

# 5 Steps to Business Automation

Learn how to prepare your business for the automated workforce and start seeing the benefits today.

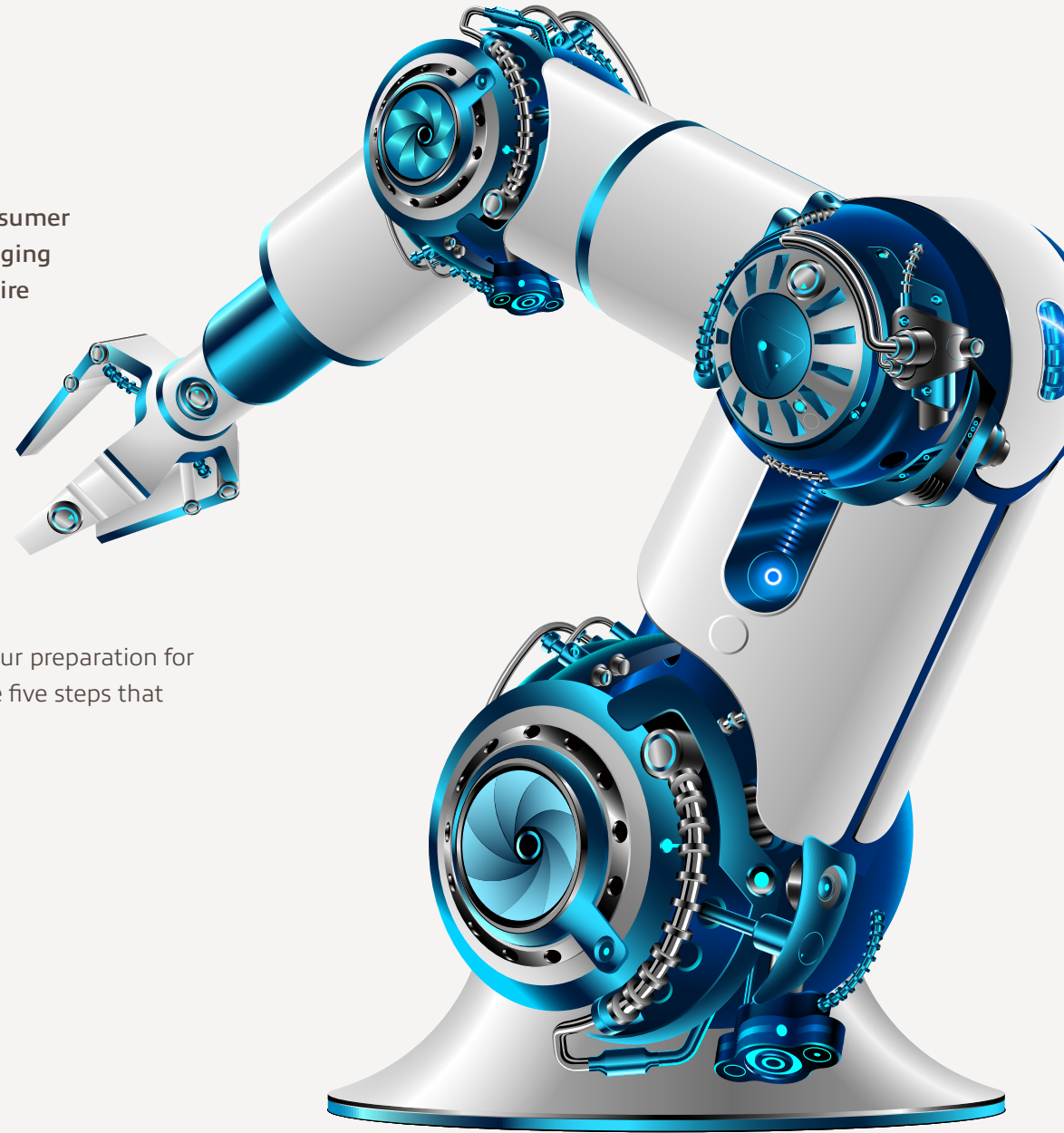
# Introduction

Artificial Intelligence (AI) is the next frontier for technology, transforming consumer applications and business processes. Its impact will be felt far and wide, changing everything from how we search the Internet and use our smartphones, to entire industries and occupations.

Automation is perhaps the single biggest use case. AI-powered software coupled with the better collection of data has the power to make organisations and employees more productive by automating repetitive tasks and better decision-making.

The path to automation is in its early stages as most of the technologies that will enable these changes are in their infancy, while many of the cultural and regulatory barriers that will need to be overcome are still yet to be considered.

But that doesn't mean your business can't benefit today, nor should it prevent your preparation for this new world of IT. This quick guide outlines the benefits of automation and the five steps that must be taken to fulfil its promise.





# What is Automation?

Automation uses AI and machine learning technologies to perform tasks and make decisions without any input from a human. Whereas big data analytics also involves the analysis of various structured and unstructured data sources, these insights are displayed to a human who can then make more informed operational or business decisions.

Machine learning combines these two disparate actions. It involves the analysis of data, which is then used by algorithms to make decisions that optimise the

process. This is true AI automation. And with the Internet of Things (IoT) now capturing data that previously was impossible to collect, the depth and volume of data will increase to unquantifiable levels.

For example, an AI algorithm might discover a more efficient process within a factory. We can see examples of consumer-facing automation in a supermarket or an airport where self-scan checkouts and automated passport controls are common place. In this digital world automation is and will be everywhere.

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## 1. Identify a use case.

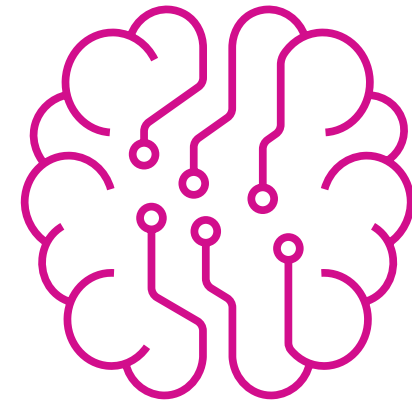
When new technology like AI promises to deliver all these benefits and open up new revenue streams, it can be tempting to get a bit carried away. But just as digital transformation will take time, so will the adoption of AI.

According to Gartner, just 4% of CIOs have implemented AI technologies in their organisation, but 46% have plans to do so. It recommends that organisations 'aim low' with a small-scale deployment to begin with and measure success against 'soft' KPIs like process improvements or customer satisfaction levels rather than 'hard' measurements like direct financial gain.

Although it's tempting to use the promise of cost savings and new revenue streams to your CEO when pitching for resources to invest in AI, it's likely that early projects will provide lessons and experiences that will make you better equipped to handle larger programmes. If you are required to have a financial target, it is best to set this as low as possible to encourage experimentation.

But no matter what the scale of the project, it will be pointless unless you have a clear goal in mind. Is it to help employees find information more easily, complete repetitive tasks that free up staff to carry out more important work, or is it to take automated, data-driven decisions?

It's a trend that cannot be ignored but it's equally important not to get caught up in the hype that automation can solve all of your organisation's problems.



Make sure you have a clear goal and measure of success in mind, before implementing any changes.

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## 2. Make cloud part of your strategy.

Digital Transformation is a pre-requisite for harnessing the power of AI. Experts believe that organisations that predominantly rely on software will be earlier adopters of automation than those in hardware-intensive operations. This means that a bank will be more likely to be a leader, while the construction and manufacturing industries would be followers.

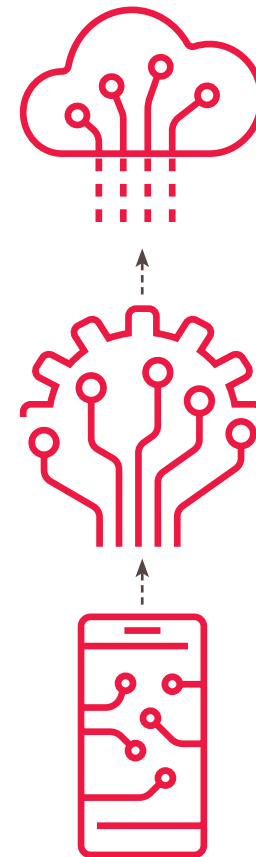
The transition from on-premise IT to cloud technology is a key component of this modernisation process. AI will require huge amounts of high-quality data to be effective and it's more efficient to store and process it in the cloud, with capacity scaled up or down depending on demand. You could use a dedicated public cloud service like Microsoft Azure IoT to process this data.

It's also vital that data is made freely available to multiple applications and not siloed away. Without this data, AI algorithms will be unable to learn and will be less effective no matter what task they are applied to.

Eventually, Software-Defined Networking (SDN) and edge computing will become increasingly important, especially when analysing data from devices connected to the IoT or dealing with latency sensitive applications.

Finally, there are applications. Microsoft Office 365 and Windows 10 are examples of commercially available software that is being enhanced by AI, while platforms like Box are using visual recognition techniques to automate the classification of images.

Also consider more specialist software such as that used by administrators to automatically complete forms, or the legal profession to identify documents that could be useful in a case.



Transitioning from on-premise IT to cloud technology is a key component to enable automation.

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## 3. Change workplace culture and engage the workforce.

As with so many of the most revolutionary technological shifts, the path to automation is as much about culture as technology. The news has been filled with doomsday reports claiming that automation and robots will replace humans in low skilled jobs, and it's true that some occupations will be made redundant by AI.

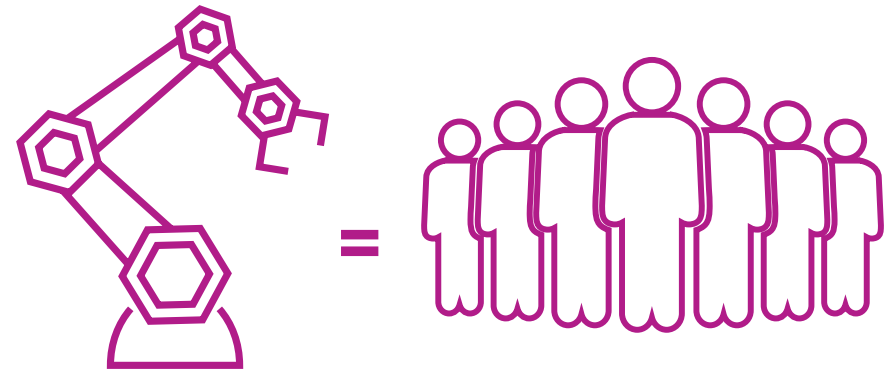
However, the true value of AI is that it performs repetitive tasks more rapidly and with greater accuracy than humans, freeing them up to do more high-value work. The danger is that the workforce starts to fear AI and therefore resists any attempt at introducing automation, meaning organisations could miss out on the benefits.

To counter this, you should focus on augmenting people rather than replacing them and engage the workforce so that they understand the benefits. One method is to emphasise the 'activities' rather than the jobs that can be automated.

McKinsey estimates that 45% of all work activities could be automated using current technologies and that potential advances in Natural Language Processing (NLP) could automate a further 13% in the future.

It adds that less than 5% of all occupations could be fully automated but that 60% of occupations could have 30% or more of their activities automated. And it's not true that unskilled jobs are more at risk – at least with current technology.

Hardware-intensive manual jobs would require significant advances in robotics for them to be automated, while creative roles will not be as affected until AI becomes more advanced in areas like emotion. Meanwhile, 20% of CEO tasks could be automated today.



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If all else fails, Gartner predicts that by 2020 more jobs will be created than lost, with some organisations having dedicated teams to monitor neural networks.

It's therefore likely that automation will affect most jobs to some degree and these changes should be conveyed to the workforce well in advance. This might mean certain roles are redefined and some processes have to change.

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## 4. Get the right skills.

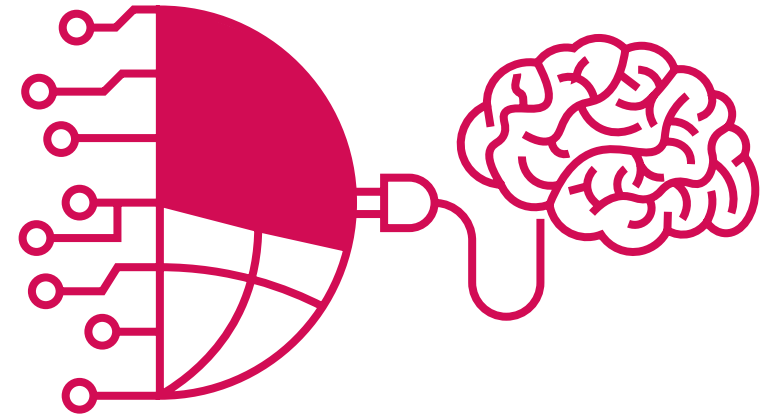
Automation will require your organisation to acquire new skills. According to the CBI, only a third of businesses believe they have the necessary skills for AI adoption, while skills shortages in areas like data science are exacerbating the situation.

This means that many organisations will look for outside assistance in their early automation projects, but such a strategy does mean your workforce won't learn the skills they need.

To combat this, organisations should ensure that they use transparent AI solutions that promise to give an insight into how the AI came to a certain decision. Whereas big data analytics often presents insights in a data or visual format, many machine learning tools don't share the logic behind their decisions.

A transparent AI solution will offer guidance as to how it operates and how it can be optimised for a certain use case. If your workforce is able to obtain some transparency, they can learn how to improve processes, building up your in-house capabilities.

This is especially important for industries where privacy is a key consideration or it is subject to a strict regulatory regime.



Automation will require a much deeper understanding of AI, data science and machine learning.

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## 5. Be prepared for future technologies.

The path to automation will be an evolution rather than a revolution, so keeping an eye on the innovations of the future is just as important as identifying the existing ones.

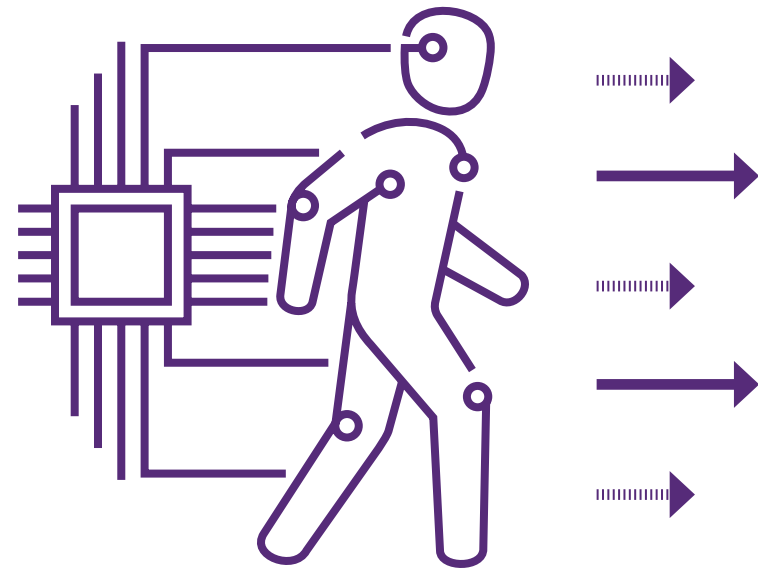
AI algorithms will become more advanced as they learn new capabilities and consume more data. To date, AI has mostly been applied to highly repeatable tasks where there is a large amount of data that can be analysed to detect patterns.

The application of AI to non-repeatable tasks will allow algorithms to make predictive decisions while advances in NLP will help them better understand humans. This will be especially relevant to things like chatbots as it will enable more genuine conversations, while it will also open up the possibility of more creative activities to be automated.

For example, some publications use AI to write baseball game reports. However, these articles are largely functional rather than creative and benefit from the fact that baseball is a statistic-heavy sport when compared to others.

The arrival of 5G mobile networks will be a significant development for automation. With 3G and 4G, the majority of network functions are carried out in the core network, but thanks to SDN, these functions can be moved to the edge and closer to the end users.

This enables ultra-low latency which will be essential for connected car and industrial IoT applications, both of which will be characterised by high levels of automation.



The path to automation will be an evolution rather than a revolution, so keep an eye on what else is coming.