CRMs, sales tools, marketing tools... Collecting data from all these places and transforming it into a standard format takes time. All these tasks can be automated within a BI tool, saving time and resources that could be better spent on other tasks.



## Human error

Manually collecting, transforming and analysing data with Excel runs the inevitable risk of human error. The more complex the task and the more business-critical decisions it's used to support, the more problematic this risk becomes. BI tools eliminate the risk of human error by automating the complete end-to-end process, ensuring reliable results every time.





## Large amounts of data

In theory, an Excel sheet has a limit of 1,048,576 rows. In practice, putting anywhere near this much data into a spreadsheet will make it slow and unstable. In addition, Excel is usually run on a workstation, and working with any large amount of data will likely leave the staff member unproductive while Excel does the processing. BI tools can handle virtually unlimited quantities of data and are designed to operate on servers and in the cloud, making processing much faster, more efficient, and more reliable.



## Security and sharing

As businesses have moved towards sharing and collaboration, Excel has struggled to keep up. BI tools, by contrast, were designed with security and sharing in mind. While Excel-based reports need to be distributed via email, BI-based reports are usually hosted on a collaborative platform. They can easily be shared internally or externally and are always available and up to date when people need them. Modern BI tools also allow users to be set up with enterprise-level security permissions, allowing you to be very specific on who has access to what data. This means you can share a single master report with multiple customers, limiting them to only see data relevant to them or with internal teams who can be provided with a view specific to their area. Additionally, users can easily be added or removed, giving you full control of the consumption of analysis.

In contrast, Excel does not have this functionality, meaning multiple 'cuts' of the same report are required to provide different consumers with a meaningful customised view, and once a spreadsheet is released, it can be difficult, if not impossible, to recall or limit access.



## Quick, data-driven decision-making is required

Today's businesses rely on timely and accurate data to support decision-making. Complex analysis in Excel takes time to complete, and the more often these analyses need to be run, the more time they take – not to mention that data can quickly become outdated, potentially resulting in flawed decision-making. BI tools can be configured to run and distribute complex reports on a weekly, daily, hourly or even continuous basis. With the addition of end-to-end automation, business leaders can have instant access to real-time data to unlock agile and flexible decision-making without investing significant resources in generating and distributing analyses

## Conclusion

Excel has been the multitool of business for decades and will likely continue to play an essential role in almost every industry for decades to come. Business intelligence tools were designed to deal with specific challenges created by complex data and repeated analysis within modern enterprises. They focus on automating the end-to-end collection, transformation, analysis and presentation of data from multiple systems.

Because of their powerful capabilities, BI tools require a unique, specialised skill set to set up and maintain. In contrast, Excel is quick and easy to set up and can be used by almost anyone in a corporate environment. Excel is still the best tool for simple, straightforward, and especially one-off tasks; however, as reporting becomes more complex, repeated, and time-consuming, BI tools can provide significant accuracy and timeliness benefits and a quick return on investment through substantial cost savings.



## About the author:

Advance Business Consulting is a technology-agnostic provider. We don't force square pegs into round holes. We work with our clients to understand their needs and recommend the solution that will provide the most value for their specific situation. Sometimes, if it's working, that means leaving things as they are; other times, it means helping develop and mature existing Excel-based processes; and in some situations, it means looking at BI tools like Qlik, Power BI and others.

We deliver solutions in business analytics, information management, portals, network monitoring and custom software development. This gives us a broad range of knowledge with deep expertise in each area, allowing us to use proven, flexible and scalable business software solutions to deliver value for our clients both in South Australia and nationally.

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