



# Improving your data practices - replacing your spreadsheets



# Improving your business by replacing spreadsheets

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Almost every employee in every organisation in the world uses spreadsheets in some capacity or another. Spreadsheets are an incredibly useful and easy to use tool. The capability they offer across a wide range of use cases makes them a favourite, but this wide-ranging capability can also cause issues and incorrect usage.

Spreadsheets can offer challenges around data quality, data security, productivity and more. It is these challenges and threats that are normally overlooked but should be carefully considered.

Knowing what other options are out there and when to use them is a challenge and one this guide is designed to address. In this guide we explore the wide range of solutions from Microsoft that offer you more capability, security and scale than spreadsheets. We discuss when each of the solutions could be used and the strengths of each offering.

## This guide covers

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- › Common use cases of spreadsheets
- › Risks associated with spreadsheets
- › The Microsoft technology suite
- › Selecting the right solution for you



# Why are spreadsheets so popular?

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You might be wondering why the war on spreadsheets? Excel and spreadsheets are incredibly easy and useful to use. After the calculator they are the biggest impacting innovation across the realm of data, statistics and finance.

Anyone can use spreadsheets to analyse, capture, store and present data. All while applying calculations and a great range of visual charts, tables and presentation options.

They are regularly the first port of call for most people when they are doing anything with data, and this can become an issue. The prolific use of spreadsheets and how they grow into business critical databases and systems is a key risk and one we touch on later.

## Scenarios/Use cases

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When considering spreadsheet usage, these can be broken down into a few key areas:



### Databases

Using a spreadsheet as a database is rife across the business world. With the ability to easily add data, format it into a table and run calculations, makes it a perfect small-scale database.

From risk registers, master spreadsheets, customer records, employee records and more. It is highly likely each department in your business has a wide range of databases living in spreadsheets.



### Reporting

Generally pulling data together is done as part of a business reporting process. Be it monthly, annual or ad hoc reporting, spreadsheets provide an accessible way to quickly gather and combine data and build reports and tables.

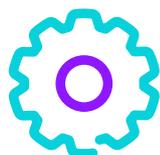
When looking at combining data, the combination of vlookups and pivot tables provide a great range of capability and make analysing data easy.



### Data transfers

Businesses have a range of different data sources, from CRM, finance, marketing, operations, HR, amongst other systems. Trying to get the data in these systems up to date and consistent normally includes manual steps.

Employees extracting data into a spreadsheet and then uploading this into a second system is a regular occurrence whether it's monthly/weekly or in some cases daily uploads.



### Systems

More advanced users of spreadsheets with the help of macros and advanced formulas can build some amazing solutions within spreadsheets.

These can be for all sorts of business applications that are connected to data sources providing, capturing and transforming data all within the spreadsheet themselves.



# Risks associated with spreadsheets

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When it comes to discovering other ways of approaching data and analytics, spreadsheets might not always be the right answer. It is important to discuss some of the challenges and risks associated with them.

## Data security

The first challenge to consider is data security. Spreadsheets do come with some security features, such as passwords and controls on read/write but that's generally where the security ends.

The main data security challenge relates to the fact that you can easily copy or delete a spreadsheet with very little ability to secure your spreadsheet from this.

There is no backup built in, yes there are some features available within Office 365, but these are limited when compared to other data solutions. Version history and audit is also now available in limited form via Office 365 but again weak compared to other data solutions. They are also limited to going through any update to the whole sheet rather than checking any change to an individual cell, row or column.

The fact that you could copy a spreadsheet full of company data and email it is a real risk and one that happens regularly. Pair this with the fact that you can't limit access to rows, columns and cells means anyone that has access to that spreadsheet has access to all the data within.

This fails to secure your personal, identifiable and sensitive data and leaves you open to data risk. All of these data security risks can be avoided in other more advanced data solutions.



## Manual data entry

Manual data entry, be this copy and pasting or typing data into spreadsheets can result in errors that can feed through into systems and reports and ruin the data quality.

- › Research has shown that approximately 88% of spreadsheets contain some kind of error, primarily due to manual entry.
- › Something as simple as a misplaced decimal point or incorrectly entered formula can wreak havoc on an organisation's financial statements or decision-making.



## Collaboration

When comparing how you collaborate across a spreadsheet vs another data solution, it becomes clear that collaboration across spreadsheets can be a challenge. Moves to cloud solutions such as Office 365 or Google Workspace does make it easier to collaborate but there are still significant challenges.

- › Inability to link data across sheets.
- › There is no way to track changes or see audit history in Excel.



## Scalability

When you first use a spreadsheet to create a database or report, you never expect it to grow into a fully-fledged system. As limited thought is put into the future viability of the solution you can quickly run into capacity issues when looking at larger data and calculation quantities.

Even the newer excel spreadsheet format (XLSX) can only handle 1 million rows of data. When looking at transactions or customer records this can easily be reached.

Adding to this is the performance challenges when dealing with larger data volumes. Any calculations across the full table will perform slowly and take up valuable time.





# Microsoft Technology solutions

Now we have discussed the different ways spreadsheets are used throughout a business and the challenges and risks involved in doing so, it's time to delve into the alternative technology solutions available.

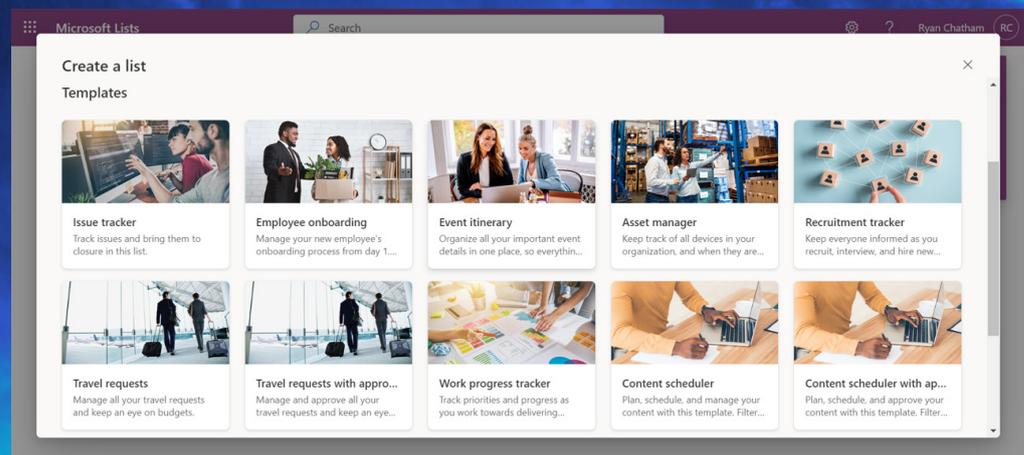
Each of these solutions offer a range of advanced features over spreadsheets.

## SharePoint lists

SharePoint lists also known as Microsoft lists are a great place to move your data to. SharePoint lists offer better data security, version control and conditional access all while storing the data within SharePoint.

Easily create lists that offer filters, wide range of visual options, have individual views, integrate with Power Platform and a full version history for each cell, row and column. A key feature here is the security within SharePoint lists, you can control who can read and edit each cell, row or column to better secure your data and provide that audit capability.

This comes as standard as part of SharePoint Online and offers a simple, easy and more user-friendly way of storing and accessing your data. SharePoint lists do have limitations, they are better suited for smaller databases where users want to be able to access and update the database in an easy-to-use way.





## Power BI

When looking at the reporting and presentation of data, Power BI is the go-to solution globally. Power BI is a collection of data visualisation and Business Intelligence solutions that allow you to provide reports and dashboards across your organisation.

Power BI can connect to your data no matter where it lives, including SharePoint lists, spreadsheets, business applications, on-premise SQL databases, Dataverse and more.

Power BI uses a drag and drop editor, making it easy to build reports and analyse and interrogate data. The great thing about Power BI is anyone can use it, it's not just for professional developers, any advanced user of spreadsheets with a little training can use Power BI.





# Azure data solutions

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Azure offers some of the most advanced data solutions available. These solutions piece together to create as complex or as simple a data platform as you need.

Azure offers limitless customisation regarding data security, scalability, automation and connectivity. It offers the ultimate enterprise level data platform.

You've done the hard part; now how do you tell people what's happening? Here are four key points you should consider:

Azure Synapse	Azure Data Factory
<p>Azure Synapse or as it was formerly called Azure SQL Data Warehouse, is the data warehouse where you will store your clean, transformed data. Azure Synapse is Microsoft's flagship data solution, it takes the enterprise data warehouse and brings in several additional supporting services.</p> <p>Azure Synapse is an integrated analytics service that accelerates time to insight across data warehouses and big data systems. It brings together the best of SQL technologies used in enterprise data warehousing, Spark technologies used for big data and pipelines for data integration.</p>	<p>Azure Data Factory is Microsoft Azure's, data pipeline solution or sometimes called extract-transform-load [ETL], and data integration.</p> <p>Azure Data Factory focuses on connecting to data sources, getting data into the cloud and in the right state for analysis.</p> <p>Azure Data Factory allows you to easily create pipelines and move data from your business systems or data sources into another place.</p>
Microsoft Purview	Azure Logic Apps
<p>Essentially a portfolio of products, Microsoft Purview, formally known as Azure Purview, provides a single pane of glass for managing data governance by enabling automated scanning and classifying data at scale through the Microsoft Purview governance portal.</p> <p>Purview enables data discovery, traceability and searchability. The benefit of this is that it helps to create more efficient business operations because it allows users to search for and discover organisational data, helping to streamline data operations and prevent duplicate or redundant projects across multiple teams.</p>	<p>Azure Logic Apps is a cloud platform where you can create and run automated workflows with little to no code. By using the visual designer and selecting from prebuilt operations, you can quickly build a workflow that integrates and manages your apps, data, services, and systems.</p> <p>Azure Logic Apps simplifies the way that you connect legacy, modern, and cutting-edge systems across cloud, on premises, and hybrid environments and provides low-code-no-code tools for you to develop highly scalable integration solutions for your enterprise and business-to-business (B2B) scenarios.</p>

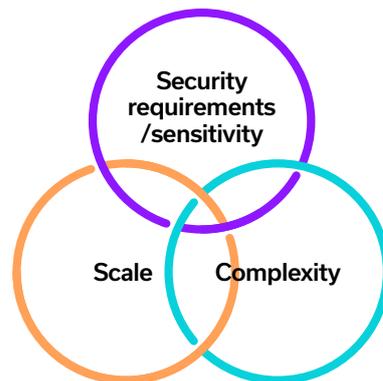


# Selecting the right data solution

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Now we have introduced some of the core data solutions from Microsoft, how do you pick the right one for you?

Effectively this comes down to a few factors:

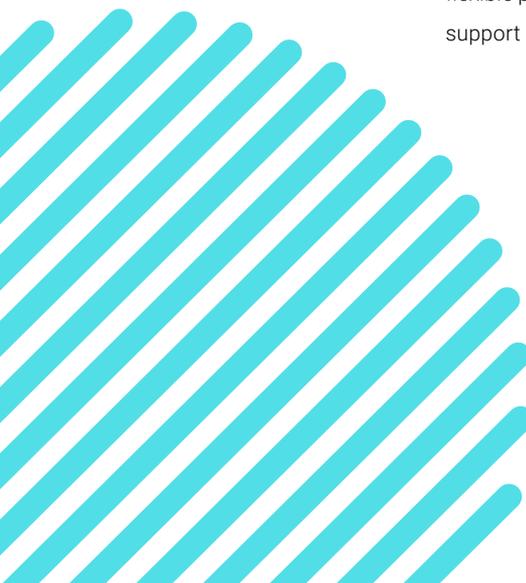


The bigger the scale and the more complex the requirements and sensitivity of the data, the more advanced solution you will need. SharePoint lists are a great next step from spreadsheets but has its own scale and complexity limitations. The fact that SharePoint lists are included in your SharePoint Online subscription is an obvious benefit to this route.

Dataverse is a great and flexible data solution. From enterprise applications to simple department solutions, Dataverse is an obvious contender for the database behind this. It offers the additional scale and requirements you might need but is simple to use and fairly cost effective.

Azure offers the most advanced data solutions available from Microsoft. For more complex, enterprise level solutions Azure is the obvious place to do this. Whether its automating processes, gathering data or providing a database for an application, Azure is the most secure, most customisable and most scalable option available. The great thing about Azure is the new micro services approach, whether you are connecting, fetching, processing, storing or visualing data, Azure has a ready-made solution for you, and they are easily connected and work together.

Lastly Power BI should be used in almost any reporting use case. It offers universal capability, and the flexible pricing model makes it accessible to any organisation. Reporting should be automated and easy to support decision making and Power BI is the main solution to deliver this.



# Next Steps

## Data platform briefing

We offer a free 2-hour briefing session with one of our expert data consultants. We will explore your requirements and discuss how the Microsoft data stack could be used to improve your data practices.

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