

Taking Control of the Cognitive Enterprise

Why your automated destiny
is in your hands, and how you
can plan for a cognitive future

An ISG Focus Paper

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Don't make plans for the singularity, think about today and tomorrow

The point at which machines surpass human intelligence is, despite the Sci-Fi dystopias, a long way off.

Futurist Ray Kurzweil believes it will happen by 2045.¹ That sounds very optimistic and today matters little to the world of commerce. There are many year-ends (let alone quarters) to go before that date. But much of the rhetoric around Robotic Process Automation (RPA), Artificial Intelligence (AI), Autonomics and Cognitive Operating Models (COM), is complicated by concerns which are not important, yet.

At ISG we believe in looking at what you need to think about and do right today, tomorrow, and over the next 18 months or so. You need to leverage the technology that can be used immediately, and prepare for that which will evolve over the short-term. You don't need to be a futurist to realize that automation can make a difference to your business immediately.

The rise of robots has been somewhat mythologized, ISG sees the new era of intelligent machines and cognitive technologies in practical, business terms. We believe it's something you can control inside your business and in doing so is the wisest way to approach the opportunity.

When we brought together four of our leading thinkers to debate what organizations should do about automation – deploy it, source it, and develop it to meet their specific needs – the discussion was lively and informative. It was also trenchant.

¹ Ray Kurzweil: The Singularity is Near 2006

They are:



Barry Matthews
Partner



Steven Hall
Partner – Digital Advisory Services



Allan Surtees
Director of Robotic Process Automation



Wayne Butterfield
Director of AI & Cognitive Innovation
& Automation



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- + Why there's no one way to automate, just the intelligent way
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Why it's a brave new world, and why robots aren't aliens

Barry Matthews: We're entering a brave new world of automation and the transformation is going to be immense, especially in the back-office operations that most of us take for granted. That's where automation can make the biggest difference right now.

Allan Surtees: The hype cycle has moved on from Robotic Process Automation to AI. People are wondering what cognitive technologies will come along that can replicate human qualities... and human reasoning... but the big wins you get from RPA are happening right now. The focus should be on that in the short-term.

Steven Hall: For me that's the most important point. Sure, it's a brave new world, but not for AI specialists, yet. It's the people who can make RPA deliver tangible benefits to operational efficiency, risk mitigation and cost reduction that are the heroes at the moment. RPA is about improving cost-to-serve, now. That's the big point I emphasize with clients. Don't get too caught up in the Sci-Fi scenarios, focus on the here and now. Let's get RPA yielding value for you as quickly as possible.

Wayne Butterfield: I was there at the creation, just about. When I worked with Blue Prism we pioneered RPA, and we named it.





Steven: Simple, direct – says what it does. Takes rules based, routine tasks and automates them. Of course, the ‘robotic’ part suggests little robots...

Wayne: But it’s software. The robots are run by clever code.

Barry: We need to be clear about the scope of automation though. I take the point about RPA. Yes, it’s the aspect that can deliver a lot of value right now, but this new world is based on three forms: RPA in the back office; cognitive technologies like chatbots and virtual assistants for the front office; and autonomic systems that can transform the way IT operations work.

Allan: All three are here... and they’re evolving fast. The cognitive side is exciting, but it’s much harder to replicate the way humans think or even show empathy for other humans. Automating that, in truth, is a long way off. RPA is the easy win. It delivers benefits right now.

Steven: RPA is nothing mysterious. Despite all the papers that are written about it, let’s be honest, it’s not a sophisticated concept. The important point I always make is that RPA can be deployed without the need to change processes. It takes over those existing processes from humans, and does it quicker, more accurately, and around the clock. Simple.

Barry: The robots mirror what a human worker would do. The robots aren’t aliens. As a professor of physics at MIT put it, “[They’re] not the product of an alien invasion. [They] are an artefact of a particular human culture and reflect the values of that culture.”²

Allan: Our business culture demands efficiency and cost-reduction. In a world of digital disruption, organizations have to be agile. They need to make the most of their human capital.

Steven: And lots of workers doing routine tasks that machines can do much better is not a good use of that human capital.

² Frank Wilceck: quoted in What to Think About Machines That Think ed: John Brockman 2015

Why robots are good for people

Allan: What we're talking about here is labor arbitrage in the age of robots. In the past, if you wanted to cut the costs of processing information, you looked for cheaper labor. That meant going overseas to places where wages were lower and connecting them up to the organization so they could input data, process invoices, or whatever it was you needed to do.

Wayne: When I worked for a large telecommunications company we had a legacy of outsourcing which saw a lot of routine tasks being carried out overseas, from SIM card swaps to account management. We'd have UK contact centers, but most of the processing was done by people in India. We quickly realized that we could use robots to do that work. So, we started an RPA project and automated 700,000 transactions a month. All done by just 170 robots.

Barry: So, you replaced real people...

Wayne: Yes, 250 of them. That sounds scary, but it isn't.

Allan: Most of the press recently has been about the threat to jobs. A survey by Oxford University showed that at least 47% of jobs currently done by humans could be taken over by robots.³ That's caused people to start worrying.

Wayne: But the truth is, RPA can be liberating. The way you need to look at it is that you're 'taking the robot out of the human.' The founder of Cybernetics, Norbert Wiener, believed that that would be the best outcome of the computer age.

Steven: The real people can move on from routine work to more challenging and rewarding work.

Barry: There's an ethical element that businesses have to confront, but if they approach robotics from the viewpoint that they can increase their human capital by reducing the mundane aspects of work, then they will work hard to provide rewarding, human-centric roles for their people.

³ Technology at Work v2.0 The Future is Not What It Used to Be:
Oxford Martin School, Oxford University 2016

Steven: The argument goes back to value. What value can you get from both robots and people. Robots deliver value by ensuring your processes are less prone to error – which mitigates risks, boosts compliance and costs less to do. Your people are free to have ideas, work with customers, be creative, show empathy – add value where it counts at the heart of the organization.

Allan: So, robots can be good for people.

Wayne: Definitely. A lot of organizations focus on the cost saving aspects of RPA...

Steven: They're important...

Wayne: Sure, but there's also the staff retention point.

Allan: It's a 50-50 approach: save costs but also improve the employee and, ultimately, customer experience. RPA helps you do that.

Wayne: If you reduce mundane, routine work you're affecting people at the two ends of the age spectrum: young people just starting out, and older people who've been used to doing the process driven work.

Allan: You have traditional mindsets and those that are open to change... but everyone wants a more fulfilling job.

Wayne: The question you start with is a simple one: why are humans doing this job? If it's because a human has always done it, but there's no reason why a robot can't do it, then you have a process that can be automated.

Allan: And the person can then be freed to use their human skills.

Wayne: Exactly.

Steven: New jobs then emerge that should yield more value. In the end, every change process has had, and will always have, human consequences. We're all used to that. If you think back to every re-organization you have ever heard of, people had to change. Some didn't like it. Some did. But there were always HR issues. The fact that automation is the cause of those issues doesn't mean that they are any different. You must be sensitive to people's needs and ensure they have new roles, new training opportunities and new ways of delivering value to themselves and their employers.

Allan: Professor Leslie Wilcox and his colleagues at the London School of Economics did quite a well-known case-study about a project concerning the implementation of RPA at a company called Xchanging, a technology enabled business processing and procurement specialist.⁴ It shows how there were fears over the coming of RPA, so the firm created an avatar (called Poppy) with a personality to humanize the change. It turned out that RPA became popular very quickly because the avatar was able to take away 'the boring bits' of a job and free people to do more fulfilling work. Because Xchanging communicated the broader context of the change... proving why it was needed... and how it would benefit people it was accepted faster and so yielded value faster too.

⁴ See Paper 15/03 'Robotic Process Automation at Xchanging: by Prof. Leslie Wilcox, Prof. Mary Lacity, & Andrew Craig. LSE 2015





Why you need a plan now

Barry: Automation is now mature. I don't think we need to 'sell' robotics to anyone anymore...

Steven: Agreed. RPA is here and it's working. I think you need to split it out from AI and focus on making the most of the technology in your existing processes. AI is coming, but it can be a distraction. Get the back-office right.

Allan: As I said, it's an easy and quick way forward. It will yield benefits quickly.

Wayne: But a plan is needed.

Barry: That's my point. There are many examples out there of organizations that have piloted projects and have learned important lessons about how automation can fit into their specific businesses.

Steven: It's not a one-size-fits-all approach – the way you deploy RPA has to be based on your specific needs.

Barry: The business case is also clear – and, I believe, well documented. You can achieve a return on investment of 300% in a short time.

Wayne: Which is music to the ears of every CEO, CIO and CFO.

Barry: Yes, but what is surprising is that many organizations don't have a plan yet. They're hearing a lot about RPA, and they understand what it is and what it can deliver, but they don't have an approach that can enable them to leverage its benefits quickly.

Steven: Long standing organizations have a lot of legacy... in terms of both systems and the way they think. That's only natural. Their processes are ingrained; they do things the way they have done for a long time. But their competitors are more agile – especially the digital disruptors. I mean, did the hotel industry ever see Airbnb coming?

Allan: I doubt it. It's such a left-field idea. But, it's not the idea that counts, it's the fact that a digital start-up doesn't think in terms of people when it gets going. It thinks about technology. Robots do everything. Isn't that why Instagram got sold for a billion dollars and yet had only 13 employees. No one's ever counted how many 'robots' they were using to run their business!

Wayne: And it doesn't matter what sector you're in – the robots make a difference. If you were to start a business now you wouldn't even consider making your routine processes manual. Take insurance. It's one of the oldest businesses there is. It has a long history of manual paper-pushing. But, there's a lot of cognitive potential for technology in that industry now. Which means there's a lot of opportunity for disruption.

A new insurance start-up called Lemonade is very up-front about how it can be so competitive. It tells customers that 'Maya' it's 'artificial intelligence bot' will 'craft the perfect insurance for you.'

Barry: Millennials love it.

Wayne: Doesn't matter how old you are; if the price is right, everyone will love it.

Steven: So, it's clear that every business needs a plan.

Barry: The problem is that there are many players in the market that claim to be experts. They want to come in and offer Solutions-as-a-Service. That's led to problems. ISG has had to mop up after quite a few bad deployments.

Steven: That's why it's important to get the message across that you don't have to outsource automation. You can do it yourself.



Why you can be confident about going it alone

Barry: But first, you need an open mind. You need to have a vision of what you want to achieve. If you don't, then your automation adventure won't end well.

Steven: Going it alone is not as scary as it sounds. The fact is that the outsourcing market for technologies like RPA is not mature. Outsourcers are not altogether ready to serve organizations. Importantly, you'll find it hard to make a choice about what to buy and what price to pay. The pricing of services in this area have not been defined properly yet. And because your business is unique in terms of its legacy estate, automation has to be tailored to specific needs.

Wayne: You have to be clear about goals – just as Barry said – Is cost your focus, or customer experience? Where does automation fit into your long-term strategy? Do you need to automate large chunks of your organization? Do you need a range of technologies?

If you were to outsource everything who would you buy it from? How would you frame the RFP's? There are a host of suppliers out there and sifting through them all would... well, you'd need a robot to do it!

Allan: Actually, no one really knows which technologies will deliver lasting value. Anyone who claims to know all the answers is, well, being economical with the truth. The point is that this is a fluid market. It's changing all the time. RPA is mature, cognitive is evolving fast, and we could be on the verge of the kind of Sci-Fi future people like to write about, or we might not be. What's important is to go step-by-step. Do it logically. Ask the right questions.

Steven: That's why working in partnership with someone like ISG is the way forward. We've worked with a wide range of businesses across all sectors, so we can help ask the right questions and get the right answers. This isn't a market where there's a vanilla product that

you can buy in and do RPA. Automation has a different impact in different areas and on different businesses. It's important that the management of a business educates itself in what's possible and what isn't. They have to understand which software to buy in – or develop in-house. How to pilot RPA, prove the concept, and then leverage its benefits across different layers of the business.

Wayne: What you're talking about there is creating a center of excellence that's unique to your business.

Steven: That's exactly what I'm talking about.

Allan: Which comes back to getting that broad vision that can inform your strategic decision making.

Barry: OK, let's organize those thoughts. Decide how RPA can work for you, then train your own people so that you can be self-sufficient as soon as possible.

“The point is not to play catch-up, but to try and get ahead of the competition – before it even appears.”

Wayne: Agreed.

Steven: Get all the business functions involved from the outset. That's how you can identify the processes that can and should be automated.

Barry: For those who have piloted RPA, like what they've seen, and want to go further, then they need help to industrialize it.

Allan: Which is how the big benefits can be unlocked. Rolling out automation across as many functions as possible can give traditional organizations the edge when it comes to competing with digital disruptors. The point is not to play catch-up, but to try and get ahead of the competition – before it even appears.

Barry: And then there are businesses that see automation as a key part of their total digital transformation. They want to re-imagine their entire business model. That means looking at the processes themselves, not just automating them.


Steven: Yes. Ask why are you doing the process in the first place? Is it necessary anymore? If it isn't, getting robots to do it is a waste of time and money.

Barry: So, it's important to look at the very big picture: look at sourcing, geographies, how people are deployed, what tasks they do, and how machines work with them. The aim is to achieve harmony across all functions and processes so that the organization can compete in a changing marketplace. If you don't do it, a start-up – I'm tempted to say 'upstart' – will do it and cut into your market share pretty quickly.

Steven: That kind of perspective is what ISG specializes in.

Allan: So, the conclusion is – with the right advice – you can go it alone, and you can be confident of doing so.





Why there's no one way to automate, just the intelligent way

Steven: I don't see many businesses resisting automation. Most aren't even waiting to see how the market develops. They're eager to unleash its potential. That's because, simply, RPA is a very attractive proposition.

Barry: Proving that value is relatively easy – and that realization is spreading, which means the demand for technologies like RPA will grow.

Wayne: Which also means that they'll want to move toward that 'Cognitive Operating Model' quickly.

Allan: Which is a much more complex proposition. There's no one way to get there...

Wayne: But there is the intelligent way to start the journey.

Steven: Get the right advice early.

Allan: Doing so will help you avoid falling into the trap of outsourcing automation and paying a margin that you don't need to pay.

Steven: Exactly. Do it yourself and get the gains early. Once you've proved that the technology can transform the way you work and do business, then you can look to outsource future versions of automation. Wait till that market is more mature and has sifted out the problems and cost-traps. This is not the time to outsource.

Wayne: I think it's important to base your plan on the customer journey – the end-to-end customer journey. Where can automation improve it? How can cognitive technologies work with your RPA? How can you link it all up?

Barry: Your goal could be similar to Amazon's – which is to try and take the human out of every stage of the process. In theory, it can be done – from online order to warehouse to driverless van (or even drone!). But I don't think that's going to happen anytime soon.

Allan: That long term vision is fine, but we advise clients to focus on the present and on realistic goals.

Barry: That's important, of course. Working with ISG, a business can map out a journey that takes up to 18 months to transform an organization.

Steven: ISG has built a robust automation practice. That's why we acquired the benchmarking, sourcing and transformation consultancy, Alsbridge. The aim is to be the go-to experts in the field. We know that this is the future, and so bringing in the right expertise is key to making our mark.

Wayne: We're also helping the C-suite broaden their vision of how this technology can change their roles.

Steven: CIOs and CTOs are working more closely with COOs as well as CEOs to talk about how operational control can be deepened and simplified. That helps the entire organization become more responsive and efficient, driving down cost.

Wayne: How long before the board gets automated?

Barry: You can joke, but there's the widely-shared story about a Japanese venture capital firm that appointed an algorithm to its board.⁵ So, perhaps, the concept isn't so far-fetched. Though, admittedly, the algorithm was there to crunch numbers and provide insights into financial patterns rather than add to the company's vision.

Steven: I don't think what ISG does can be turned into an algorithm; it's too personal, too experience-based. We've been at the sharp-end; we've seen things fail and we've seen them succeed. We have the scars. That kind of insight is invaluable.

Wayne: And it's totally human.

Barry: We can help with the small decisions and the huge decisions. In the end, we're there to protect the value of a client's business. Help them deal with the social consequences of RPA. The people consequences. Help people achieve better careers. Use their talents. Be a loyal, productive employee. By thinking broadly about automation and how it impacts your entire business, we're contributing to the wellbeing of society.

⁵ BBC News 16 May 2014