Harnessing the power of Cognitive Technology and Automation.

Are you ready?

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The power of Cognitive Technology and Automation

Your organisation is driven by the talent, ability and productivity of your people. So imagine if you could increase their impact exponentially – by freeing your employees from routine tasks and enhancing their productivity with the help from ‘digital colleagues’. These colleagues can work 24/7, perform tasks at digital speeds, and even think for themselves.

That is the power of cognitive technology and automation. It’s predicted to become mainstream within the next 2-5 years and is already being embraced by forward-thinking organisations around the world, both large and small.

This next-generation technology includes robotic process automation (RPA), machine learning, natural language processing, and digitalisation.

KPMG New Zealand can help you navigate this new frontier. We can identify which solutions are right for your organisation, seamlessly integrate the technologies into your business, and ensure you reap the maximum benefits.

What is Cognitive Technology and Automation?
Cognitive technology and automation (also known as ‘digital labour’) can perform a range of tasks that have traditionally been performed by humans.

At the basic level, simple robotic process automation can speed up transactional, rule-based tasks, such as applications, compliance, or changes to customer details.

At its most sophisticated, cognitive automation can perform complex tasks that require human-like judgements, such as healthcare diagnostics, asset management or legal research.

Why is it important?
The concept of using technologies to enhance how we do things is not new. Many of us are already using advanced technologies in our daily lives (for example, smartphones with voice recognition). What is new, however, is the scale of change that’s about to impact the workplace.

Studies show that workforce requirements will change dramatically in the next 5-10 years, and nearly 50% of today’s jobs will be replaced by well-established technologies.

Automation will impact every industry, and at every level. Cognitive technologies will fulfil functions across the front, middle and back office. Standard office processing tasks will no longer be a drain on employee time and effort, and will be completed at digital speeds.

With cognitive technologies and automation sharing more of the workload, your employees will be free to focus on more high-value activities. Their work of the future will be characterised by problem-solving, creative thinking, and discovery.
Why should New Zealand businesses embrace it?

Cognitive technology can be applied to any type of organisation – large or small, public or private.

At KPMG, we are excited about the potential of cognitive technology for New Zealand. As a country with a relatively small labour force – and a reputation for being innovators and early-adopters – there is a huge opportunity to use this technology to boost our productivity.

Cognitive technology also has the potential to transform our small-to-medium businesses, which form the backbone to our economy. These solutions are flexible and can scale up with the business as it grows.

What’s more, cognitive technology is easily integrated into your current IT and ERP systems. Cognitive robots can perform their functions while ‘sitting on top’ of your existing technology.

Where can Cognitive Technology and Automation help your business?

Cognitive technology works on a number of levels.

Firstly, it can boost the efficiency and effectiveness of any core business function - including HR, finance, compliance, supply chain management, IT and customer services. By capturing those time-consuming, repetitive ‘swivel chair’ transactions, it allows staff to focus on more valuable activities.

For organisations with thousands of stakeholders or customers, cognitive technology provides transformative opportunities for how they deliver their services. It has the ability to process natural language requests (through text or speech), and analyse large amounts of information to provide the right answer.

It is also being embraced by organisations with significant capital assets. Cognitive technology can maintain equipment at the optimum level of performance. It can predict when equipment needs to be maintained and replaced. It can also assist maintenance engineers by scanning thousands of pages of text to find the right information about a specific piece of equipment.

The value delivered

Productivity/performance: Software robots work 24/7 and 365 days a year; and performs tasks at digital speeds.

Increased employee value: By eliminating mundane repetitive tasks, employees are free to focus on ‘creating’ rather than doing; and engage in problem-solving, value-adding activities.

Cost efficiencies: When compared to a full-time onshore employee (FTE), a software robot is approximately one-fifth the cost. Digital labour savings are estimated to be between three and ten times the cost of implementing the automation.

Scalability: Software robots automatically scale up and down to meet fluctuating workloads.

Consistency/reliability: Cognitive technology eliminates human error. When properly configured, software robots do not make mistakes or inconsistent decisions.

Auditivity: Software robots keep the perfect audit trail – the software log – that documents every action taken, and the corresponding outcome.
Types of Cognitive Technology and Automation

The term Cognitive Technology and Automation encompasses a spectrum of technologies. At its most basic, Robotic Process Automation (RPA) describes technologies that can automate predictable, rules-based processes with good quality data. In contrast, Cognitive automation represents the most sophisticated forms of automation that can learn from the latest information and combine it with its own experience to adjust the way it performs tasks.

We have illustrated this continuum in the diagram opposite.

Basic RPA (Rules-based)

Basic RPA can replace human interactions in simple, repetitive, rules-based processes. For example, simple automation can collate order information, check item availability across multiple systems and email the order to the correct dispatch centre. All of this, without making any changes to the IT systems already in place.

Characteristics

» Automation of transactional, rules-based tasks
» These tools “sit on top” of the existing IT system, without infiltrating it.
» Working with structured data and within well-defined parameters, virtual robots can complete tasks autonomously.
» Solutions are easily designed, quickly tested, and implemented with a relatively low investment or expenditure.
» Partially or fully eliminates human interaction with the process.
» Benefits of basic process automation can be seen in a matter of months.
Enhanced RPA (Learning)

Enhanced RPA incorporates a suite of advanced technologies to perform more complex processes, including front-office activities such as customer support and helpdesk assistance. Instead of relying on structured information, enhanced RPA can interact with customers through speech and text, or learn how to do things better from observing a human colleague.

Characteristics
- Incorporates more advanced technologies to enable the use of structured and unstructured data to support elements of self learning.
- Enables the capturing of tacit process knowledge, and applies this knowledge to instruct how the process should run.
- Based on evidence, defined process outcomes are generated. These consistently carry a high probability of the desired output.
- Needs availability of large amounts of data to model and code scenarios.
- Speeds up human analysis to drive the right decision.
- Likely benefits are greater, but may take longer to implement.

Cognitive automation (Reasoning)

Cognitive automation involves advanced systems that can adjust the way they perform tasks, based on fluidly-changing information, as well as its own experience performing a task. In this way, it is similar to human logic and reasoning.

Characteristics
- Decision support and advanced algorithms to allow automation of processes that are more cognitive in nature. Solutions incorporate advanced self-learning capabilities.
- Can be used for sophisticated cognitive hypothesis generation/advanced predictive analytics.
- Such platforms generally require more investment in time and effort and different tools to basic or enhanced automation.
- Reduces human error, but does not take humans out of the equation.
- These technologies have the highest potential to change how services are delivered.
Partnering with KPMG New Zealand

We have a team of experts, ready to work with you to unleash the power of cognitive technology and automation in your business.

KPMG is leading the way for cognitive technology in New Zealand. We are already using cognitive technologies in our own work with Audit clients and other parts of our business; and have a thorough technical understanding of the various technologies.

Additionally, we can access KPMG’s global network of cognitive technology experts, across 144 countries. In particular, our member firms in North America, India, Israel, the UK and Australia are achieving ground-breaking results.

We do not have any pre-existing preferences for vendors or technologies. This unbiased approach will ensure we find you the best fit-for-purpose solution for your business problems, before recommending the tools that would best meet your needs.

How can KPMG can help?

Our full-service approach – from strategy through execution – will assist you on each step of your Cognitive Technology journey. We can help with:

Opportunity discovery
» Understand the potential impact of automation on your business.
» Identify which parts of your business are ripe for transformation/decide on priorities.
» Quantify and forecast efficiency gains.

Vendor selection
» Understand the different classes of automation, and their capabilities.
» Gain insight into the various service offerings and toolsets.
» Select the best providers for your business requirements.

Strategic roadmap
» Develop a detailed business case.
» Advise on a governance model and identify change management needs.
» Develop a detailed roadmap to guide implementation.

Implementation
» Finalise detailed solution architecture and user experience.
» Build a solution that best fits your requirements.
» Ensure that solutions are seamlessly integrated with the wider business.

Ongoing support
» Confirm that cognitive technology and automation continues to deliver the best possible benefits to your business.
» Identify and deploy fresh cognitive automation solutions.
» Assist you in building internal capability to develop new opportunities and maintain existing automation.

Is your business ready for cognitive technology and automation?

Many businesses have features that make them particularly suited to the use of cognitive technologies. If you would like to:
» Get greater value from your employees’ time and increase their engagement and job satisfaction.
» Better engage your customers and deliver high-quality, timely and tailored services.
» Support your fast-growing business with technology that grows with you.
» Reduce risk and improve resilience across your asset portfolio.

Then cognitive technology and automation could be just what your business needs to take the next step into the future.
Leading the way for cognitive technology in New Zealand.
Next steps

Ready to explore how cognitive technology could transform your business or organisation? Those who start today will position themselves to learn about these technologies at their own pace and will reap the early competitive and customer service advantages.

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