

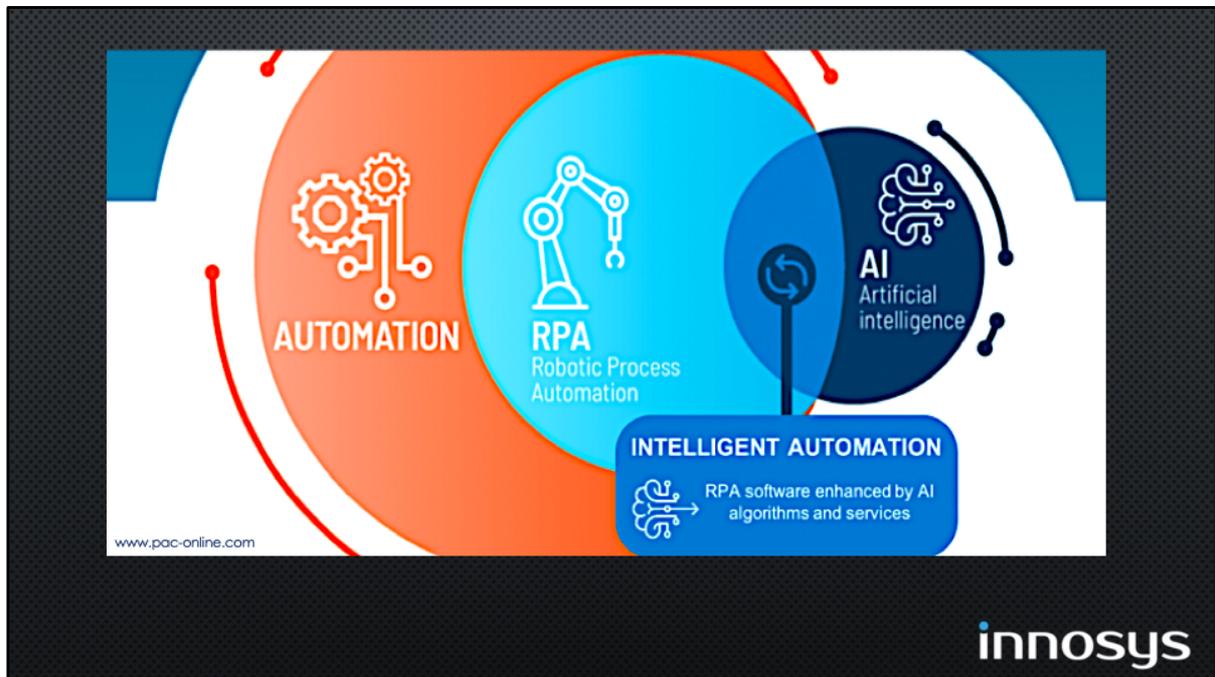


Automation. Robots. Artificial Intelligence.

It doesn't matter if you're thinking of these things as an evolution, a revolution or a disruption.

Industry 4.0 is a seismic shift in technology towards systems that no longer have clear boundaries between the physical, digital, and biological.

It's easy to play buzzword bingo with these terms, let's start out with a recap of what's what.



Robots. Easy enough. A machine that can be programmed to move on two or more axes and can complete tasks with a degree of autonomy.

Automation, or more specifically, Robotic Process Automation. This is a flavour of business process automation using software robots or artificial intelligence workers.

Artificial intelligence. A combination of algorithms, data, and learning techniques that mimic human intelligence.

And somewhere in the overlap of all these, with a little internet of things thrown in for good measure, is the future of an insurance industry that looks nothing like the one we work in today.

4 Rules for Automating Responsibly

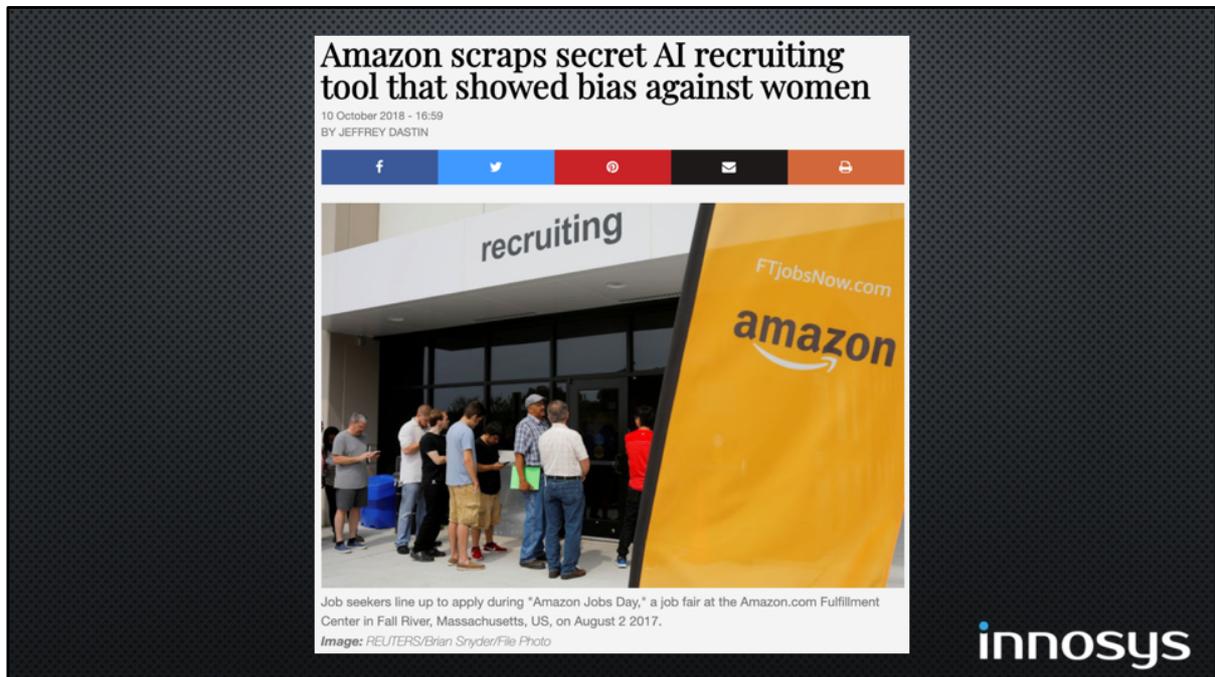


Watch out for the biases

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We can't just be churning out silicone, aluminium or software editions of ourselves. Humans are great and all but we have some bugs, right? And when we're building the algorithms that run the machines, believe me, the bugs are baked right on in there.

One of the biggest challenges we face in automation now is that the technology is built by humans who are unintentionally but inherently biased.

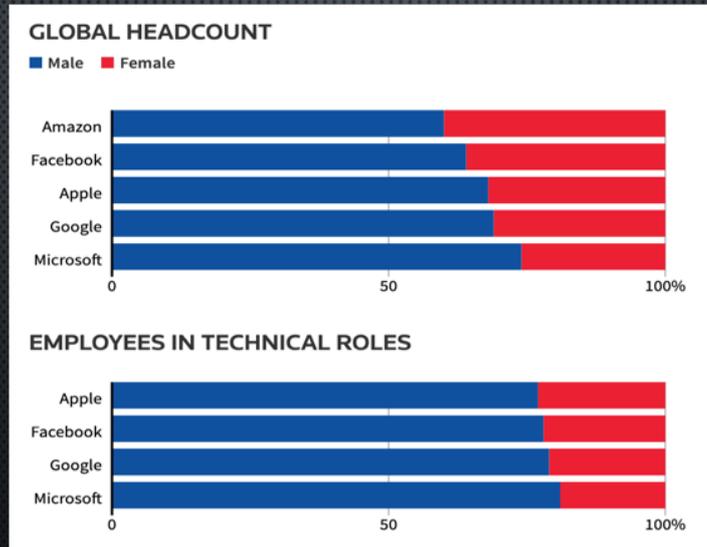


Amazon were forced into a very public apology last year when it was revealed they'd had to scrap the artificial CV screening intelligence they'd been building since 2014 after it taught itself that male candidates were preferable. Whoops.

You see, the thing with AI models is that they have to be trained on a data set. Amazon had fed their tool a carefully curated set of markers for what makes a great Amazon employee, along with a decade's application and appointment data.

Unfortunately, the gender spread in the US technology sector looks like

2017 Gender Stats of US Tech Giants



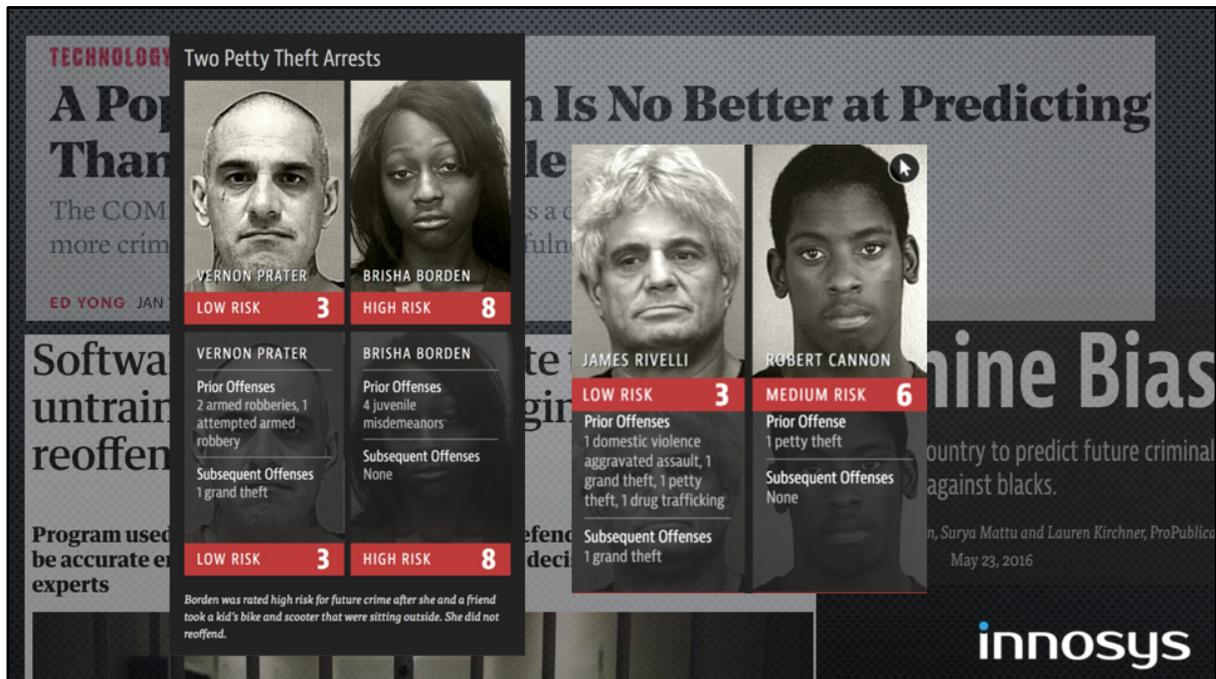
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like this so Amazon had also, inadvertently, taught the tool that star performers were men.

To sort the supposed wheat from chaff, the tool had taught itself to look for obvious strings like 'women's chess club'.

Slightly more disconcerting was that it had evolved to eliminate candidates from two all-women colleges in the US, without anyone tell it that this was the case.

With the high demand for skilled technical resources, I guess not making it into Amazon probably didn't ruin anyone's life but that isn't always the case.



COMPAS is a piece of software built for the US judicial system and it supposedly predicts how likely a defendant is to reoffend.

In theory, it's sound and it does accurately predict, in binary terms, the tendency of a convicted criminal to reoffend.

But things went wrong when it tried to give a qualitative score on the risk of reoffending.

It pretty much consistently spat out that black people were a higher reoffense risk than white people.

The tool used 137 data points to produce the score, none of them a direct question about the offender's race.

What had of course been overlooked is that there are many, many things that are a proxy for race in an unequal society - residential area, level of education, household income - all which produce a biased result when not treated correctly.

The reports from the tool were used to assist in sentencing decisions, which is a little more life-changing than not getting a job at your favourite silicon valley blue-chip.

If these examples feel a bit far removed, consider the algorithms that are used by our South African financial institutions to approve home loans and business funding. We're assured that race isn't part of the decision-making criteria but we also know that here, far more than in the US, the factors that proxy race definitely will be.

Responsible automation means we're fully cognisant that seemingly black and white data points can result in decisions that have unintended consequences.

So now you're aware of this, you're good to go, right?

Not so fast. You know that when you have a hammer, everything looks like a nail. So the second rule of responsible automation is to do so judiciously.

4 Rules for Automating Responsibly



Watch out for the biases



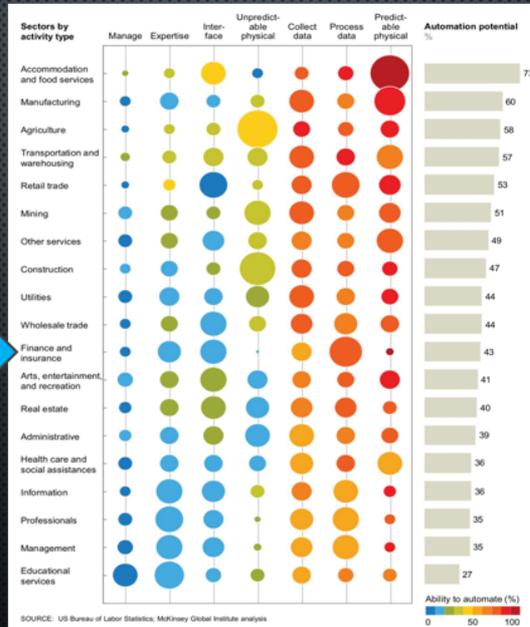
Automate judiciously

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The very first thing to consider is how well suited your particular industry is for automation.

Mckinsey's have put together an interesting report on exactly this.

Potential for Automation



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In the study, they assessed the level management and expertise typically required, the extent of human interaction needed, whether the physical activity was largely predictable or largely unpredictable, and scale of data collection and data processing.

The plotted results show the financial services sector squarely in the middle.

This just reinforces that we need to automate wisely.

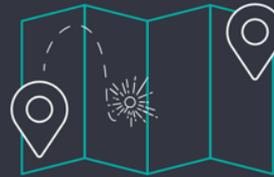
There are aspects of what we do that are just not suited for the machines to take over, at least not yet.

We really are suckers for the shiny new toys, probably because on some level, most businesses are desperate for that silver bullet.

According to a Deloitte's UK study across all industries

Most organisations have embarked upon their RPA journey

53%



of respondents have already started their RPA journey



This is expected to increase to **72%** in the next two years

If this continues at its current level, RPA will have achieved **near-universal adoption within the next five years**

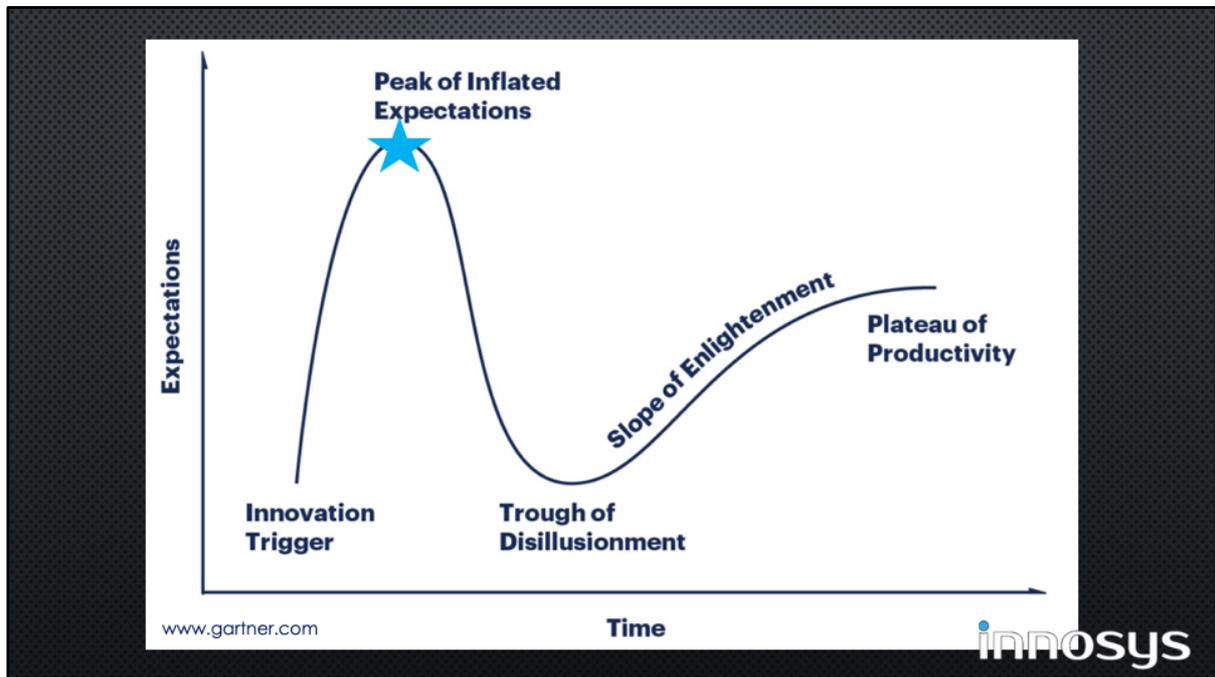


#worktodo | www.deloitte.co.uk/robotics

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53% of respondents are already investing in RPA. and a further 19% plan to begin in the next 2 years. That's effectively a 72% adoption rate by 2020.

If you've attended a tech conference in the last two decades, you'll be familiar with the Gartner hype cycle



Their 2018 report on RPA indicates that the technology is at the top of the cycle. And we all know what happens next. With investment in this category estimated at 680 million dollars globally, that's quite a big bubble.

The slide into the trough of disillusionment is typically triggered by the bucket of cold water that is reality when projects start failing or implementations fail to deliver returns. EY estimate that RPA projects already have a failure rate of between 30 and 50%, which is only expected to increase.

Given that financial services is not suited to full automation with the tools we currently have, and automation projects are not immune to failure, you want to choose your candidate processes carefully.

To Bot or not to Bot ?



Process the process

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Process the process

The aim should be to automate an entire process, rather than just individual tasks.

But treat yourself to a good processes review and re-engineering first.

Automating a bad process means you'll simply produce bad results faster.

To Bot or not to Bot ?



Process the process



Value, not cost

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Just because technology can reduce the cost of a business process, doesn't mean that it will necessarily improve the process or the result.

If having a person rather than a bot means you will produce better value for the customer, and ultimately your business, have the person.

To Bot or not to Bot ?



Process the process



Value, not cost



Robots suck at passing tissues

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Robots suck at passing tissues.

When Honda tasked its ASIMO robot with leading museum tours, it failed dismally because it wasn't able to differentiate between people raising their hands to ask a question and people waving hello to it.

Technology is bad at correctly handling abstract concepts and emotions.

Whenever your customer is likely to be upset, like complaints or claims, giving immediate and easy access to a well-trained person will do far more for a positive customer experience than a prompt auto-reply claiming to be sorry for their loss.

To Bot or not to Bot ?



Process the process



Value, not cost



Robots suck at passing tissues



Humans are good at grey

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Humans are good at grey.

As great as software is at handling complexity, the sorts of systems we work with in the business environment are not yet adept at understanding nuance.

Situations that ask for equal parts rule book and judgement, like the underwriting of large and non-standard risks, are best left to the professionals for now.

To Bot or not to Bot ?



Process the process



Value, not cost



Robots suck at passing tissues



Humans are good at grey



Expectations must be met

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I don't mind chatting to a service bot, I don't mind if it's been given a human persona, I do like to know it's not a real person on the other side of the messenger box when I start the conversation.

If your customer would otherwise be expecting to interact with a person and you've introduced technology, or even vice versa, make sure to set their expectations correctly, and in advance.

Zero value is achieved for anyone if the customer abandons an interaction.

So, where are we now. We've carefully considered which processes to automate and now have RPA or even some well-trained AI running in the business. Excellent.



You'd be forgiven for thinking it was time to queue the credits.

What many companies seems to be overlooking when implementing automation, especially RPA, is that it isn't a once-off exercise.

4 Rules for Automating Responsibly



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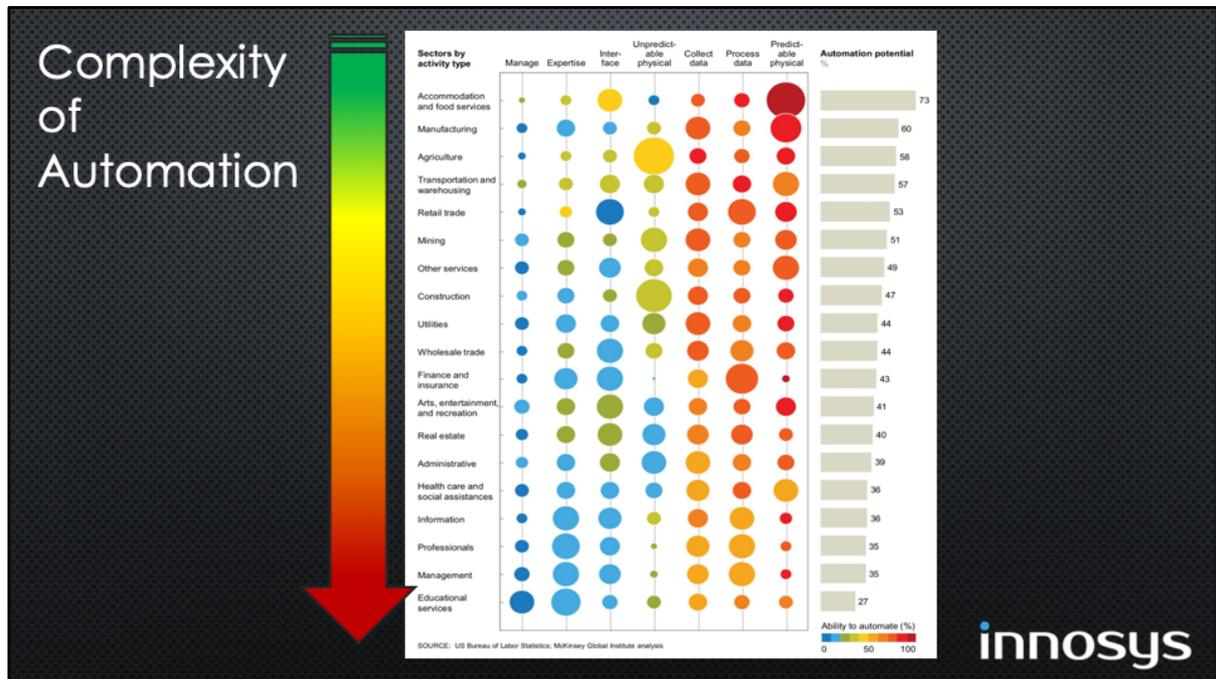


Automate judiciously



It's a process, not an event

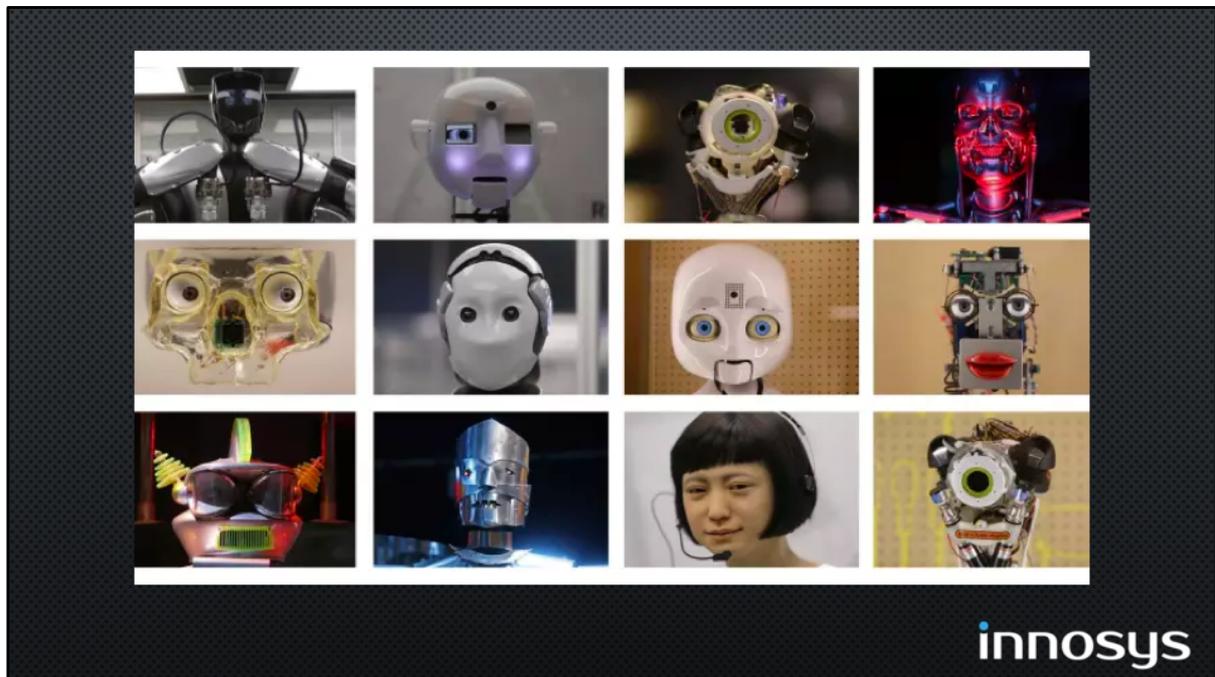
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Our table of industry suitability for automation also gives us the gradient of automation complexity.

It follows then that, where automation has been implemented in more complex situations, there is a greater need for monitoring it as well as the ability to rapidly refine.

About two years ago, Deloitte implemented a bot project internally



and recognised straight away they were now faced with the challenge of measuring the bots' effectiveness.

The solution came from the HR team who suggested that if the robot was filling the role of a human, it should be managed like one.

The bots were named, given employee profiles and underwent regular performance reviews.

If a bot wasn't improving the efficiency of its tasks, it was submitted for re-engineering.

It sounds a little frivolous, doesn't it. Giving personas to modules of software. Perhaps it is but the mindset of treating your RPA bots as digital workers rather than software is key to the success of your automation initiative.

Successfully managing bots

Managing a Digital Worker

- Define KPI's and metrics upfront



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as digital workers requires a few things:

The first one is nothing new at all: If it's going to be managed, it must be measured.

And if you're going to measure it, be sure you've thought about it upfront.

Consider which business strategies the automation will enable and which metrics will tell you if things are improving once the solution is in place.

Managing a Digital Worker

- Define KPI's and metrics upfront
- Short review cycles



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Second, keep review cycles short

You certainly wouldn't wait an entire review cycle to tell an employee that they should send claim progress queries to the claims team, not the sales team. So by that standard, you cannot wait a quarterly or half yearly release cycle to refine your RPA.

Managing a Digital Worker

- Define KPI's and metrics upfront
- Short review cycles
- Short change cycles



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Third, keep change cycles short too

The word agile has so much baggage attached these days, especially for technology teams but in this scenario it is so apt.

Managing digital workers well means taking on board the feedback from the review cycles and making small, refining changes to the bots very, very regularly.

Managing a Digital Worker

- Define KPI's and metrics upfront
- Short review cycles
- Short change cycles
- Be ruthless



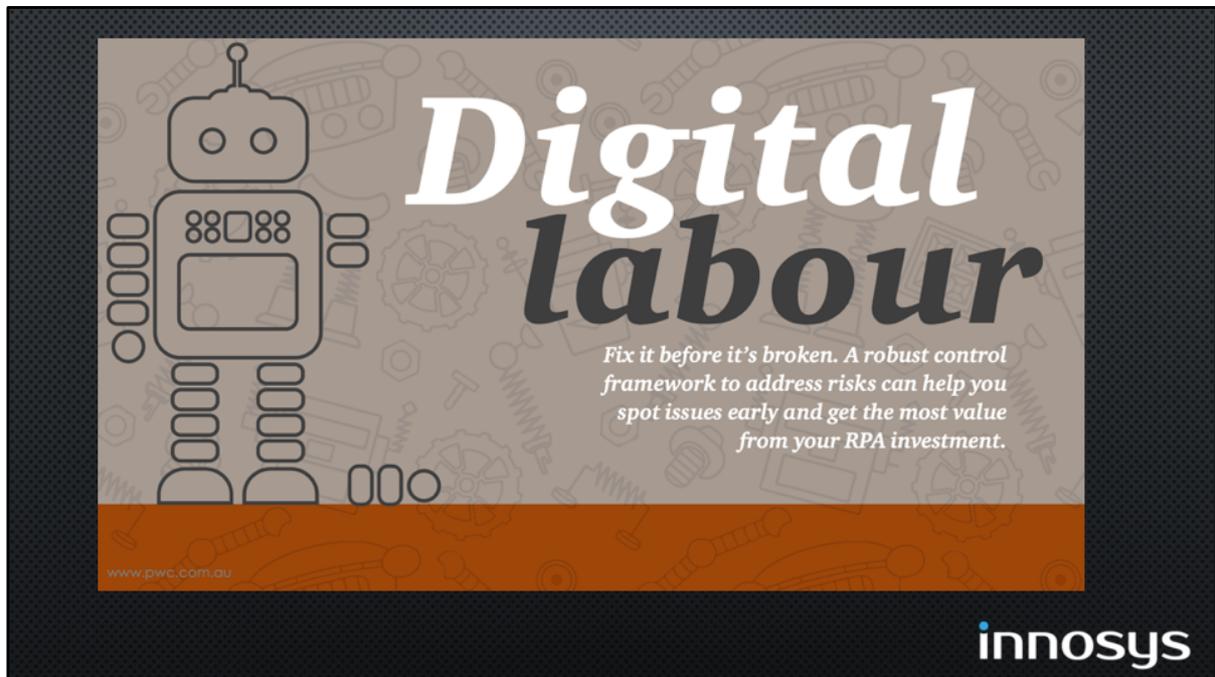
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Lastly, this is your chance to be absolutely stone-hearted. Fire at will.

We get so overly our software solutions in financial services, probably because we live with them longer than the average marriage last these days.

Once we've spec'd it, built it and dragged it over the finish line having spent the GDP of a small country in it, we'd be only too happy to leave it as-is for a decade or so. Longer if possible.

The very nature of RPA means you will never have millions invested in a single bot. While I'm not quite suggesting you treat your automatons as throw-away, be diligent about measuring and ruthless when you aren't seeing value.



PWC talk about having an RPA control framework in place. In simple terms, their recommendation talks to making sure you

have all the stakeholders engaged, have considered all possible points of risk exposure, including regulatory compliance and have the correct processes in place to manage feedback, change requests and incidents.

Obviously the scale and weight of approach is very much dependent on the size and nature of your organisation but the underlying point is the same regardless: responsible automation is a journey, rather than a destination.

The final guideline for responsible automation is by far the hardest to assess, to predict and to control.

4 Rules for Automating Responsibly



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Automate judiciously



It's a process, not an event



Don't ignore the social impact

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There is plenty of research (and lighter reading) available on the impact of Industry 4.0 on the insurance sector.

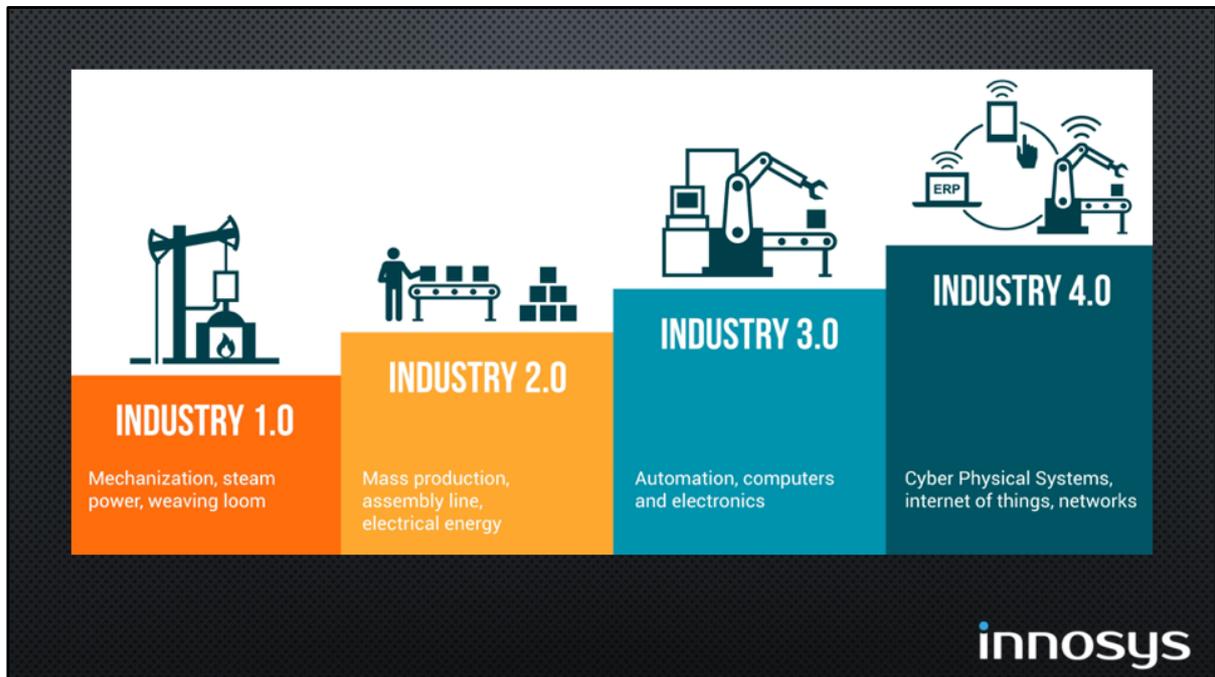
From the broad redefinition of perils and insurable risks to robots running the backoffice, we know the insurance company of the 2020's and beyond will look significantly different.

Functions that are now completely reliant on people will probably not be in five years' time.

And so far, I have not told you anything new.

But did you know research is suggesting that up to a third of South African jobs could be lost to automation? That is 5.7 million jobs, and it is not like we have them to lose. The high rate of job elimination is by no means unique to us, depending on a country's major industries, anywhere between 15 and 47% of jobs may be lost to or radically altered by automation.

You could not argue the benefits brought by the industrial revolutions of the 19th century.



I, for one, am delighted that my formative years were not spent in the tunnels of a coal mine. However, when you are in the throes of such a revolution, it can be hard to see the light at the end of said tunnel.

By their very definition, industrial revolutions are a time of uncertainty, which is not something us humans are especially good at coping with. Threats of a short-term rise in unemployment are very unsettling, even if history does suggest we have good odds on a happy ending when jobs are redistributed into other areas of the economy.

The developed world is gearing up for manufacturing and other labour-intensive industries no longer absorbing the majority of employable people.

School curricula and university programmes are refocusing to provide not only greater exposure to different technologies but also the tools and techniques needed work with tech in many different contexts.

The demand for semi-skilled workers is falling, the need for specialist technical skills is growing, and these countries are positioning themselves with a supply of suitably

skilled people.

In contrast, the developing world is struggling to resource the wholesale change needed in education systems that are more closely aligned to the previous industrial revolution than the current one.

Countries like ours, that are already on the back foot in a socio-economic sense, run the real risk of falling further behind.

Avoiding large-scale automation and keeping focus on growing the workforce in traditionally labour-heavy industries like mining and manufacturing, especially with our heartbreakingly high levels of unemployment might feel like the more ethical choice but isn't the long-term solution.

Neither are policies that limit or prevent automation. India's ban on washing machines certainly didn't stick.

If other developing nations are embracing automation, not doing so will result in us being uncompetitive on cost and we'll lose out anyway.

Caught between the proverbial rock and hard place.

Like all great predictions, most of those made around the impact of automation on employment levels range from one extreme to the other.

Either everyone will be redistributed or we'll all be living in cardboard boxes.

Re-skilling will be completely feasible or absolutely impossible.

I imagine the reality will be what it always is: somewhere in the middle.

The World Economic Forum's Future of Work report makes for interesting reading (once you've got over the irritation of the categorisation of sub-saharan africa as one ubiquitous economic unit)



Broadly, roles in financial services will shift from task-processing to knowledge-management. No surprises there.

But notice the increased need for communicating and interacting to be handled by humans?

This is a great example of how skills only held by humans will be better utilised in an automated world.

As the machines take over the rote information distribution, people will be available to handle higher level interactions.



A more granular look at the roles that emerge and decline over the next four years suggests something similar.

The two I found most interesting are these

Surely these are exactly the sorts of functions we would expect to disappear as service bots and customer self-service platforms become more prevalent?

And yet the data suggests exactly the opposite will happen.

The pattern here is, I believe, similar to those we've been observing in millennial consumers in recent years.

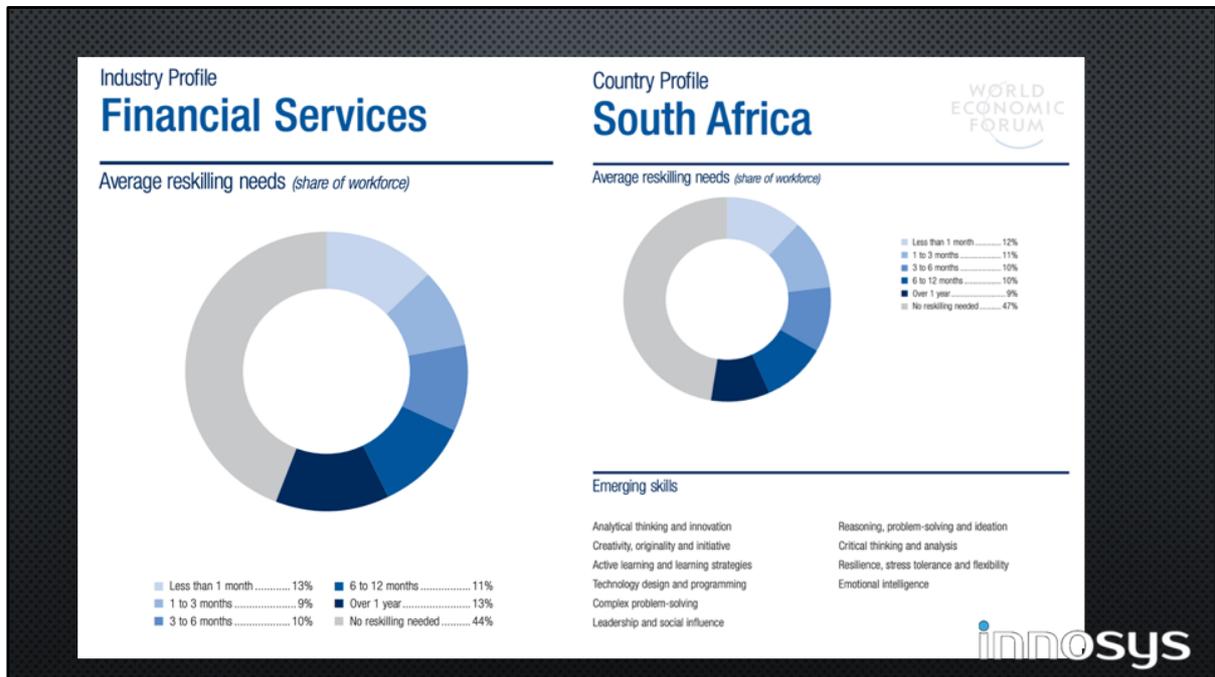
As consumers who have a much greater implicit trust of technology, first prize for them is to interact with a technology service platform.

Only when they have exhausted this channel, will they look to engage with a person.

But boy, when they do, they expect a knowledgeable person who can address their needs efficiently.

This is the shape of financial services in the automated world.

This is the future employee we need to work towards empowering, through re-skilling and more appropriate education.



By global standards, the South African workforce appears to be almost on par with the expected re-skilling needs of the fourth industrial revolution.

I'm a little dubious about these numbers myself as I suspect they look only at skilled people employed in the formal sector.

But whether we're talking about re-skilling the existing workforce or providing skills training to learners, students and the unemployed, our responsibility as employers and society as a whole should be on honing the skills the machines are unlikely to be able to easily emulate:

Future-proof Skills



Team work



Empathy



Creativity & analytical thinking



Learning

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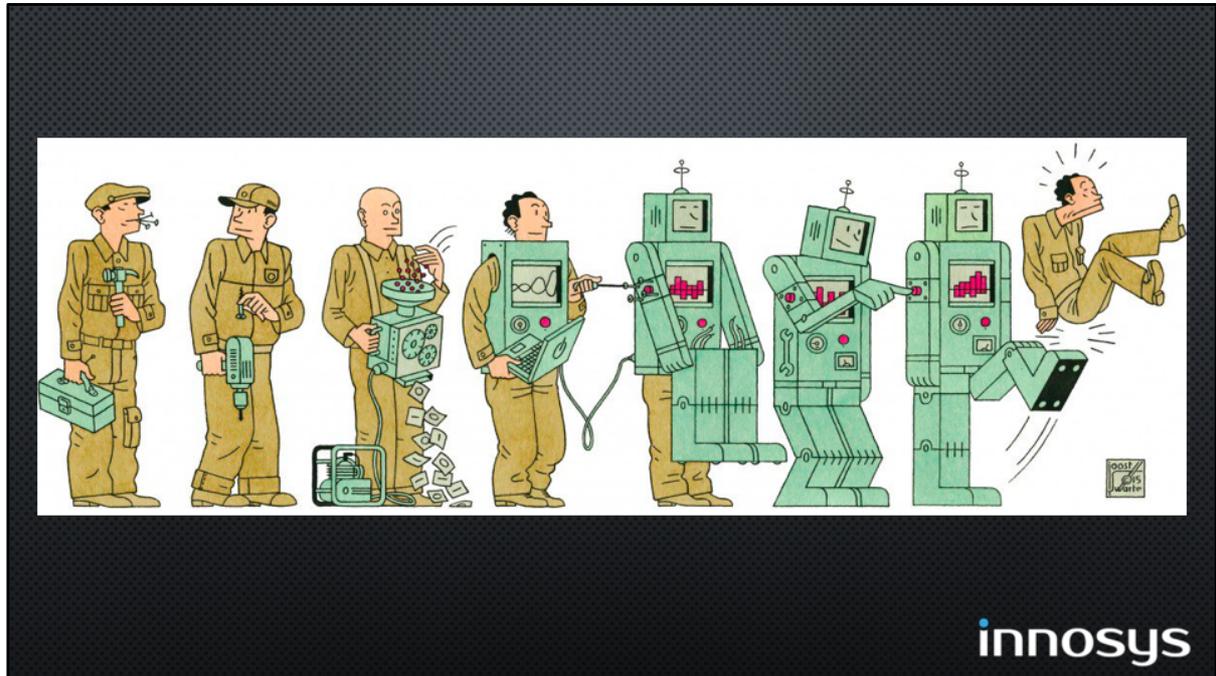
team work

empathy

creative problem solving

the ability to quickly learn new hard skills

And underpinning all of these, the ability to work with
and analyse data



It's not a new one but if you have seen the animated movie WALL-E, you might remember that humans had made themselves redundant through over-reliance on robots.

The risk is not that the robots will somehow, nefariously, push us out;

it is that we will not learn the skills we need to manage a harmonious relationship between man and machine.

Questions?

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