



Robot Accounting

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Talking points

What do we mean?

Examples and advantages

Predictions and implications

What do we need to do know?

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What do we mean?

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Terms being used

**-RPA – Robot Process
Automation**

-Robot Accounting

-Robotic Software

What do we mean?

Definition

The use of a software robot or “bot” that replicates the actions of a human to execute tasks across multiple computer systems.

What do we mean?

Disruption discussion

A minute of work for a robot is equal to about 15 minutes of work for a human. Robotics is predicted to automate or eliminate up to 40 percent of transactional accounting work by 2020. The bots can have accuracy rates as high as 99 percent and can reduce operating costs by 25 to 40 percent or more. They work 24/7. They don't take vacation.

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Since the arrival of [cloud computing](#) platforms, a growing share of accounting's donkey work has been automated. Software firms such as Xero, Intuit and Reckon have all made everyday accounting processes simpler and faster. Reconciliations and report generation are now being done using robotic process automation (RPA) solutions from the likes of BlackLine, Thomson Reuters and Wolters Kluwer.

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When analyst [Telsyte](#) explored RPA adoption in Australia and New Zealand in May 2017, it found six out of 10 organisations were now using or considering RPA. Among large enterprises with more than 500 employees, 38 per cent have already adopted some form of RPA as a cornerstone of digital transformation. Telsyte estimates that by 2020, organisations in Australia and New Zealand will spend A\$870 million a year on RPA.

What do we mean?

Disruption discussion

There are three waves of technology-charged change already facing accountants.

First is robotic process automation (RPA), which optimises the execution of business processes. Melded with deep machine learning, which can identify patterns and continually monitor regulatory compliance rather than just conduct end-of-year audits, this will see organisations benefit from improved process quality and regulatory compliance at a lower cost

Blockchain (distributed ledger technology) is the next wave of automation impacting accountants. One of the first applications for blockchain is likely to be in large enterprises, which will share financial information across international or departmental silos. Given all transactions would be stored on an internal blockchain, there would be no need for account reconciliation.

The third area identified is smart contracts that encode business and financial logic onto a blockchain, which is then dynamically executed.

Why would it apply in PNG?



Examples and advantages

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Let us discuss robot accounting

Examples of what they could do

Automate previously manual business processes and functions

A bot could scan an invoice in a PDF document attached to an e-mail, save the data into an Excel spreadsheet, log into a web system and enter the data to generate a report, all before e-mailing an employee to say the work is done.

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Three levels of accounting that are ripe for automation

Process automation using structured data and basic rules

More sophisticated platforms that can deal with structured and unstructured data (for example, recognising a purchase order number on a scanned document and automatically processing it)

Artificially intelligent platforms “where machines learn through algorithms”.

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Payments

In July 2016, Mastercard and the Singapore Economic Development Board signed a memorandum of understanding to develop transformative solutions with robotics. Mastercard’s Singapore lab has already developed a payments app for the humanoid robot Pepper, which has been trialled in Asian Pizza Hut restaurants, taking meal orders and receiving customer payments

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What have accounting firms done so far?

KPMG has used various degrees of intelligent automation for more than three years.

Ernst & Young has built in the last 18 months an army of about 200 bots in the firm's tax practice operations that has resulted in saving several hundred thousand hours of process time annually

Among its latest audit partner appointments Deloitte has named a data scientist.

Examples and advantages (cont'd)

Advantages

Time - definitely!

Intelligent automation can provide greater accuracy, accountability and defensibility by logging every process step executed and data source used.

Furthermore, automation allows for larger amounts of information to be analyzed for audits, risk analysis, and predictive analytics instead of depending on a smaller sample size that has been the norm when done manually.

The use of RPA and other intelligent automation is also leading to a decline in offshore outsourcing for the array of tasks that can be replaced by digital workers. In turn, that would also save companies money and give them more control.

Opportunities for value – adding

Accuracy

Audits

Service expansion





Predictions and implications

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Rules-based activities not performed by humans?

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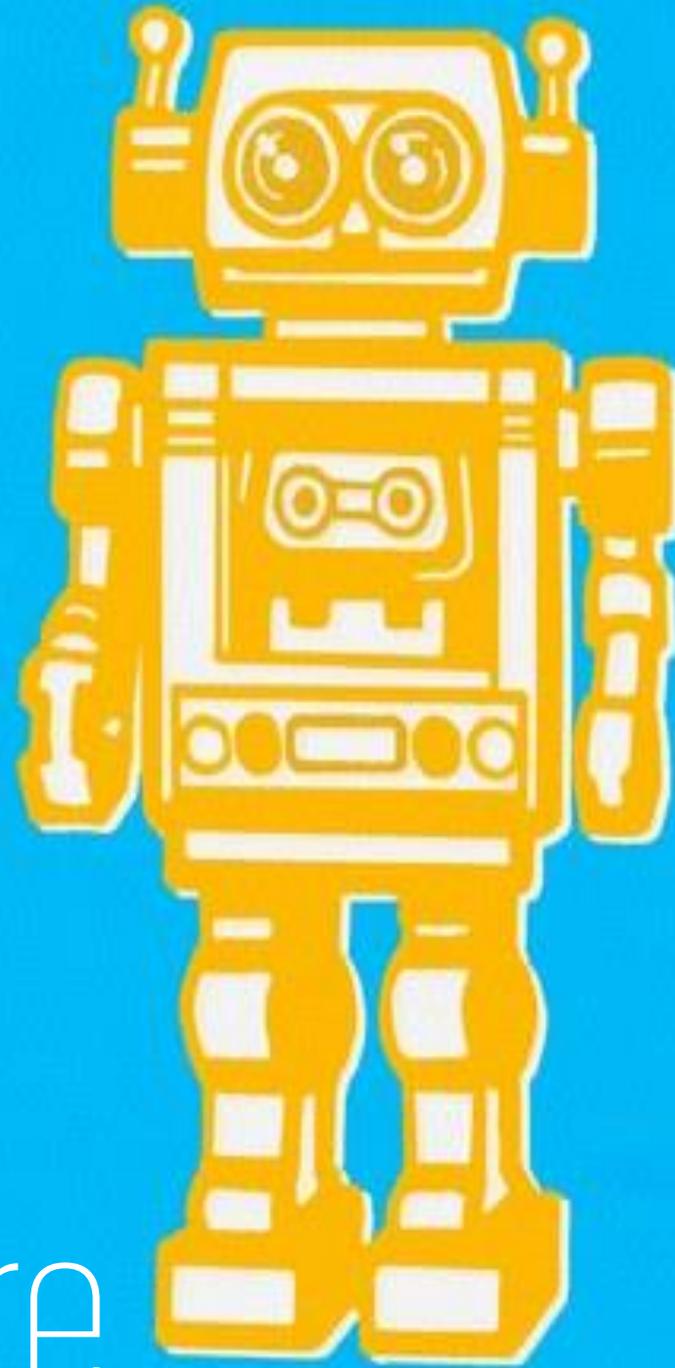
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Transactional processing will move from somewhat automated to fully automated, and that moves people up the capability curve. It pushes people into new roles and fields where they can anticipate change for the business.



The future

What do we need to do now?

Reinvention

The most successful approach is to treat robots and humans as partners.

There is a lot of high-volume repetitive work you can use a bot for. Bots are brilliant when it comes to following rules and they don't make errors. Nor do they make judgements. But the bot is not taking over all the work. A bot can hand work to a human and a human can hand work back to a bot, allowing humans to focus on issues requiring judgement such as approvals or analysis..

Over time, bots can be supplemented with smarts from AI platforms and machine learning to deliver what is described as "intelligent automation". It is in this space that experts foresee a completely new role for today's accountants and auditors – literally training AI platforms with their domain knowledge and experience. Coupled with machine learning that allows a platform to improve over time, these intelligent automation systems can take on increasingly sophisticated tasks.

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Advisory and judgment-based roles. Acknowledging that RPA could be "bleak for the profession", it opens opportunities for individuals prepared to partner with a business to use the data spat out by the robots to influence a business, and to become its trusted adviser.

What do we need to do now?

Reinvention

Staying ahead of the curve

Accountants and finance professionals need to act now and transform the way they operate. The longer we take, the more we will be left behind. Progressive finance leaders are prepared to experiment, so that the culture of a new way of working becomes the new normal.

The new normal includes a modern accountant or auditor. How the audit function is changing – to be agile around data and complement the business value.

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Understanding data is essential

This is a commercial vantage point. Instead of accountants becoming extinct, roles will emerge, which are not even invented yet. In the course of history, whenever machine and tools substituted one type of human capability, new human experiences and capabilities actually emerged. This happened when humans made the transition from hunter-gatherers to farmers, and then from farming to more industrial modes of work.

Likewise, the boundaries of the accountancy profession are shifting, and the skills which it calls for are evolving. The advance of technology has freed accountants from the drudgery of menial and mundane tasks such as the manual data entry of invoices, to pursue higher-value work that may bring in higher incomes. That includes accountants harnessing technology like data analytics tools to provide more in-depth and timely financial expertise to help their business outfits navigate today's volatile business landscape.

To give a simple example, records of point-of-sale transactions can be used to project future patterns of consumer behaviour. Accountants can move from having a "hindsight view" to having more "predictive foresight". One of the possible outcomes of predictive foresight is that companies know what inventories to hold, which frees up capital and lowers costs such as rental - since less storage space is now required - and obsolescence.

Accountants in business can also use data analytics to understand and discover patterns in customer behaviours and advise businesses on the best course of action in a competitive market.

What do we need to do now?



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Reinvention

4 soft skills in demand in accounting

With robotic technology performing the grunt work, the skills likely to make accountants stand out, are their **emotional quotient, problem-solving capabilities, creative thinking and cognitive flexibility** – all of which are currently foreign to robots.

According to a study of over 2,000 work activities in more than 800 occupations by the McKinsey Global Institute released this year, the easiest jobs to automate are those involving predictable physical activities such as assembly line work in manufacturing. The next easiest jobs to automate include data collection and processing activities.

At the other end of the spectrum, the hardest activities to automate are those that involve managing and developing people or require deep expertise in decision-making and planning.

Rather than being a monolithic role, the accountancy profession similarly covers a spectrum of activities from routine ones such as data entry to analysis and judgment. Routine activities can be and already are being automated with accounting software like Xero and QuickBooks. The implication of this would be job losses especially for accountants doing mainly routine accounting work, unless they can move on to higher value roles.

When the accountant analyses, applies judgment and then explains the issues relating to quality financial management to his clients or employers, he is actually assuming a role akin to an educator - an activity which the McKinsey study identified as among the most highly resistant to automation in the foreseeable future.

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Finally, professionals prepared to use bots to automate and speed up mundane tasks, even learn how to code, are going to free their time for more value-adding work. The robots may be coming, but for accountants this shift may ultimately present more of an opportunity than a threat.

A [survey](#) released in May 2017 predicts that by 2030 “soft-skill intensive” occupations will account for 63 per cent of all jobs in Australia – and that job market success will require candidates to demonstrate their prowess in areas such as communication, teamwork, problem-solving, emotional judgement and professional ethics.

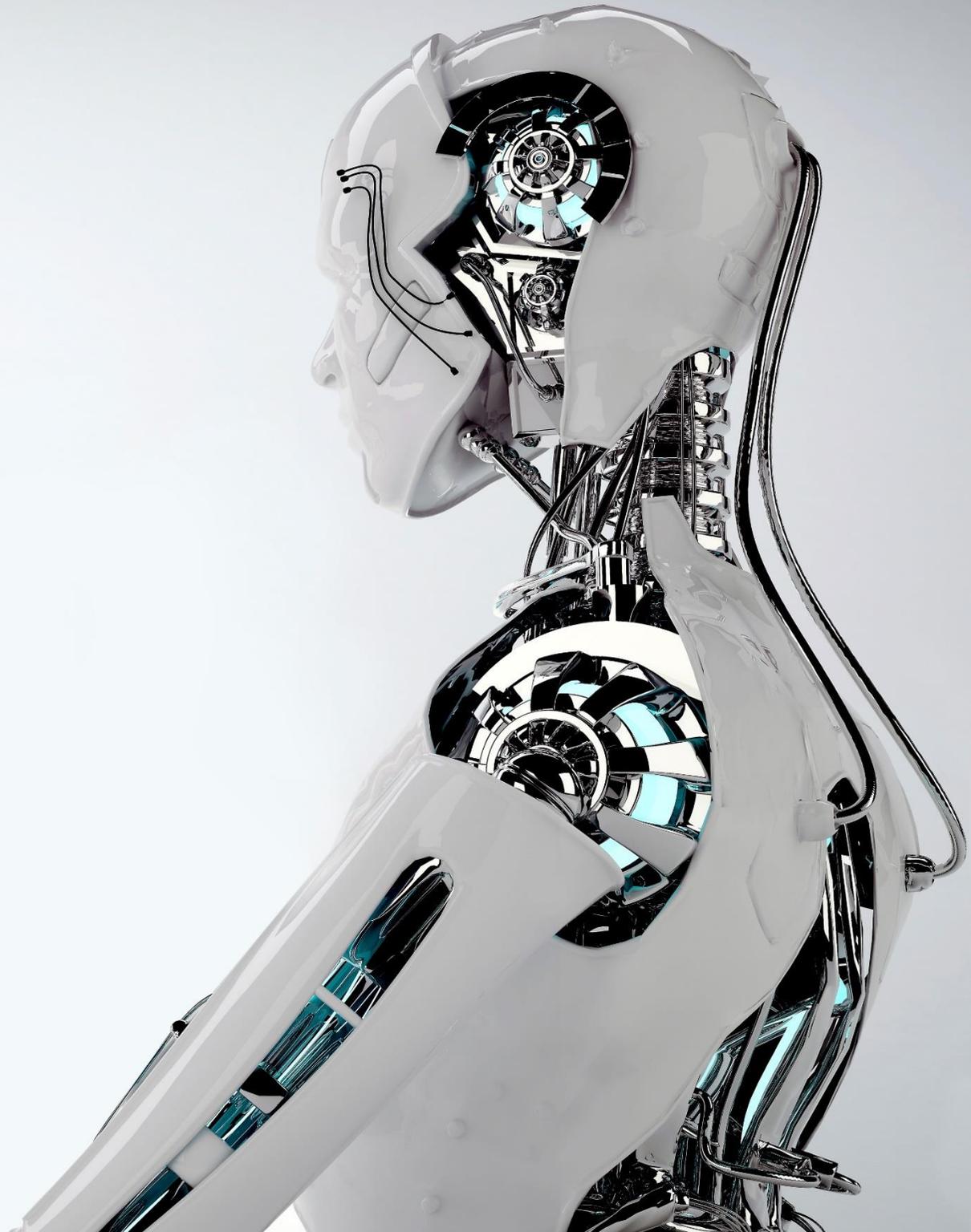
Armed with these soft skills, professionals will be able to harness technology for repetitive tasks, then sprinkle the data revealed with real human insight and intelligence.

What do we need to do now?





Questions?





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