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AUTOMATION AND THE BACK OFFICE

How Robotics and Cognitive Computing are Changing the Workplace

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ISG WHITE PAPER

INTRODUCTION

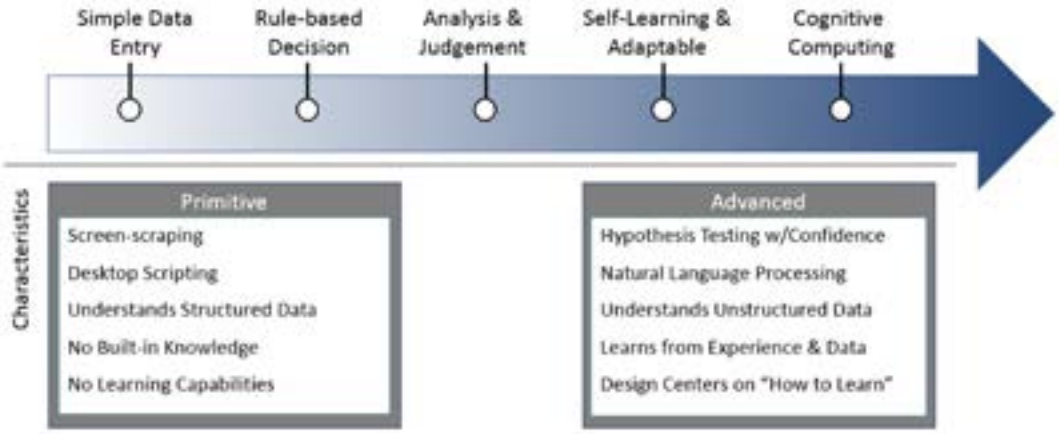
Imagine an IT service desk that actually runs on a "smart" event-and-ticket management system that is completely free of human labor. Because it has no technological boundaries, such a system raises the orchestration and categorization of event feeds to a level that is indistinguishable from, or better than, one that depends on human capabilities. The system "watches" humans perform IT service management tasks in incident resolution workflows as a way to continuously "learn" in the client's ever-changing IT environment. This kind of IT service desk is not a far-off dream. It is already a reality in enterprises around the world.

We are all familiar with the growing interest in how the next generation of robotics and automation will impact the outsourcing industry. Over the last several months, the digital team at ISG has been on a journey to understand in greater depth robotics and its potential for automated service provision. This white paper explores the answers to the questions we asked: What is the current state of robotics? Where is it headed in the next few years? And what will the impact be on the outsourcing market?

In this context, robotics is not a physical device but rather smart software that operates and orchestrates other applications or systems through the use of specialized automation graphic user interfaces (GUIs). By using these automation GUIs, clients can rapidly deploy robotics to perform manual activities that require adaptability, judgement and awareness. This class of software enables business users and functional experts to quickly leverage automation in the performance of day-to-day tasks without the need for significant IT investments.

WHAT IS ROBOTICS?

Different outsourcing engagements apply automation solutions in different ways, ranging from sophisticated to complex. As seen in the figure below, automation in its most primitive form is used for simple, repetitive data-entry tasks, often making use of macros or screen-scraping technologies, as in Microsoft Excel's Macro Recorder that can record user actions and play them back at a later time. In more sophisticated implementations, automation—also known as Robotic Process Automation (RPA)—can rapidly perform defined processes and workflows such as system, network and application tasks that users can quickly create or modify.



MARKET SNAPSHOT

Automation can address tactical needs in situations that do not support a business case for significant IT involvement.

Currently, automation technology is best-suited for processes that are highly repeatable, rule-driven and urgently needed but have requirements that are too tactical or short-term to be addressed by lengthy IT project approaches such as service-oriented architecture (SOA) or business process management suites (BPMS). Essentially, automation can address tactical needs in situations that do not support a business case for significant IT involvement.

An airline company, for example, is using automation to test the "quality" of bookings. In this initiative, automation software pulls data from across different systems to determine if airline tickets were created in violation of airline policies. In this instance, automation transforms a cost issue—the investment in software to displace human labor—into a revenue generator that creates an opportunity for the airline to sell more tickets and ensure correct pricing.

Operationally, robots used in automation are tireless, scalable, extensible, agile and easy to use. They are cost effective and can be reusable. Business process outsourcing (BPO) robotics providers claim they can replace up to three staff with a single implementation of desktop RPA software at half the cost of one individual.

Single instances of automation rolled out into specific environments have seen broad success, but sophisticated RPA products that bond irregular operational data together across multiple systems are just beginning to be tested in the market. Some clients have successfully deployed automation for event and incident management processes in various IT functions. These types of implementations have not been widely deployed because they are complex and tend to require significant planning and project hours.

MARKET FORECAST

The scope of RPA is growing beyond IT, especially with BPO firms such as Accenture and IBM that are making significant investments in robotics. Accenture has partnered with IPSoft to expand its RPA capabilities. The division that works on Watson, IBM's cognitive computing system, expects Watson-based business to make up 12 percent of IBM's total enterprise revenue.

While current technologies use RPA software that relies on "watching" and mimicking humans, the next decade will see the results of technology providers, such as Blue Prism, IBM and IPSoft, that are pushing the boundaries of automation past RPA and into two rapidly evolving areas of computing, including:

1. Autonomics – a system that is characterized by "self-learning" and "self-healing" capabilities that allow it to automatically discover and correct faults, and
2. Cognitive computing – a system that uses hypothesis generation and statistical analyses to interpret unstructured data, perform analyses and answer user queries.

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The next wave of technology will be more human-like, solving problems, evaluating and judging. This work is focused on creating systems that are self-managing, self-configuring and self-optimizing. For most applications, advanced cognitive computing will not take effect for several years. In the meantime, RPA is reinventing the interaction of humans and technology in the delivery of moderately complex work.

CONCLUSION

The use of RPA is changing the workplace dynamic. Rather than deploying entire teams to collect and structure information to support further processing or decision-making, companies are using automation to carry out repeatable tasks with more ease and precision than ever before. Potential clients of automation technologies and capabilities will need to understand the realities of automation. It's not uncommon for large ITO and BPO providers to offer services that are 30-40 percent less expensive than delivery models that rely solely on offshore labor arbitrage, which is something they are able to do largely because of the economies of automation. What they won't tell you is that not all functions, processes and activities are automatable due to a lack of scale or stability in the IT/process environment. They may also not tell you that a number of investments are required to achieve the promised

price reductions. Automation is not a magic bullet; employing it with success requires commitment and a disciplined approach.

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Automation technologies vary from very basic to extremely advanced, and most clients don't need to start with the most sophisticated solutions. Clients that opt to start with simple solutions may quickly realize returns and then choose to expand usage or implement more sophisticated solutions. The key to successfully embarking on the automation journey is to break down processes and identify true automation opportunities.

ISG experts have a proven automation framework to inform and educate customers about the realities of automation, assess and identify automation opportunities, evaluate strategic options and design roadmaps for adoption in ITO/BPO renewals.

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Rob Brindley works with clients to develop and implement business process re-engineering, improve service delivery and customer relationship management (CRM), create and implement applications development projects and transition employees and operations to external service providers. He is a highly knowledgeable ADM and infrastructure professional with more than 30 years of experience and excels in project, program and supply chain management. Rob recently led a transaction effort for a US-based multi-tower engagement in which he helped the company assess its strategy, develop an RFP, manage contract negotiations and transition and establish sourcing management and governance. Rob has been published in *Pulse, ComputerWorld, InfoWorld* magazines and contributed to the recent publication of the book *Service Automation Robots and the Future of Work*.

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Patrick is a cognitive technology expert and brings years of consulting experience, helping clients perform rigorous analyses, identify solutions and implement transformational initiatives to create a solid foundation for success. On his most recent engagements, Patrick recently helped an organization assess and optimize its agile and DevOps operating model and fine tune various aspects of operations (processes, roles and automation) and sourcing (providers, locations and contracts). Patrick also recently supported a large specialty insurance company along its sourcing journey, from strategy, data collection, RFP and negotiations for three major agreements, including service integration, security and infrastructure services. He is ITIL Foundation, ITIL Service Strategy and Six Sigma Green Belt certified. In addition to being fluent in Mandarin Chinese, Patrick is well-versed in several programming languages.

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ABOUT ISG

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