

The Ultimate Guide to Data Visualisation using Power BI



Introduction

The sourcing, analysis and presentation of data can be difficult; the key to an effective **Data & Analytics** solution is the appropriate people in your organisation accessing the right insight at the right time.

That's why data visualisation is now an ever-present component of any data and analytics solution used to provide timely business insight. Microsoft Power BI's reporting and analytics capabilities makes it the preferred data visualisation tool for many organisations- **but is it right for you?**

In this guide, we'll go through the fundamentals of data visualisation, including what it is, and why it's useful. We'll provide an overview of some of the best data visualisation tools on the market today - including an in-depth look into why Microsoft Power BI is the **ultimate all-round solution** for businesses today.

We've outlined **what you need to know**, so if you're considering implementing a data visualisation solution, or more specifically, Power BI in your business, you can be sure you're making the right decision.

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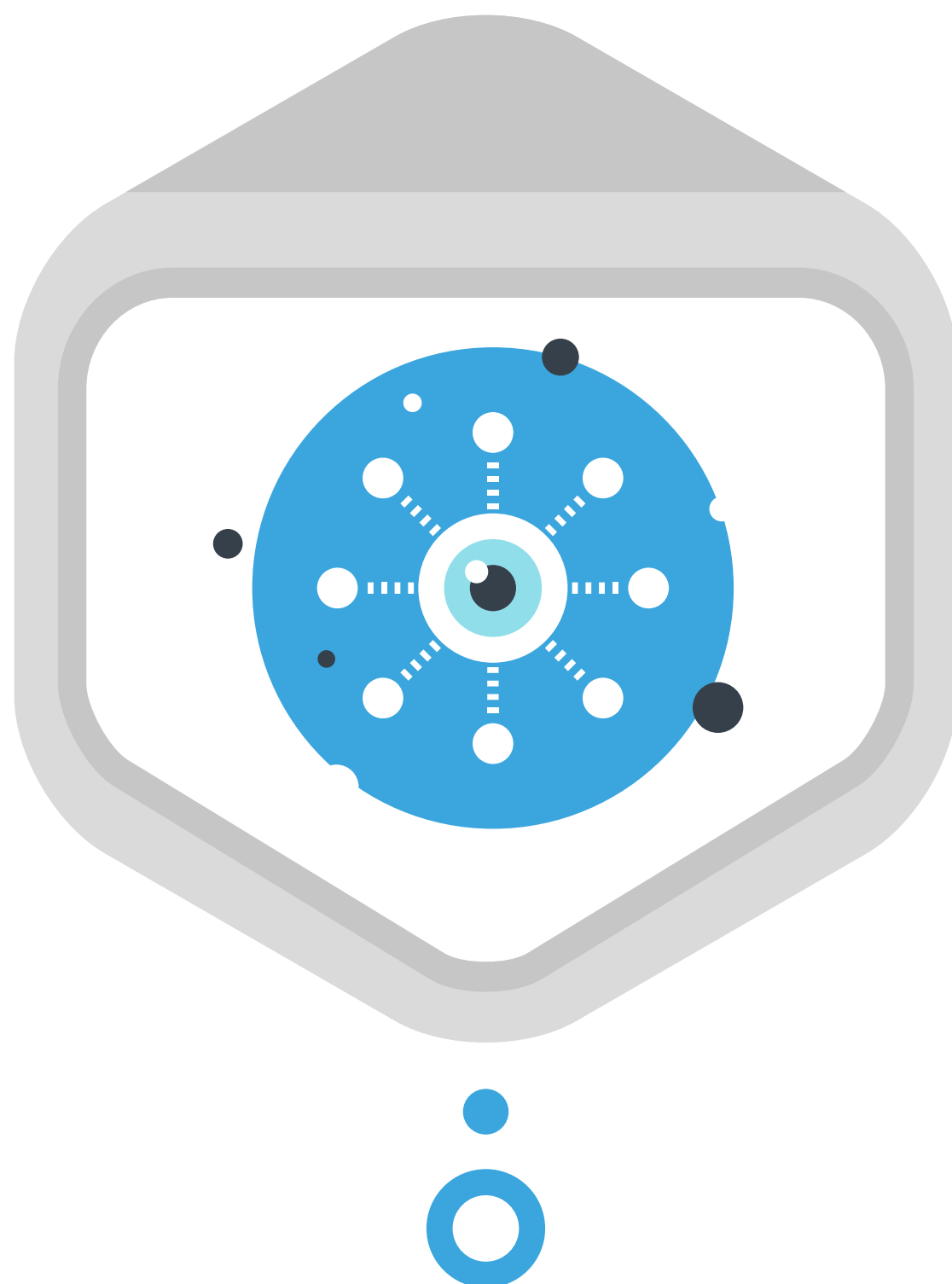
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What is data visualisation?

Most traditional reporting approaches relied on consumers receiving long lists of data which made it extremely difficult to understand and make decisions based on the information. Borne out of this challenge came data visualisation, which is the term used to describe a **visual representation of information or data**. Initially using visual elements such as graphs, charts and maps, data visualisation is a more user friendly way of presenting complex data and information. Data visualisation allows for better decision making, as data-driven organisations are able to gain insight at a glance, and grasp difficult concepts more easily.

Data visualisation has matured over recent years and become synonymous with the **business intelligence tools** available in the market, such as Power BI, Tableau and Qlikview. Tools like these provide a way for businesses to overcome challenges such as **visualising their sales pipelines**, and **automating manual reporting processes**, which is invaluable to improving the efficiency of businesses across all industries.





Why is data visualisation important?

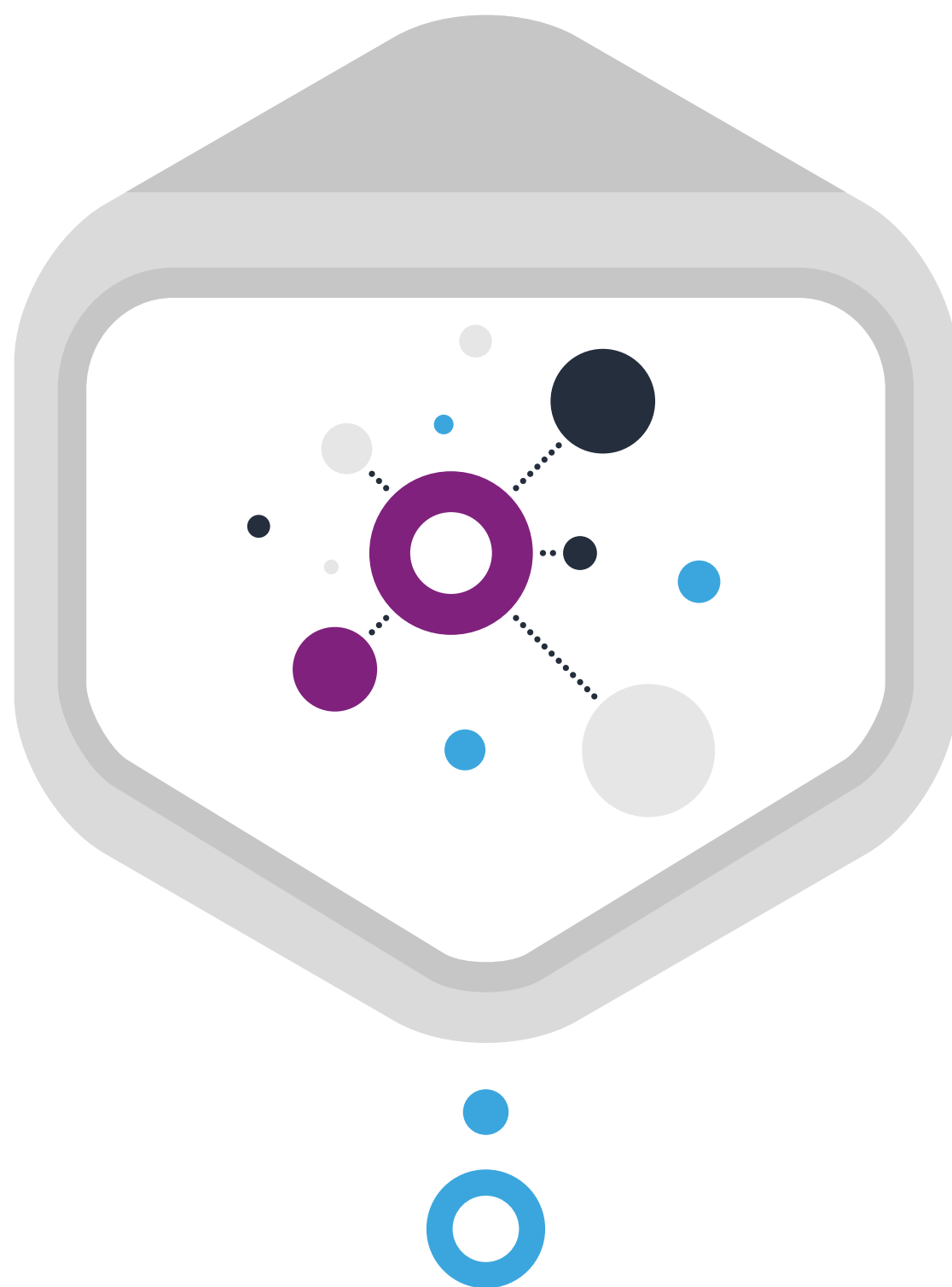
1 Improved business insight

A lack of data visualisation increases the **risk of missing key business insights**. It's more difficult to spot unusual trends, patterns and outliers in a huge list or complex report - data visualisation overcomes this challenge. For example, looking at a visual graph of sales volume over time makes it much easier to spot unusual patterns than in a huge list, which gives you a better understanding of **key organisational KPIs**.

2 Faster decision making

Companies who are able to gather information and act on it quickly have a **significant advantage** above their competitors, because they can make intelligent decisions much faster. Data visualisation enables businesses to interpret their data much more efficiently. It also supports self-serve analytics, which is where decision makers are able to gain the insight they need **without the need for IT intervention**.





3 Accessibility

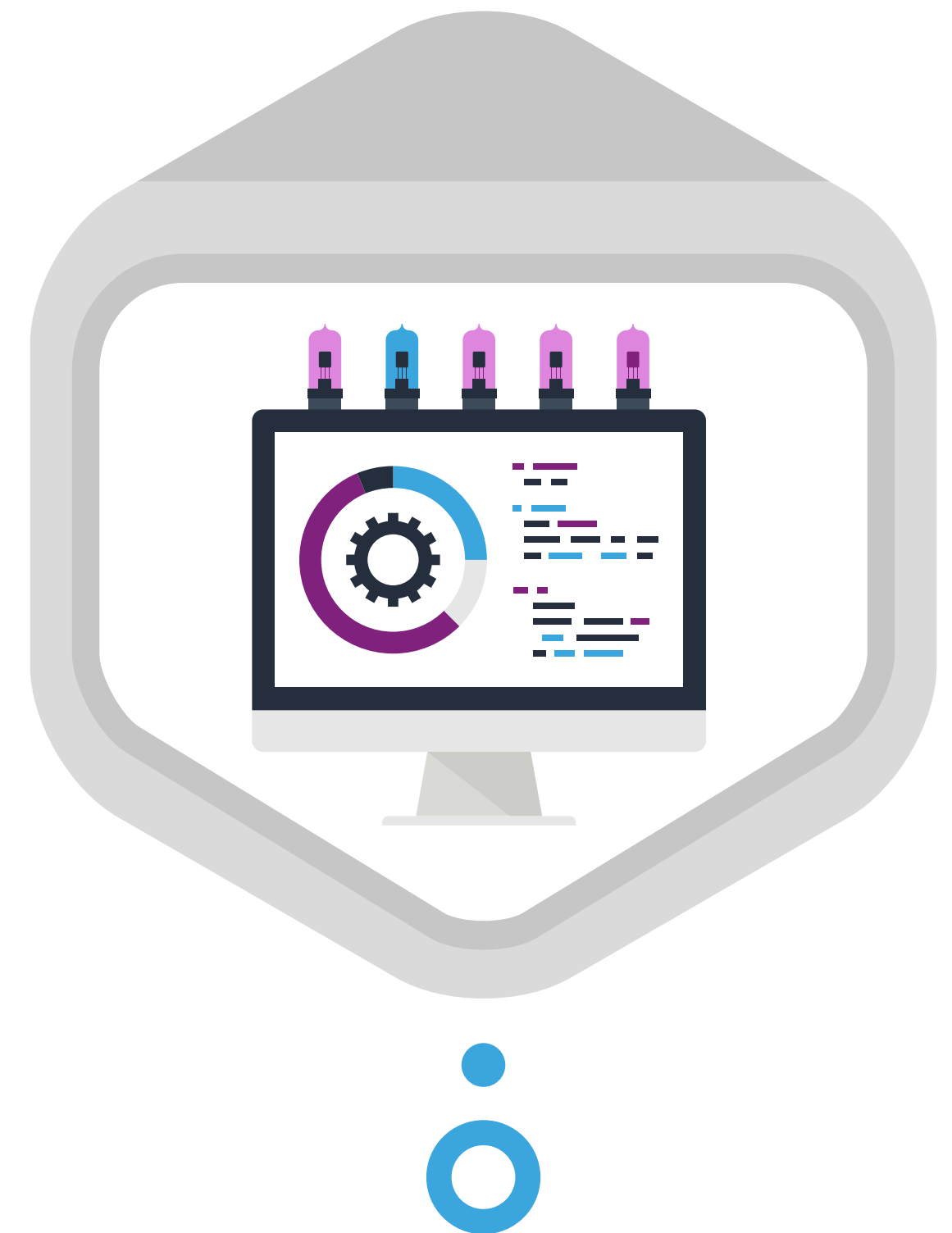
Gone are the days when executives would have to wait for the IT team to process data and email reports. With the right data visualisation tools, members of an organisation can **easily analyse data**. A self-serve business intelligence delivery model democratises data and analytics to decision makers, allowing them to understand complex data and find the answers they need from it.

4 Automation

Timeliness of insight has always been a key challenge in any organisation. However, modern data and analytics tools succeed by **automating tasks that were traditionally manual**. This is a huge benefit, as it reduces the time spent sourcing and mashing up the data to be re-purposed, which can then better be spent understanding the data, gaining insight and making informed decisions.

Ultimately, the importance of data visualisation for the modern business cannot be understated - if organisations want to have competitive advantage, having a data and analytics solution in place is essential.

But which data visualisation tool is the best for your business? We take a look at three of the key players.





The best data visualisation tools

Data visualisation tools have evolved rapidly in recent years, and there are a number of applications for businesses to choose from, such as Microsoft Power BI, Tableau and Qlikview - all of which have been cited by Gartner as key players in the market. Let's take a closer look at each of these tools:

Power BI

As one of **Microsoft's leading products**, Power BI is a sophisticated, powerful data and analytics tool that integrates seamlessly with all Microsoft applications; providing businesses with the means to manage and analyse data from a range of sources (from basic Excel spreadsheets to databases) in a user-friendly interface.

Power BI works by allowing users to unify data across these sources to create interactive, intuitive dashboards and reports with in-depth business insights - making complex information more easily digestible. Power BI represents a huge step forward when compared to Microsoft's traditional reporting tool, **SSRS**.

A market leading data visualisation and analytics tool, Power BI not only provides insight into what is happening in your business now, but what has happened in the past, and crucially, **what could happen in the future**. Power BI is innovative; built-in machine learning enables the application to spot patterns in data, which it can use to make well-informed predictions, or generate 'what if' scenarios- all of which help users make better decisions, whether that's generating sales forecasts, or preparing the business to meet a rapid increase in demand.

Power BI is **Gartner's leader in business intelligence tools for 2020**; for organisations wanting to revolutionise their reporting capability and enhance their decision making capability, there really is no other option.

Tableau

As an innovative data visualisation tool, Tableau is another popular choice for organisations wanting to gain more intelligent insight. A well established business intelligence solution, Tableau excels in **simplifying very complex data** into an accessible, understandable format. Due to its user friendliness, Tableau can be easily used by almost anyone in an organisation, giving them the chance to create a range of visualisations in the form of dashboards and worksheets.

Tableau is a great choice for businesses due to its user-friendliness, however, there is a concern that it lacks the innovation of its counterparts.

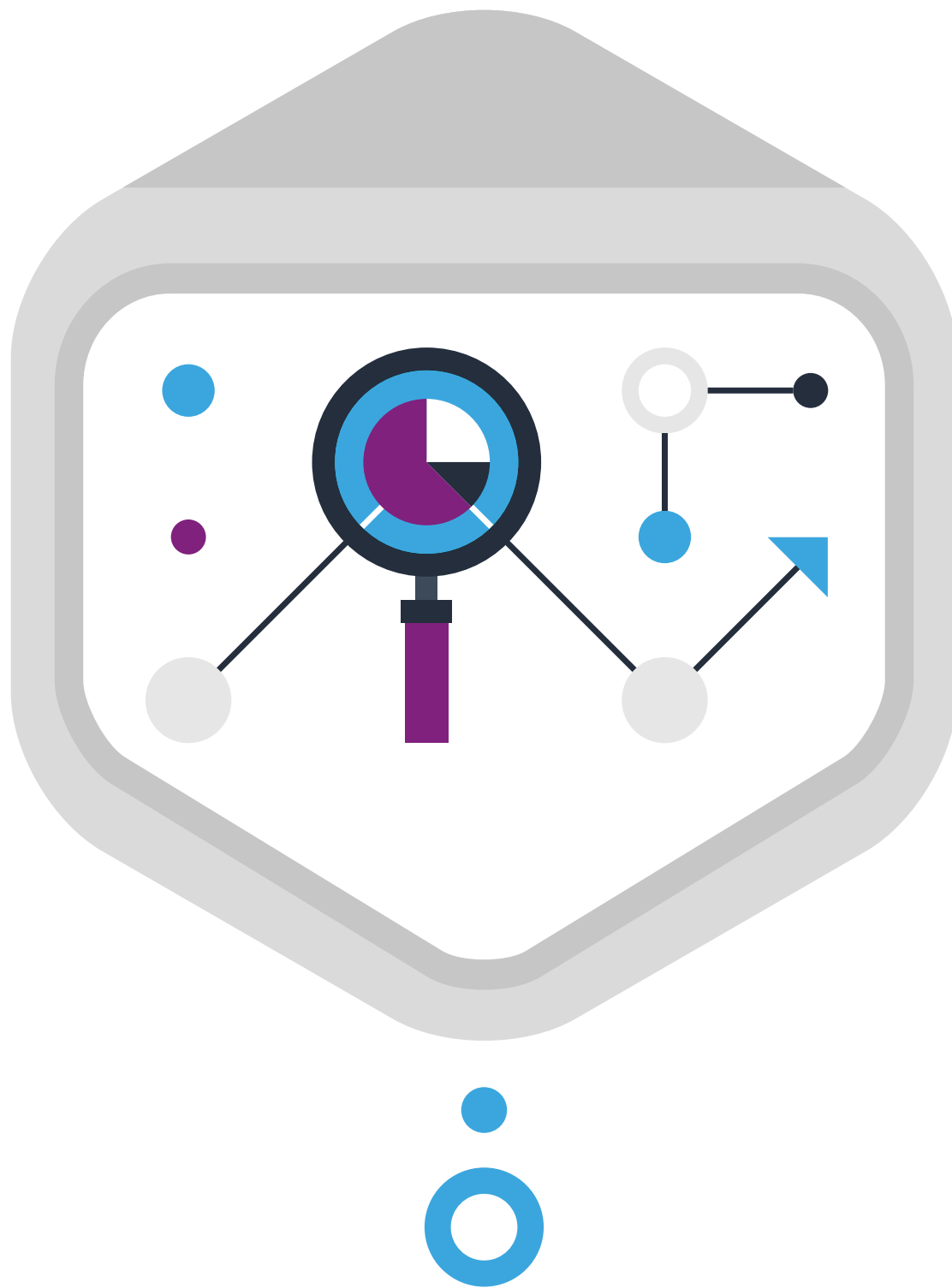
QlikView

Another major player in the data visualisation tech world is Qlikview, At its core, the classic analytics solution **compresses data** and holds it in its memory, allowing users to explore their data immediately. It's a highly interactive solution, that has been a key market player for some time. It has been well adopted by many organisations, however more recently it has been **overtaken** by other BI tools on the market.

Note: Qlickview is **no longer available to new users**.

No matter which data visualisation tool you choose, you'll need to be sure that it's **the right fit for your business**, and not base your decision on reputation alone.





Key factors to consider when choosing a data visualisation tool

► Price point and licensing model

When it comes to the cost of data visualisation tools, this can vary across providers, and you should evaluate price in terms of what the best fit is for your organisation. To do this, you'll need to understand **how many users** you'll need and what your **business requirements are**, and base your decision on which solution can best meet your needs.

► Ease of use

Since one of the main drivers for implementing a data and analytics solution is so that users across an organisation can access and understand business data more comfortably, knowing **how easy it is to use** your chosen tool is vital.

► Functionality

Although this is fairly straightforward, you need to know that the tool you choose actually has the **functionality required** to generate the visualisations you want.

► Organisational alignment

When implementing any new system - but especially with a data visualisation tool - you need to be sure that the analytics tool you implement **integrates with your current systems**, and aligns with the wider organisation. For example, if you're

using the Microsoft suite across your business, **Power BI** is the logical tool to go for.

► Your data sources

This is key. You need to know that the tool you choose is able to **natively connect** to your data sources, particularly if you're using legacy systems.

► Business intelligence delivery model

When it comes to implementing a data and analytics solution, it's essential to understand what kind of information you want from the tool - for example, if you want **self-serve** or **fully governed** (corporate business intelligence) data and analytics; which will depend entirely on your business, and how accessible you want reports to be across your organisation.

Each data visualisation tool on the market will have strengths and weaknesses in each of these areas; however, in order to find the best fit for your business, you need to evaluate what your requirements are from the solution, and how it can meet these.

That being said, the **comprehensive functionality of Power BI** makes it one of the strongest contenders for your data and analytics solution - let's see why.

Enhance your data visualisation with Power BI

In a time where **complete visibility of your business** is absolutely vital, Power BI represents the best option on the market. As one of Microsoft's leading products, Power BI is consistently flagged as one of the most powerful, insightful tools available to your organisation. Here's why:

▶ Power BI has a huge number of native connectors

Power BI is able to **connect** natively to a huge amount of data sources - from flat files and databases to web services. One of the key factors in any business intelligence tool is being able to easily source the data from your source system. Power BI's coverage of native connectors is growing all the time, meaning you'll usually be able to find the one you need to access your organisation's source data.

▶ Power BI offers both standard and custom visuals

Power BI's **wealth of standard visuals** provides a fit for the majority of visualisation requirements. In the occasional event where a standard visualisation doesn't meet your needs, Power BI can **import custom visuals** from Microsoft AppSource, or you can even create your own; meaning a Power BI visual will always be available to meet the needs of your users to make effective decisions based on their data.

▶ Power BI has a robust data mash-up tool

For users who want to bring their own data into reports, Power BI has a powerful data mash-up engine called **Power Query**. This allows users to **enrich organisational data** with additional data sources to provide rich insight to decision makers.

▶ Power BI is continually enhanced

Microsoft releases new versions of Power BI on a monthly basis, meaning the solution is regularly updated with new features. These updates are seamless; requiring no input from the user, leading to **enhanced capabilities** each month for users in your organisation.

▶ Power BI has a flexible pricing approach

The cost of a data and analytics solution is likely to be an important factor when it comes to choosing the best for your business. Due to the wide range of options available for Power BI, the tool has an **attractive price point** for every organisation. Power BI Desktop and Power BI Mobile are **free**, Power BI Embedded is priced as a **pay-as-you-go** service, and Power BI Pro and Power BI Premium are costed according to **how many users** you need to access the platform, and the level to which they'll need to use it.



The **flexibility** of Power BI pricing makes it an extremely attractive tool for many organisations - no matter the size of your business, there's a Power BI pricing option that can work for your budget.

▶ Power BI keeps your data safe

Data security is a consideration for every organisation. From the browser to the data centre, Power BI provides a solution which places paramount importance on the security of your organisation's data assets. Power BI also supports row level security and data categorisation providing a robust, flexible, and scalable solution to your access requirements.

▶ Power BI has embedded AI capabilities

More recently, Power BI has been enabled with AI capabilities driven by Microsoft cognitive services; using **AI and machine learning** (ML) to further enhance the application. Using built-in "**AutoML**", Power BI provides end-users the capability to make educated predictions that could make a significant impact on your bottom line.

▶ Power BI's system integration options are vast

More and more business systems are being enabled with the capability to integrate Power BI, which already has a huge array of integration options. For those already using Microsoft products (such as Dynamics 365 or Teams), Power BI's integration options provide the ideal way to get insights to the appropriate people in the right place, at the right time.

▶ Power BI is backed by an active global community

With a significant amount of free educational material, community forums and a feedback loop where users can request and vote for functionality, the roadmap for Power BI is driven by the people who will gain the most value from requested changes. This makes it a solution developed and continually enhanced with **users at the forefront**.

▶ Power BI solves challenges surrounding report commentary

It's easy enough to create reports, but what about sharing them, and user input?

Power BI solves this traditional reporting challenge by using either it's in-built comments functionality, or using Power Platform. A great example of this is where a PowerApp is embedded within a PowerBI board report, providing the user with a mechanism to add their own comments in a governed way; allowing for **greater collaboration between decision makers**.

These are just some of the benefits organisations can realise through using Power BI - there are many more. As the tool is constantly evolving and being enhanced, the possibilities are endless.

However, while Power BI is a powerful data and analytics tool, **it isn't an out of the box solution** - in order to make it work for you, it needs to be implemented to meet your exact requirements.

Implementing a data and analytics solution can be a challenge, as the stakes are high, and there are endless risks to consider when undergoing such a project. It's essential that businesses are equipped with the knowledge and expertise needed to mitigate any risk, to ensure that their data and analytics implementation is a success.

Engage with Inciper for your Power BI implementation

To be confident in your data and analytics implementation, consider enlisting the support of a Microsoft Data and Analytics partner with the extensive knowledge needed to ensure your Power BI deployment is a success.

Read our blog to find out how a Microsoft Data Analytics Partner can help with your data & analytics implementation ▶

At Inciper, we have a track record of success implementing Power BI solutions; our data and analytics team are experts in their field, working to completely understand your business needs before, during and beyond implementation. We support organisations who have traditionally surfaced data manually and guide them through how to use data visualisation and business intelligence to enhance their organisational decision making capability.

However, implementing MS Power BI is just one part of our Data & Analytics solution; our experienced team will work with you to understand where Power BI or Azure Data Platform can add value immediately to your business- while delivering a technical solution that will make a lasting positive impact in your organisation.

Ready to see how Power BI can enhance your ERP, CRM or other line of business systems?

Speak to a Data Analytics expert

Click here to speak to one of our Data Analytics experts about Power BI, and how Inciper can help solve your business challenges. ▶