NTT DATA Services

POINT OF VIEW | DIGITAL BUSINESS

# Transforming and Simplifying the Enterprise Bot Landscape

## It's time for a portability framework that consolidates bots built on multiple tools and platforms

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NTT DATA



Recent disruptions caused by the COVID-19 pandemic have accelerated the need to become an intelligent enterprise. With companies of all sizes across industries embracing digital transformation, the door has opened for robotic process automation (RPA) in a bid to remain relevant. They recognize that, when done right, RPA can optimize digital processes, improve quality, augment speed and enhance productivity. So it's not surprising that a recent study by NTT DATA and Oxford Economist found more than 80% of business executives are committed to RPA, including those who have established RPA investments, have active experiments/pilots around RPA and/or plan to invest in RPA in near future.[1]

**Mitigation risks associated with RPA**

- Identity and access management
- Data leakage, privacy and security
- Vulnerability check and secure coding
- Regulatory compliance
- Incident and change management
- Business continuity
- Audit and traceability
- Governance
- Controlled operations

The growing popularity of RPA has led companies to deploy several hundred thousand bots, with many more finding their way into the organization's IT operations. Unfortunately, in this frantic effort to deploy bots, most companies fail to take a consolidated view of all RPA initiatives across the organization. As a result, many find themselves choked with multiple pockets of automation, each with its own cocktail of chosen tools and disparate RPA platforms. Now, organizations need to capture the inner workings of these bots, and then migrate them from one RPA platform to another — with minimal human intervention.

In other words, they want portability, and a solution that will help them efficiently operate armies of bots — deployed over a period of time — without disrupting day-to-day business operations. It's the rise of the intelligent enterprise.

## Making way for bots

Automation in the workforce is increasing faster than expected and will displace 85 million jobs in next five years.[2] This makes sense, given that many of the tasks employees perform are classified as mundane and/or labor intensive — and therefore good candidates for automation — so companies across the board clearly realize RPA and automation technologies are here to stay.

And because RPA vendors aggressively market their platforms by emphasizing the ease and simplicity of bot deployment, many companies now have significant interest in exploring the possibilities bots offer.

Companies that are ahead on the digital transformation maturity curve look at RPA not only in terms of cost savings but also as a means of relieving their resources from mundane work so they can concentrate on higher cognitive functions.

There are also the eager few organizations that jump to embrace new tools without either a long-term strategy or an end goal and see RPA only as a way to minimize labor spend. Starting with this objective is a mistake that often undermines a larger initiative and results in a failure to realize RPA's full value and potential.

# Realistic view of RPA and the adoption risks

Given RPA's growing popularity it's common to see organizations taking a do-it-yourself (DIY) approach, executing pilot projects in isolated environments. But with hundreds of screen scrapping tools available and marketed as RPA packages despite lacking key automation features, choosing the right package is neither a quick nor a straightforward process. Most solutions claim to do wonders and provide miraculous savings, so it's easy for someone with limited knowledge of the vast array of RPA packages to fall victim to the marketing hype or RPA washing.

Another challenge organizations face is internal RPA initiatives that are mostly siloed, where different teams or business units proactively pick and try RPA platforms. In such cases, there is a high chance of the company selecting an inferior RPA tool, only to realize later that features are missing. This scenario tends to lead to high maintenance costs and manual interventions to fix errors.

Adding to these issues, to win customers, service providers and RPA vendors often promise unrealistic bot development timelines that are created without following industry standards. Such poorly designed bots fail because exception scenarios aren't built in. There is a high risk of data leakage too. Then, when the bots do fail on a business-critical task, the backup personnel who need to execute those tasks manually aren't available because they've already been reassigned. These bots are also a security nightmare for both the IT and the support teams.

When different teams within an organization take such a trial-and-error approach it results in using multiple RPA platforms as well as paying license and maintenance fees to multiple vendors.

## Living with limited choices

Bots are tightly coupled to their RPA platform and the ecosystem. They may use a run-time license provided by that RPA vendor and generally can only be operated, orchestrated, controlled and monitored using the tools and dashboards (if any) within that RPA platform.

RPA vendors also keep adding advanced capabilities to their platforms to better compete with one another. If an enthusiastic team gives in to the desire to add or switch to another RPA platform simply for the sake of new features, it may further complicate the company's technology stack.

Organizations that deploy bots in production environments using multiple RPA platforms need to not only pay for multiple RPA licenses but also shuffle (read struggle) and use multiple disconnected orchestration and monitoring tools for bot management and control. In addition, there could be a potential cost for different workflow and credential management tools.

Using bots built on different RPA platforms requires multiple monitoring tools — in addition to human resource monitoring tools — all of which need to be integrated if the organization is to draw contextual, consistent and consolidated insights.

Running bots from multiple RPA platforms makes it challenging to implement an organization-wide change management mechanism. Regular maintenance and upgrades, governance and audit protocols are also more difficult to implement.

**The complexities of using multiple RPA platforms within an organization**

- Individual license fees for multiple RPA platforms
- Multiple license fees for workflow and credential management tools
- Need to use multiple bot orchestration and monitoring tools
- Difficult to deploy and scale based on business needs
- Different change management mechanisms
- Difficult to implement universal audit and governance models
- Difficult to use reusable components and existing libraries (like SAP or SF)
- Difficult to implement universal bot security framework
- Need to have skilled resources for different RPA platforms to support and manage bots

# Breaking down the RPA barriers

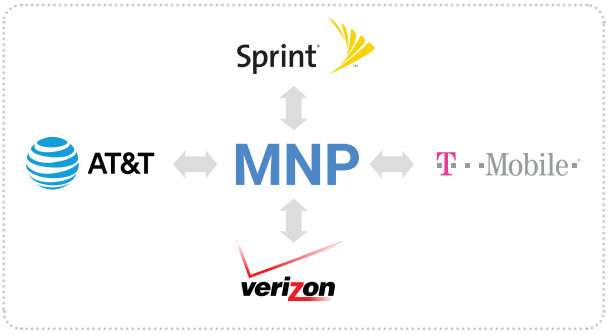
Today, there's no standard interoperability between any two commercial RPA platforms — possibly by design. The scattered landscape and ambiguity on the tools of choice increase the complications when an organization plans a full-scale RPA adoption and tries to consolidate all bots on a single RPA platform of choice.

Even if a parent organization carefully selects a secure and modern RPA platform for company-wide deployment, it may still have to deal with bots built in other RPA platforms due to acquisitions and mergers.

If security flaws are detected in old bots built using an RPA platform, what option is there apart from stopping these bots and recreating them on another, more secure and modern platform of choice? A platform that will, of course, require rework, time and effort.

## Taking a page out of the mobile carrier's playbook

The world is full of examples where customers and clients both require the flexibility to decide what they need and demand the freedom to move away from products and services they don't like.




Not all that long ago mobile phone subscribers were locked into a service provider because switching operators would have meant giving up their beloved, long used and widely circulated mobile number. Then came mobile number portability (MNP). It gives subscribers the flexibility (depending on their country) to switch to a different service provider without changing their number if they're unhappy with a data plan, network coverage or signal strength.

When a mobile service provider receives an MNP request, it provides a unique porting code to the customer's service provider of choice. Using this unique code, that operator activates new service without changing the customer's existing mobile number. This freedom of choice is economically feasible for customers and generates competition among service providers.

Early adopters and enthusiastic teams who experimented and invested in different RPA platforms may not appreciate being stuck with their original RPA providers, platforms and bots for a lifetime as it could significantly limit flexibility.

Organizations are always looking for efficient ways to manage and maximize the productivity of their teams, which now include a significant mix of human and digital workers. It should not be a daunting task for the administrative team to measure the efficiency and productivity of heterogenous bots in real time and to control those bots with the same yardstick. Also, business leaders should be able to gather consolidated and actionable insights, because failing to do so can hinder an organization's long-term strategic growth.

Bot development is expensive, in terms of cost and effort. It includes functionality, in-built logics, behavior, business rules, process steps, and interaction and connectivity with other applications, which must be refined and perfected over time. It doesn't make sense to simply scrap old bots and manually rebuild them from scratch on the preferred platform, as that too would require development time, effort and related infrastructure cost.

Instead, organizations need a way to capture the inner workings of bots and migrate them from one RPA platform to another with minimal human intervention. Bot managers would appreciate such a migration option, not only for the convenience but because it may bring down all the maintenance and licensing costs associated with bots. And bot developers would find it easier to rebuild their bots on the new platform because the logic and process steps are retained and there are no major changes in the process steps. Even RPA vendors would become more efficient and be able to offer quality services to maintain customer loyalty.

# NTT DATA can help

Bots are an organization's virtual employees. They need constant monitoring and care to ensure they work as expected. With NTT DATA's Universal Bot Portability Framework, powered by our Nucleus Intelligent Enterprise Platform, you can take back control of your organization's digital workforce.

Our proprietary solution offers flexibility similar to that of mobile number portability, but in an enterprise bot environment. This unique, patent-pending solution aims to help our clients consolidate all bots and virtual resources in a single RPA platform, giving them the freedom of choice to switch and migrate between different RPA platforms at any time based on specific business needs.

No matter which RPA platform you used to build your existing bots, our cutting-edge framework will identify the input bot platform and assist in capturing all process flow information and functionality. The Universal Bot Portability Framework uses intelligent algorithms to automatically port existing bots as new bots on your preferred RPA platform without making any changes to bot behavior, ensuring business continuity.

Ported bots are tested automatically based on predefined security and compliance guidelines, and our solution suggests manual QA in case of errors and inaccurate or inadequate information on security or compliance guidelines.

With all bots on one platform, organizations gain another advantage when negotiating with RPA service providers to achieve better pricing and, eventually, control license costs.

**Benefits of NTT DATA's solution**

- Examines bot functionality automatically to capture business logic and task execution workflow
- Auto-extracts the designed connectivity to business applications, login credentials and exception handling procedures
- Identifies security loopholes in donor bots and suggests missing functionalities or compliance needs
- Provides automated version mapping to map the input bot into a specific version on the desired RPA platform (where the organization may already have existing licenses)
- Identifies the need for a new license (if any) for the ported bot so it can be deployed in the new platform

# Conclusion

Although starting the process is easy, the ability to support heterogeneous bots in production throughout their lifecycle and keep an eye on how those bots work every day requires skilled resources and multiple tools and applications. For this reason, it makes sense to have the entire digital workforce on a single platform for a truly intelligent enterprise. It speeds deployment, helps with scalability and makes bots easier to maintain and support.

# Let’s get started

### See what NTT DATA can do for you.

Our Universal Bot Portability Framework can help your organization retain the benefits and efficiency of existing in-production bots while moving to a platform with better features and automation capabilities. It’s also a good option when you simply want to lower or avoid run-time license fees.

And it’s powered by the NTT DATA Nucleus Intelligent Enterprise Platform, built precisely to accelerate the evolution of an intelligent enterprise. The platform leverages a catalog of cloud-based tools, processes and services to power all NTT DATA offerings. The underlying fabric uses data and artificial intelligence to automate IT and business functions, enabling smarter decision making. Built with pre-integrated future-proof solutions that accelerate deployment, Nucleus combines the right mix of NTT DATA intellectual property, third-party tools and open-source solutions in a flexible platform to support specific business needs.

Visit **nttdataservices.com/rpa** or contact **rpa@nttdata.com** to learn how we can help you empower your business by consolidating your digital workforce onto a single platform.

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Dr. Harsh Vinayak leads the Intelligent Automation and Data Solutions (IADS) division. His background in advanced research and development uniquely positions him to provide clients with informed solutions based on extensive data analysis and forecasting.


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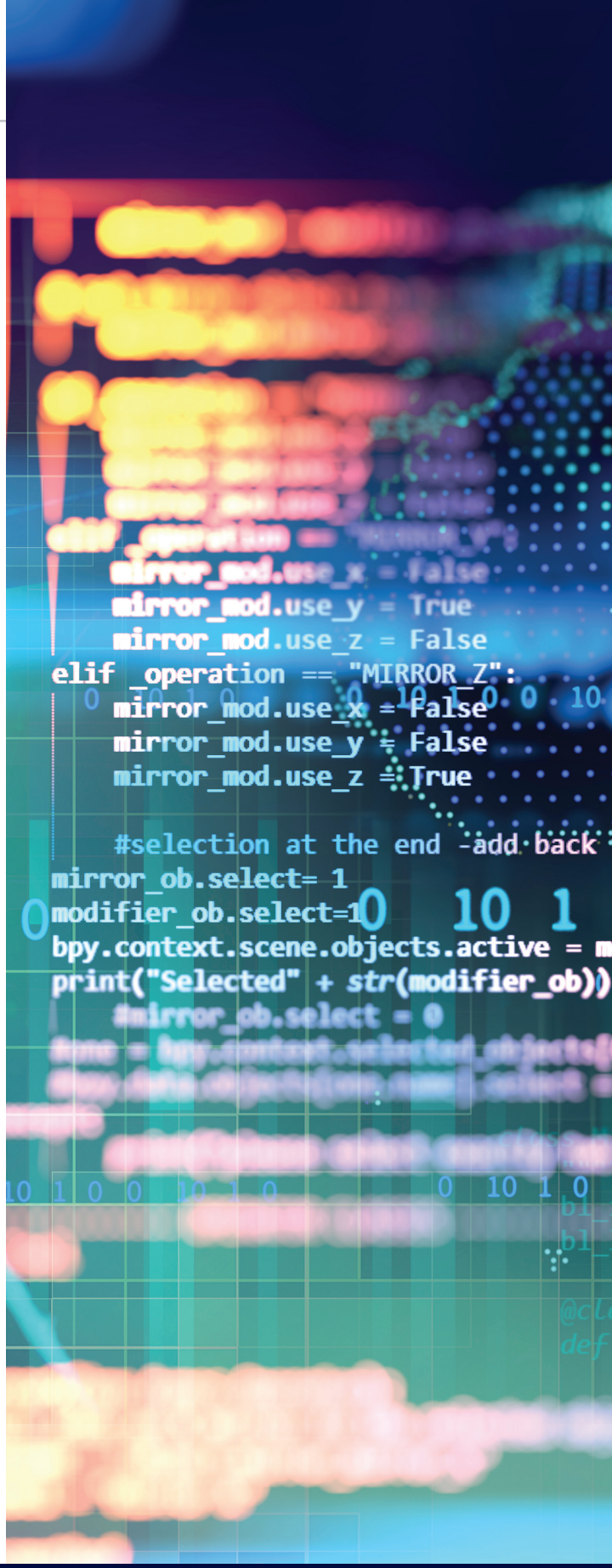
# Sources


1. NTT DATA and Oxford Economics. "AI, Accelerated." September 2020. https://us.nttdata.com/en/engage/ai-study-ai-accelerated

2. Amanda Russo. "Recession and Automation Changes Our Future of Work, But There are Jobs Coming, Report." World Economic Forum. October 20, 2020. https://www.weforum.org/press/2020/10/recession-and-automation-changes-our-future-of-work-but-there-are-jobs-coming-report-says-52c5162fce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