

Robotic Process Automation: Combining Human Direction With Technology to Improve Process Performance



Robotic process automation is set to disrupt the status quo

The business process outsourcing (BPO) industry is buzzing with talk of robotic process automation that is expected to become a significant game changer. However, customers are still unsure how this new, evolving technology will bring business benefits.

Questions range from how adopting robotic process automation will affect the current market ecosystem of providers, buyers and platform solutions providers, to how contracts will look in a post-robotic process automation world. Adding to the skepticism are differing viewpoints from industry watchers urging a cautious approach to adoption.

Is robotic process automation core to the future of BPO?

According to a recent HfS Research study, the demand and expectations for automation have become more elevated than any other skill in the market today. Their research shows that, “65% of service buyers and 69% of provider professionals cite the need to understand and deploy automation is significantly increasing as a skill requirement — and even 61% of advisors are feeling the pressure to knowledge-up.”*

Service providers are considering automation as the ideal method to increase cost savings for customers or improve margins. The first focus area for them is reducing or eliminating repetitive, manual tasks within an outsourced process to decrease labor costs.

*“Work smarter, not cheaper: Automation skills have rapidly arrived at the top of the talent agenda.” Horses for Sources. March, 26, 2015. http://www.horsesforsources.com/automation-skills_032615

Improving business rules within the platform application, such as a claims adjudication engine, can reduce human effort by increasing straight-through processing and decreasing manually processed exceptions. But these reductions are hampered by the evolution of platforms, market place changes, product changes and customers choosing multiple third-party or legacy platforms for different functional areas.

This creates the right opportunity for service providers and buyers of outsourcing services to begin considering robotic process automation.

Dispelling the robotic process automation myth

At NTT DATA Services, we use self-learning, self-healing man-machine interaction-based tools for robotic process automation. We redefine process execution by breaking down the processes to the most granular level, then creatively reconstructing them by applying complex man-machine interaction technologies that separate human- and machine-based tasks to fully or partially automate the process task sequence.

With our focus on automation theory, NTT DATA can automate processes regardless of the platform, industry or geographic location of the work. While the technology and rationale behind the tools may be complex, the overall user experience is kept to a very simple level to enable quick automation adoption.

NTT DATA Automated Full-Time Equivalent

NTT DATA Automated Full-Time Equivalent (AFTE) is the new normal in the digital age of robotics process automation. AFTE works on the principle of not just displacing human workers, but helping our clients find an optimal mix of human and machine FTEs.

Built on the suggestions of thousands of automation experts, AFTE includes more than 50 vertical-specific, vertical-agnostic and process-agnostic

tools — such as web crawlers, batch download management systems and optical/intelligent character recognition (OCR) tools — that can function as stand-alones in a process or can be integrated with any of our clients' platforms. AFTE works hand in hand with the NTT DATA Business Process Management Suite to automate workflow and knowledge management tasks.

Utilizing automation, man-machine process interactions and our unique business process management workflow, AFTE enables automation of complex processes through either full or partial process step automation.

Best practices and automation methods

Our experience building AFTE helped us develop a comprehensive set of best practices:

- **Involve the delivery team.** No one understands business processes better than the team performing them every day. Create a mechanism to listen to them, aggregate their

NTT DATA AFTE utilizes an iterative process to deconstruct work activities by identifying each micro-step and creatively reconstructing work activities by deploying a combination of automated techniques and manual effort.

suggestions, reward them for their ideas and invest in resources to work alongside them in executing process automation.

- **Collaborate and share with other teams.** Sharing processes, results, challenges and learnings from automation efforts in one process area or vertical with process leaders in another area or vertical will lead to the development of process- and industry-agnostic automation.

Automation principles

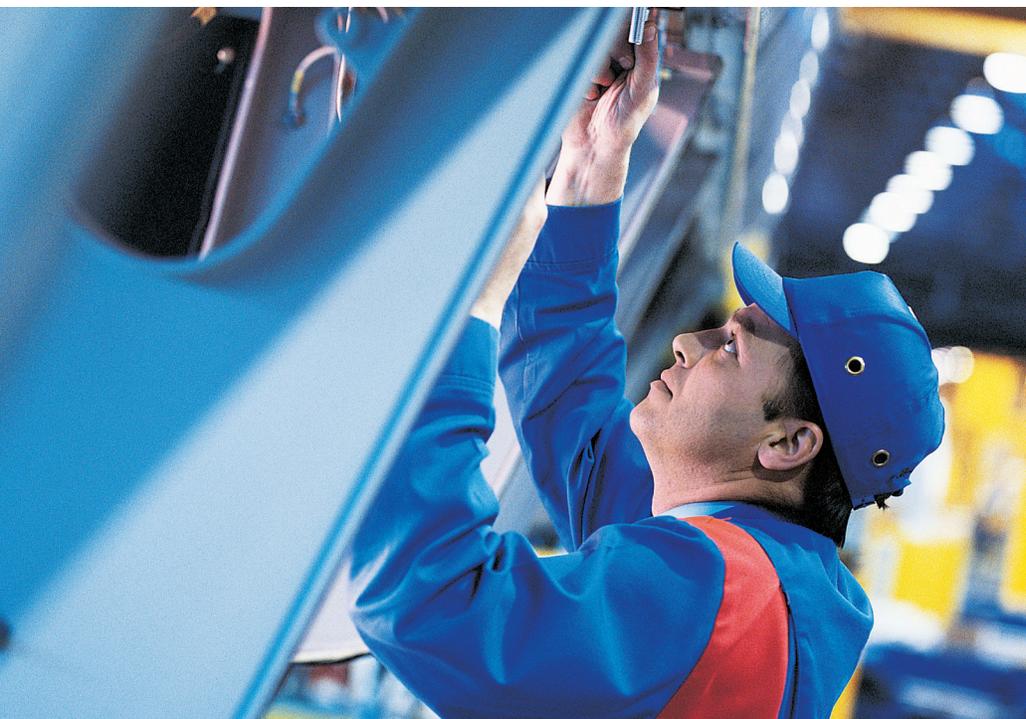
- **Automation framework:** One platform with multiple choices to simplify business processes.
- **Enterprise model:** AFTEs are designed to work at scale and deploy using existing data center technologies and infrastructures to form part of an organization's technology asset base.
- **Automation as a service:** This eases deployment and infuses self-healing capabilities.
- **Self-learning, smart AFTEs:** AFTEs can be trained to retrieve and enter rule-based data into any type of system.
- **Self-healing:** Non-IT expertise can train AFTEs to work with any rule-based data entry system, whether the data is using custom-made systems, a remote desktop system or the internet.
- **Large volumes of business process transactions:** These require accurate and efficient rule-based, data entry-oriented processes.
- **Reduce delivery costs:** This can be accomplished by improving the accuracy of first-time processing and mitigating labor costs.
- **Involve the team:** With a BPO innovation program, you can increase awareness and involvement for all employees.

- **Invest in a core automation team.** Make the most of technology investments by splitting the business support technology team into groups that focus on operational support and process automation — a major step forward in automating processes. Also, encourage the technology team to work with the business process design, quality and transformation teams to set targets for automation-related savings.
- **Automate workflow.** When applied effectively, workflow automation can enable coordination between human and machine actions, which aids the success of the automation initiatives by simplifying human-based tasks. It also enables granular inventory control and process performance data, which leads to better prioritization on automation initiatives across different functional areas.
- **Develop process automation.** Deconstruct processes to the most granular level and reconstruct them by analyzing the relevance of each action and the time consumed for

each task to separate human- and machine-based tasks, then logically group these tasks in a process-specific automation tool. When developing a process automation tool, look for its applicability in adjacent and similar processes across the organization, as well as in other industry areas. Look for opportunities where a human task can be emulated using preloaded process rules.

- **Creatively design the automation tool.** It is important to design automation solutions with multiple processes in mind. For instance, an automation tool designed to collect data from a specific website should also be designed to collect any kind of data from any website with just a basic reconfiguration of the tool.
- **Infuse self-learning capabilities.** This enables machine-based actions to progressively enhance skills and become more productive. It usually takes several attempts to yield the desired results.

- **Utilize self-service design concepts.** When designing an automation tool, incorporate the ability for process leaders to configure the tool themselves.
- **Build an automation stack.** Like the AFTE solution, build a set of vertical-specific, vertical-agnostic and process-agnostic tools such as:
 - A configurable OCR tool capable of recognizing scanned documents, PDFs and on-screen applications, as well as helping automate data retrieval from image-based files using a third-party tool
 - An automated workflow toolset, like the Business Process Management Suite
 - An automated web verification solution that pulls data from a web page and automates posting to a client platform
 - An automated medical coding utility that uses natural language processing, such as an online code finder for International Classification of Diseases and Current Procedural Terminology that includes a cross-walk solution
 - A soft dialer engine for voice-based services
 - A provider payment posting application that posts payments from explanations of benefits and integrates with any client revenue cycle management platform via a flat-file exchange
 - A process guide and knowledge management tool
 - An online idea portal that enables workers on the floor to contribute ideas, provides innovation governance and program management features that help in seamlessly tracking ideas, empowers managers to decide on the effectiveness of ideas and provides status reports to innovation governance team members



- Web crawlers
- Batch download management systems
- Smartphone- and tablet-based reporting, such as a dashboard or a client portal that enables managers to make operational decisions
- A tool that connects users with subject matter experts to seek answers via screen sharing and real-time chat, and also has the ability to generate reports and view trends and patterns
- A configurable utility that reduces repetitive keystrokes and helps improve productivity, consistency and quality
- Six Sigma and process excellence trackers
- A suite of macros to automate user inputs and actions in the automated workflow and client applications to improve productivity

• **Drive adoption.** This is not as easy as it sounds and should include:

- Getting executive buy-in. Executive buy-in and support for automation initiatives is critical. Advertise successes of automation initiatives in the organization, and award the team members involved.
- **Tracking the adoption.** This involves:
 1. Gauging the percent of processes where automation has been applied
 2. Gauging the percent of work being performed by humans and machines

3. Having data on how machine-based activities are performing, so that self-healing and self-learning capabilities can be applied, as well as proactively identifying issues

Tracking adoption rates through a command center

Monitoring the adoption and effectiveness of AFTEs is imperative when defining automation-related savings targets. Our AFTE command center maintains a fully auditable track of machine-based work and its effectiveness. It aggregates the machine-based tasks, assesses the cross-process penetration levels, and distinguishes automation penetration levels between machine and human-based tasks in these processes.

This tracking provides insight into the overall success of automation initiatives and delivers proactive notifications on any deployment issues, freeing valuable personnel from constant and painstaking manual oversight.

As service providers continue to use automation as a labor arbitrage method, NTT DATA stands apart from the competition with the process intelligence and decision support to help any business thrive in this new digital age. NTT DATA AFTEs can help:

- Provide the building blocks to develop more streamlined end-to-end processes
- Perform meaningful analytics
- Reduce reliance on lower-cost human labor

At NTT DATA, robotic process automation is about integrating human direction with technology to effectively and efficiently deliver measurable outcomes that impact the core of our clients' business.

Visit nttdataservices.com to learn more.

NTT DATA partners with clients to navigate the modern complexities of business and technology, delivering the insights, solutions and outcomes that matter most. We're a top 10 global IT services and consulting provider that wraps deep industry expertise around a comprehensive portfolio of infrastructure, applications and business process services.