

The AI Journal

RPA, Intelligent
Automation &
Data Analytics



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Foreword

You've likely noticed how, as a planet, we're quickly adopting emerging technologies to enhance our way of living, increase engagement and deepen relationships with the people that matter to us, and deliver greater value to customers.

This has enabled the people who are at the core of the world's greatest accomplishments and businesses' life changing services and products to have increased focus on creating value.

We're waving goodbye to the old ways of working, mundane tasks that are no longer worth a person's valuable time, and the headaches that come with lengthy manual data input, thanks to the advancements in technology that include Robotic Process Automation, Intelligent Automation, and Data Analytics.

The advancements in these technologies and the capabilities they're unlocking on what seems to be a weekly basis are improving your customer experience in ways never before seen across numerous sectors.

Thanks to these advancements you can now have what was looked at as impossible – from having

a bespoke experience for your family holiday organised from start to finish by your own intelligent virtual assistant chatbot, receiving the medical treatment you need in record time with higher attentive care, through to getting what was once a lengthy application process approved in minutes.

It makes me excited to see what the future holds for us as a whole and you as an individual with the exceptional improvements these technologies are set to bring us across so many areas.

From climate change to healthcare, manufacturing to insurance, and education to banking, we're set to enter a new world where it would seem nothing is off limits to what we can achieve.

Throughout this report you're going to get valuable insights into how companies can make sure they are ready for the digital transformation projects they wish to embark on.

We're going to be looking at a range of key consideration points together with the constant reminder that people are the sun that make the decisions, and technologies are offering the helping hand to enhance them.

At The AI Journal, we want to create a positive future for AI and emerging technologies; be a voice for the community through our open source platform; and to enable businesses to make informed decisions that can add greater value to their team and customers.

It's my personal aim that through thought provoking reports such as this one you're about to delve into we can deliver on the above while hosting cross-industry engagement, causing new discussions, and creating world-changing ideas.

Thank you so much to everyone who took the time to give their valuable views, our amazing sponsors for providing incredible support, and to you reading this for being a part of The AI Journal's journey.



The AI Journal

Tom Allen, Founder, The AI Journal

An industry of great fanfare

Peter Steube, Head of Content Marketing & Ecosystem (Partnerships), Robocorp

The Robotic Process Automation (RPA) industry is the subject of great fanfare which Robocorp is happy to validate, in fact we see no slowdown in demand or lack of buy-in for its transformative principals. That said, Robocorp is listening clearly to the loud voices of RPA's practitioners, as it is frequently cited but seemingly overlooked that 30-50% of initial RPA projects fail (Source: [Ernst & Young](#)). Coupled with constant reports of broken bots, costly and intense maintenance, missed deadlines and extended payback periods, this altogether shapes our constructive view that this nascent industry is already in need of a modern evolution. Robocorp offers open-source, Python-based tools, operated in a diverse set of environments, capable of automating any repetitive process, all the while meeting the high-demands of professional and mission-critical processes like those integrated seamlessly with AI. Altogether Robocorp is the antidote for the RPA industry's pain points.

Having vision is one thing, executing it into a reality is often the greatest challenge. From Robocorp's perspective this is a quality summation

of the landscape currently for intelligent automation. We have conviction that the "brains" of AI are equally mature and rapidly developing so as to create a meaningful impact on enterprise systems and society's end-users. However, "brains" require "hands" to handle their tasks and decisions. Robocorp believes there is vast opportunity in addressing the challenge of enabling "brains" with a flexible open-source platform, that through a common Python-foundation integration with AI models is easily accomplished, and as one well suited for scaling complex automation tasks.

Often billed as democratizing the industry due to cost – assigning open-source RPA the label of simply a no-cost / low-cost option is an inaccurate understatement. Robocorp's developer tools and libraries are available instantly free to all those who wish to build automation projects. The necessary complement of a robust, modern, orchestration platform for deployment in any environment features a consumption-based (run time) approach to pricing. Best described as cheap? No. Cost-effective and attached to the

value your bots are generating? Yes. While this model without a doubt offers accessibility of automation to those who cannot afford up-front per-bot licenses, we view open-source democratization as being more than that. Our view extends to the pervasion that automation can reach once project ROI is re-imagined, vendor lock-in alleviated, and deployments are proven sustainable.

At the onset of COVID-19 Marc Andreessen penned "It's Time to Build" an article which in summation states that fortune favors those who embrace the challenge of building (uniquely and proprietarily) rather than buy (constrained and generic). Robocorp believes that not only will this mindset continue to permeate and benefit open-source products entirely, but in doing so it will ultimately increase the pressure for others to embrace the same approach so that they can compete effectively with the robust automations of their peers. Our part is in enabling the builders, and it's not only expert coders, by setting an accessible bar of programming and basic-scripting in a ubiquitous syntax. A combination of detailed

documentation, simple training, and robust community support weakens the concern of human capital investment all while still capturing limitless capabilities over time.

We're building in order to transform the automation industry - a platform suited for mission critical processes and different from brittle drag-n-drop tools - all the while not buying the headlines that automation is always simple or easy. Robocorp is thrilled to bring the future vision of complex, scalable, end-to-end, intelligent automation to reality.



Peter Steube is Head of Content Marketing & Ecosystem (Partnerships) at Robocorp, the open source stack for simplifying automation.

Predictive-Automation and Data-Management

George Purvis, Academy Lead, Virtual Operations

All mainstream organisations require strong data-management to succeed but most are finding this difficult to deliver.

Let's start with the facts:

1. Thriving, or surviving, as a mainstream organisation today is increasingly dependent on being data-driven.
2. Becoming data-driven is difficult, impediments include:
 - a. Cultural resistance – traditional mindsets
 - b. Legacy systems, processes
 - c. Conflicting, short-term, business-priorities
 - d. The length of time and effort required to get showcase results
 - e. A confusing array of data-technology tools to choose from – there are >65 'leading' data-technologies
 - f. A global shortage of data-skills and experience
 - g. Data is only valuable if it is good, clean data & poor data is dangerous.

A recent Harvard review¹ based on a survey of Fortune 100 companies supports these facts and shows that despite a massive increase in C-Suite level recognition, focus and investments few respondents (25%) felt their business was becoming more data-driven.

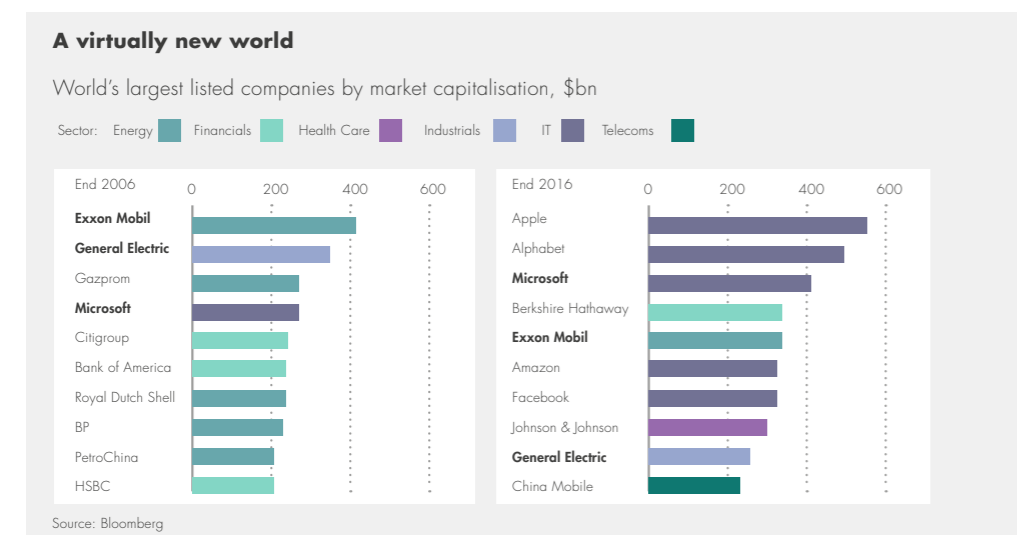


Chart 1: Chart showing the largest listed companies by market capitalisation. (Source The Economist, published on World Economic Forum Website)

¹ Randy Bean, CEO, NewVantage Partners – Harvard Business Review

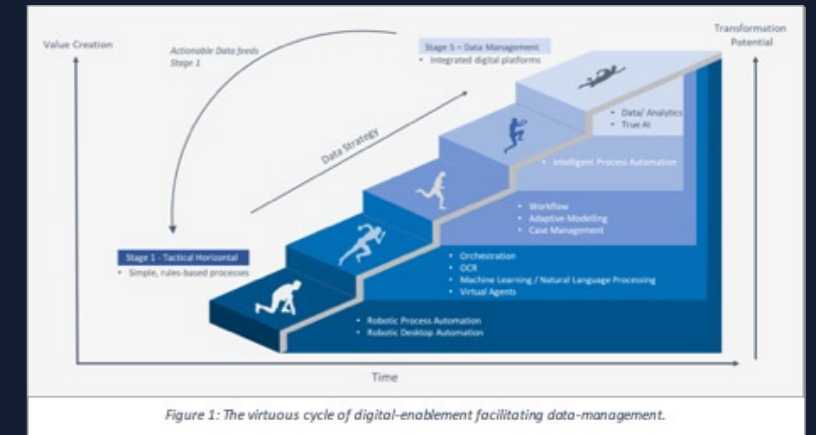
The change in Fortune-100 leading companies over the past 10 years (Chart 1) shows the biggest jumps are those who are most data-driven. This picture is further emphasised by looking at market cap as opposed to revenues (Facebook, Amazon, Alibaba). Traditional companies are fighting back but it is an uphill struggle for all the reasons listed above and most are losing ground. The study further revealed that the biggest challenge was cultural not financial nor technological.

"Culture eats strategy for breakfast"

Drucker

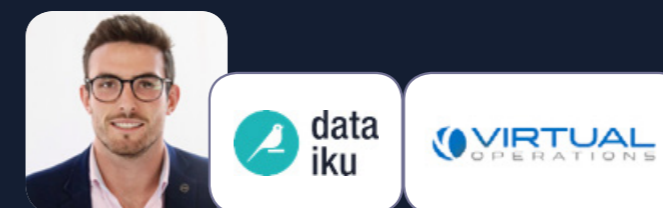
There is some good news, however:

1. Cultural resistance can be overcome but, to do so, requires a sacrosanct data strategy, a continued Executive commitment and clear compelling communications of the imperative to all 'data stakeholders'. Data dabbling makes things worse; you have to focus, you have to invest in people (leaders) and you have to persevere.
2. Data flows through an organization and cannot be allowed to sit in silos. Treat it as a valuable liquid-asset and it will reward you.
3. Legacy systems/processes can be brought into the digital arena through Intelligent Automation. A virtuous cycle where broad-application of IA leads to Digital-enablement which facilitates Data-management, illustrated in Figure 1. The data can be fed back into the Automated process for action– we call this "Predictive-Automation" and it is truly transformational.
4. As for the confusing array of technologies, the mist is clearing with the advent of multi-functional technology platforms. In the world of Automation, UiPath is leading this charge and has reinvented itself as THE Platform for Intelligent Automation (its increasing market share reflects this). In the Data Management arena Dataiku has emerged as the user-friendly AI & Analytics enablement platform and is the perfect place to start your data journey.



A great example of Predictive-Automation is being developed by one of Dataiku's partners, Virtual Operations using RPA+ to optimise the supply-chain for a giant Consumer-Products Company. Virtual Operations and Dataiku are working with them to optimise the supply-chain by analysing the data gathered by the RPA-tool and combining it with retail buying patterns. This data can then be used to predict optimal truck-fill levels. For example, a truck returning empty to a factory or DPC may pass an outlet that (through data analytics) is likely to place an order in a few weeks' time. That truck could have carried a pre-emptive load.

The adoption of predictive automation will be exponential as use cases such as this become more widely visible.



George Purvis is Academy Lead for Virtual Operations, the process automation specialists.



What are RPA, IA and DA?

We're at the start of a new chapter in automation, where Robotic Process Automation (RPA) is just one aspect of an ecosystem housing myriad technologies, including Intelligent Automation (IA), Machine Learning (ML) and Data Analytics (DA).

This report will take a close look at these exciting new technologies, focusing on the opportunities for these tools to improve business processes, and the perceptions and market for these tools in the broader business world.

Robotic Process Automation – a mimic of human actions

Simply put, RPA is one of many bots that mimic human actions, which distinguishes it from its more sophisticated big brother, AI, which mimics human

thought. RPA bots can automate and digitise the repetitive processes typically performed by human operators, and it is proving increasingly popular in the business world.

In 2018, analysts at Gartner forecast that worldwide spending on RPA would hit \$680m in 2018 and that it was on track to reach £2.4bn spend in 2022. Gartner predicted that 85% of large companies will have established some form of RPA by 2022.

More recently, Brandessence Market Research estimated that RPA generated \$2.7bn in global revenues in 2020, and is expected to achieve \$18.3bn in 2027.

Clearly, it's big business. The reason for its popularity is that RPA frees up staff to work on other, less tedious data processing tasks, the crux being that they can instead perform higher value work. Using RPA tools, a company can configure a robot or software to capture and interpret applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems.

Applications can be as straightforward as generating an automated response to an email, through to sending out legions of bots to automate multiple jobs across a company's ERP (enterprise resource planning), systems used across financial management, HR, supply chain management, manufacturing and distribution. For instance, RPA can match purchase orders to invoices and receipts.

The other clear benefit is that RPA bots are cheap and easy to implement and do not require custom software or deep systems integrations.

By taking up RPA tools offered by practitioners – such as UiPath, Blue Prism, WorkFusion and Pegasystems – the benefits are numerous. More recently the market has seen a growth in VC \$12M opensource providers such as Robocorp. Automating tasks saves time and money; allows companies to create, test and develop automation schemes within a fraction of time it would take manually.

"I would say there are three opportunities for businesses to be gained from using these technologies: embedding the results-driven mindset, growing in-house digital capabilities and employee empowerment."

Eric Nguyen, Senior Manager, Synergy Group Australia

On its own, however, RPA's uses are limited. It cannot, for instance, optimise processes end-to-end. Put prosaically, it can only be told what to do.

But it can also be combined with other technology.

Intelligent Automation – the learning bot

This is where IA comes in, a technology category that is often confused with RPA. On its own RPA offers many of the benefits of automation but it is very much rules-focused. When it comes to smart learning, it falls short.

IA elevates RPA by introducing an array of technologies into the mix – such as Machine Learning and Natural Language Processing. While RPA can read datasets, IA can think about them, synthesise huge swathes of information, automating processes and workflows while learning, adapting, decision-making and optimising. For instance, IA can recognise handwritten documents, convert them into digital, searchable text and then enable bots to resolve information into components parts and understand their syntactic roles.

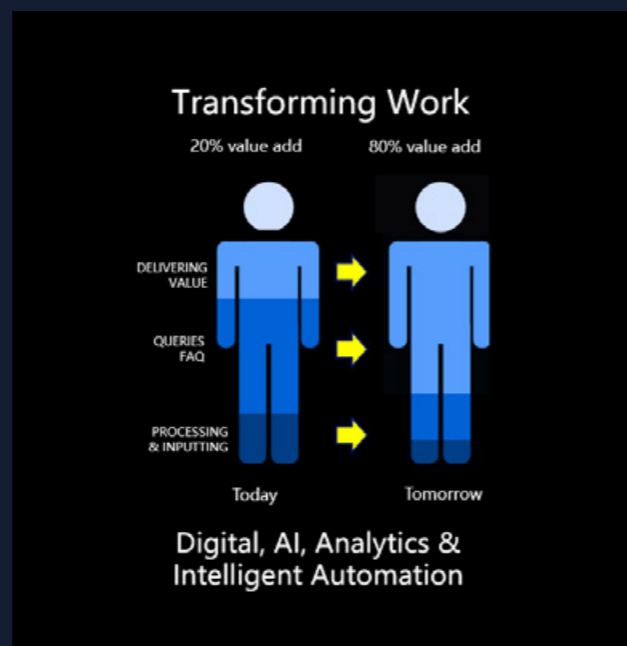
Data Analytics – delving into Big Data

Furthermore, Data Analytics (also known as Data Science) can be integrated into RPA and IA processes to enhance capabilities.

Data Analytics is just as it sounds – the analysis of datasets to glean insights on the information they contain, delving into Big Data on customers to identify behaviours and patterns.

Today, specialised systems and software can work in real-time to enable data analysts to integrate systems using RPA, IA and Machine Learning algorithms to better understand consumer behaviour, to shape business strategy, optimise and evaluate marketing campaigns, personalise content and develop products.

The purpose of this report is to take a deep dive into how these technologies can help companies adapt their corporate culture, embrace the likes of NLP (natural language processing), chatbots, Open Source, Machine Learning, and potentially develop Centers of Excellence to help them future-proof their businesses.



“RPA, IA and DA working together will reach a maturity that cloud computing has today, in that the vast majority of workers will either employ them or be directly affected by their existence.”

Peter Steube, Head of Content Marketing & Ecosystem (Partnerships), Robocorp



Chatbots – where automation and humanity intersect

Historically, the term automation refers to the notion of work typically done by humans instead being conducted by machines operating within a self-governing system. In many industries, automation is not just commonplace, it's a necessity – there's no way that sectors such as manufacturing, automotive and medicine would be able keep up with demand without automated systems that perform tasks at a rate that would be impossible for human workforces.

But today, automation can apply just as much to the services industry, allowing businesses to hand control of business processes over to bots. And that's largely thanks to the growth of RPA.

While RPA on its own continues to enhance corporate process management, taking on monotonous tasks and freeing up people for higher-value work, it is its integration with AI that makes it an exciting prospect looking into the future. Chatbot technology, conversational AI and Natural

Language Processing (NLP) are three terms that are spearheading this evolution.

As we examined in the previous chapter, RPA is markedly the deployment of rules-based bots which follow specific instructions, whereas Chatbot tech is cognitive and introduces intelligence into the RPA equation.

Through the application of NLP and other AI systems, RPA systems can effectively learn through experience, allowing them to become adept at customer-facing processes, such as customer service, sales and marketing; but also proficient at managing back-office jobs.

Let's talk Chatbots and NLP

Chatbots are defined by a number of characteristics: they are applied to customer- or user-based conversations that take place by voice or text, be that phone, voice-activated interfaces, email or online chat; they are put in place to react, rather than merely automate, adapting to changes as knowledge is gleaned from data and experience; and they are intended to simulate less structured (or robotic) human conversation.

If robots had a heart, then the beating heart of Chatbots would be Natural Language Processing (NLP), the AI that governs how computer systems

analyse natural language data and identify and extract meaning from contextual nuance, upon which it can then base decisions.

From a consumer point of view, NLP is already manifest in many aspects of our lives. The digital assistants that reside on our smartphones, such as Siri or Google Assistant; the auto-correction that kicks in when we tap out messages; the sifting that enables spam filters to decide what is unsolicited and unwanted email and then chuck it out; and the ability of the web to determine the intention behind our internet searches... so many elements of our digital lives are handled by NLP.

Teaming up

From a business perspective, the different natures of RPAs and Chatbots can complement one another to a powerful degree: conversational AI can interpret customer intent, for example, and pass on data to inform more rigid RPA-driven process. RPAs can help Chatbots tap into complex, data-driven requests, while Chatbots can make the user experience a more natural, human experience.

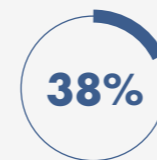
For example, if an employee wanted to search for specific items within an RPA system that matches purchase order to receipts, they could use a voice-activated Chatbot interface to search for information. Or let's say a business customer wanted to book an appointment with a company but found that they cannot get through on the phone. Instead of waiting on hold, they could call or text a Chatbot, which would then activate an RPA, which schedules an appointment based on the appropriate management system.

"Intelligent Automation and Data Analytics play a critical part in the Fourth Industrial Revolution, deeply transforming how we work, educate and evolve as a society."

Irene Lyakovetsky, Technology Talk Host, SaugaTalks



Business leaders stating that chatbots are currently used by their organisations



Business leaders planning an implementation of chatbots

Source: The AI Journal's AI in a Post-Covid-19 World report, published in September 2020.

A marriage made in heaven

The business case for employing Chatbot technology and marrying it with your RPA systems is a no-brainer, but firms can find their first chatbot hard to implement. Companies can use Chatbots to transform user interfaces by using text-based, social media-style interfaces that allow staff to engage with ERP (enterprise resource planning) systems by simply stating their request. They can foster customer loyalty by using conversational AI to bypass call centre comms and handle customer service communications in a consistent manner, 24-7 and via an array of channels or platforms (such as Google Assistant, Apple's Siri or Facebook Messenger).

While RPAs eliminate the need for staff to do tedious administrative tasks, Chatbots can talk to and understand a person using NLP. Both are powerful forms of AI in isolation. But it is the combination of the two, the ability to build conversational process automation into a business's data-rich systems and processes that makes it such a powerful proposition.

"Organisations that implement these activities should be able to have more business agility and reduce the drag of legacy systems in digital transformation. It should also increase competitive advantage, productivity and effective output of manual labour."

Arnaud Lagarde, VP Europe, Partner and Growth Business, Automation Anywhere

"In the next three years the drive for companies to be faster, quicker, better will accelerate. The driver for this will be competition from the market. Achieving competitive advantage will come down to how quickly you can move tasks and processes to machines and free up capability in your workplace to drive new products or services to improve your operational efficiency."

Janine Gill, Client Director, Cortex Intelligent Automation



Open-source and the democratisation of RPA

To its most vehement fans, open-source is the Holy Grail for RPA – a no-cost/low-cost alternative to the many commercial platforms in the marketplace.

But it has limitations. While open-source RPAs are free of software licensing fees, there are costs to consider – predominantly around the time and effort involved in implementing the technology without the on-hand expertise of a specialist provider; while some open-source platforms charge membership and/or consultancy fees.

In this section we will take a look at some of the pros and cons of open-source RPA, and how the

likes of no-code technology are helping shape a future in which RPA is accessible to all.

The adoption of RPA bots is already enabling companies to bolster efficiencies within business processes by automating jobs that had previously required a human worker, potentially realising cost savings between 30% and 50%.

While the implementation of RPA technology itself is relatively cheap even when using commercial RPA tools from specialist providers, there is a growing selection of open-source RPA tools available. These are often free to use and are arguably perfect for

businesses looking to make their first foray into RPA.

It's little wonder then that there's so much activity in the open-source arena, with the emergence of new players and technologies becoming increasingly commonplace.

Fulfilling a promise?

For example, in November 2020, following two years of R&D, OpenBots Inc launched what it claimed was the very first "completely free and open source process automation tool suite".

It allows users to build a digital workforce painlessly, using a designer that uses dozens of automation commands and options and a screen recorder that records and replays scripted automation.

OpenBots' mission statement is to cut the costs of implementing RPA systems. The company cited estimates that for every \$1 spent on RPA software, almost \$3 is spent on implementation and service.

During the launch, Ashish Nangla, OpenBots' chief technology officer, said in a statement: "OpenBots is our attempt to fulfil a promise.

"We want everyone to be able to create enterprise-grade simple to complex automations, very quickly,

"Teammates want to spend time engaging with each other and on activities that are value-add. We know that most employees aren't fulfilled by pure data-entry roles, so the entire workforce stands to benefit from automation, which plays an important role in maintaining a productive and engaged team."

Megan Amdahl, Senior Vice President of Partner Alliances and Operations, Insight Enterprises

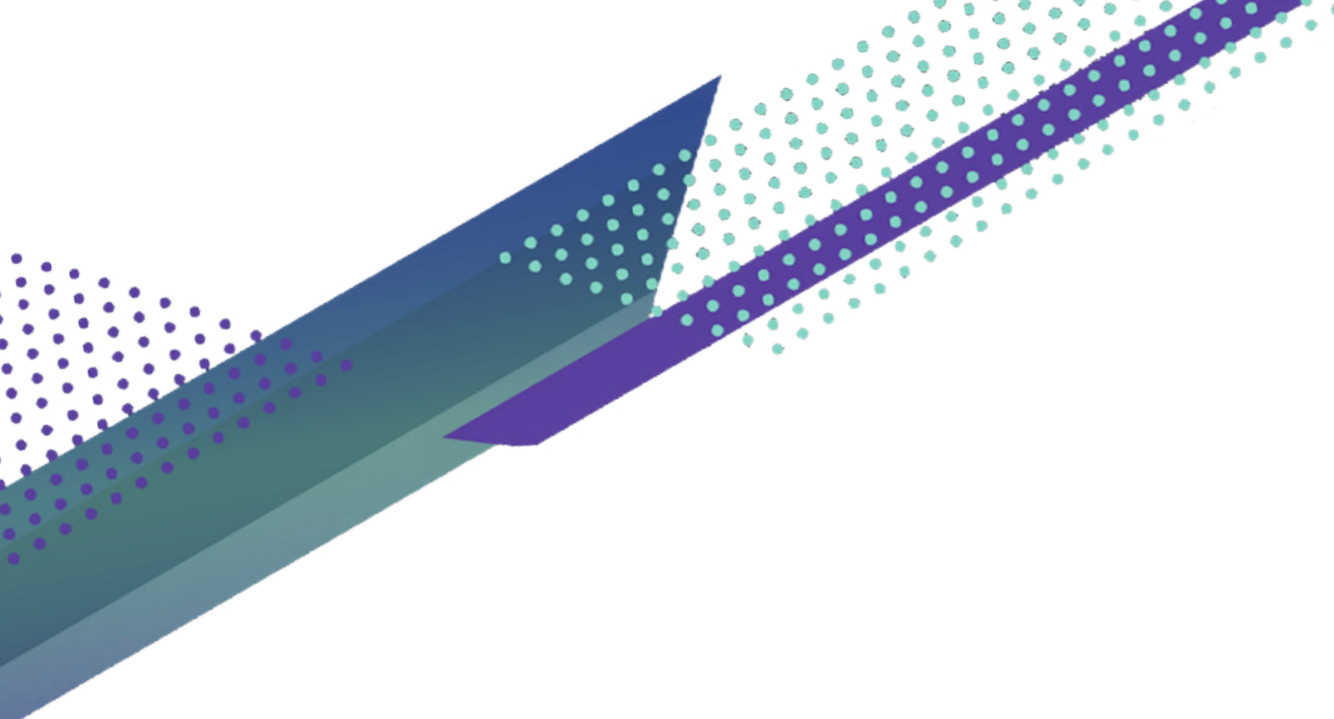
with little effort, and at very little cost. Our slogan 'Open Source Automation for All' explains our initiative very clearly. We want the democratisation of automation and the widespread availability of the tools."

Three players

Among the many open-source RPA players, one of the most interesting is [TagUI](#).

TagUI – a free-to-use, open-source RPA tool created by AI Singapore, a government-funded project to accelerate the development of AI. It uses simple language, using terms like 'click' and 'type' to interact with identifiers, in order for users to automate their web, mouse and keyboard actions on-screen. The standout for users is the scripting language, enabling companies to create complex RPA instructions. Users are able to set up libraries of files for processes that can then be quickly and easily applied to varying needs.

Then there's Open RPA, a platform comprising two free-to-use and easy-to-scale tools to help



organisations automate and track their processes – OpenRPA and OpenAIP. While the tools are free, users can pay for consultations on how to implement the systems. Features include remote management, integrations with the major cloud providers and dashboards displaying analytics.

Finally, [Robot Framework](#) describes itself as a “generic open source automation framework for acceptance testing, acceptance test-driving development and robotic process automation”. It has “simple plain text syntax” and can be used with data libraries set up with Python or Java. While it is non-profit, Robot Framework Foundation was set up by a consortium of companies, all of which are part of a knowledge-sharing community.

Open source opened out

Clearly, for the newcomer, RPA – open-source or otherwise – can be intimidating. Unless you’re a programmer, the world of code is arcane. Which is why one of the most enticing prospects for organisations looking to embark on their RPA journey is that of a no-code future.

“The future of coding is no coding at all.” Those were the words of Chris Wanstrath, the then-chief executive and co-founder of not-for-profit hosting service GitHub speaking at the company’s Universe event back in 2017. His point was that the use of coding language is a primitive means of conveying information to a system.

With barely any coding experience, no-code tools let users create applications without having to rely on traditional coding language. Instead, users can programme using a graphical UI, where lines of abstruse numbers, letters and symbols are replaced with a drag-and-drop system, while behind the scenes the original code is being manipulated.

There is a massive array of no-code tools out there, some suited better to certain jobs than others. No-code’s selling point is clearly its simplicity. But that is also its downside – there are limitations to its simplification of coding and there may be applications that can’t be created.

Pros and cons

The general view is that the virtues of open-source RPAs are most pronounced for small-to-medium-sized businesses, which can avoid the initial licensing fees attached to the commercial platforms. But there are also advantages for larger businesses that get onboard: they often use a combination of open-source and commercial to cover all their needs, as there isn’t a single provider who can answer every business need.

Given that RPA is itself a relatively new technology, open-source RPA is a great starting point for a business’s first foray into process automation. But adopters should beware the hidden costs of implementing open-source RPA, the level of expertise, technical support and time that are needed to fully realise RPA’s potential.



Corporate culture and the case for RPA

RPA has many virtues: from improving business processes and freeing up staff for more useful tasks, to cutting costs; improving customer relationships; boosting output and managing marketing campaigns. But it has its fair share of challenges to overcome. Many of these are not just technical, but are rooted in company culture.

This section will provide an overview of the obstacles that need to be overcome within organisations to successfully implement an RPA strategy – the logistics and potential expense of

“The three common data quality issues that business leaders overlook when digitally transforming a company are: siloed data, identifying useful data to create business insights, and unstructured data management.”

Pascal Bornet, Author of the bestseller book INTELLIGENT AUTOMATION

“Change management and excellent governance are essential to implement and run this technology to ensure it remains working and delivers a tangible return measurable on the P&L.”

Kieran Gilmurray, Global Automation Expert

putting it in place, or convincing management that it is a viable business solution.

The road to RPA

So, you've heard about RPA technology, you've listened as people have waxed lyrical about the benefits it can bring to a business, you've perhaps even half-persuaded your CEO of its virtues, and he or she has given you a tentative nod to make enquiries.

But before you even think about which RPA provider you're going to use, whether commercial or open-source, the first question a company needs to answer is this: which processes within your business would most benefit from transformation?

Drawing up a formal roadmap for how your company will proceed with RPA is therefore a must – laying out cost-benefit analyses, detailing how staff will be educated and trained, drawing up a priority list of new processes to which RPA can be applied, identifying stakeholders and project teams and raising potential hurdles.

The starting point then is an internal audit of systems and an assessment of which will fit with an RPA, and – crucially – which areas of the business will benefit the most, offsetting implementation and running costs against savings.

Getting the board onboard

This is the juncture at which more in-depth

conversations can start happening with internal stakeholders, and probably the leadership team, around why the company should invest. Nothing piques the interest of an FD, MD, COO or CEO more than mention of sizeable cost-savings and a pleasing ROI ratio, so this is probably a good thing to bring up early on.

To strengthen the case for RPA, it also makes sense to sound out a few RPA players most suited to your needs, inviting one or two to demonstrate the technology to your colleagues and bosses. You'll need to agree with them which of your organisation's specific processes they will present on, as proof of concept.

Once the board is convinced in principle, you need to set out specific goals, start-up costs, determine who within the firm will handle the various roles and comprise project teams, who will oversee the implementation and day-to-day running.

Things to avoid

One thing that practitioners are quick to point out is that newcomers to RPA should avoid soft-testing the technology by applying it to a largely inexpensive and already-efficient process. Nothing is more likely to be met with a shrug from stakeholders than minimal savings on an already efficient and effective system.

RPA needs to be brought in for systems on which

they will have a sizeable impact, often around where customers are part of the equation. For instance, building RPA into managing sales processes, from an initial quote through to transaction, can be hugely beneficial, not least because it can take human error and delay out of the customer experience. Alternatively, you may choose to introduce it to handle high-volume processes that are more prone to human error.

And of course, you should avoid bringing in RPA technology to handle processes that are prone to development or change – it is best implemented in established, unchanging systems so as to avoid a constant cycle of maintenance and adjustment.

Change management

But from a cultural standpoint, arguably the most vital thing to consider is the makeup of the company itself. People, rather than bots, are what generally drive a business's success, or otherwise. It is therefore critical to consider this

“Change and expectation management are the biggest challenges to implementing these technologies. You need to help users understand how it will impact their day-to-day and why the change is happening so that they adjust and support the changes. You cannot scale automation if the business and organisation as a whole don't see the value.”

Emma Roloff, Senior Sales Executive, Naviant

CoE: nerve-centre of RPA

The purpose of RPA is that it cuts the fat from the lean, refining processes to their essence through the deployment of bots. So when it's weaved into the fabric of an organisation and crossing departmental boundaries, a fragmented approach just won't cut it. If you're taking RPA seriously, you need a Center of Excellence (CoE).

In the previous section, we looked at the cultural challenges around how a company might build RPA into its processes and, very briefly, touched on the topic of CoEs – an internal team dedicated to automation systems.

Say you're at the point where your CEO and leadership team are onboard with RPA, you've introduced the technology across a couple of processes and they are literally paying dividends, slashing costs, eliminating human error and streamlining customer relations. What's the next step?

Pulling the strands together

Within AI circles, there's a consensus that those companies which have enabled RPA to truly thrive across their businesses have formalised the process by forming a CoE. The benefits are numerous. As its name suggests, it becomes the nerve centre of company-wide RPA and creates a standardised framework that makes subsequent project roll-outs significantly smoother.

A CoE also delineates RPA leadership, providing governance and helping the company define requirements, optimise resources and man-

power, promote best practice and advise other departments and operations on how best to implement RPA.

In short, it pulls together multiple strands from across the business and validates a centralised approach to RPA.

But that's not to say that a CoE should become a department like any other, or an adjunct of another department such as IT. It should stand alone. Possibly a CoE's most important characteristic should be nimbleness. After all, RPA is designed to introduce efficiencies by bringing disparate elements into a cohesive whole.

In the words of provider UiPath, a CoE is "essentially the way to embed RPA deeply and effectively into the organisation and to redistribute accumulated knowledge and resources across future deployments".

Here are some of the facets a CoE should oversee: governance, by establishing standards, policies and procedures across the business; organisation, by managing internal and external responsibilities and dealing with change management; technology, by selecting the right tools for jobs; processes, through executing and monitoring RPA; and operations.

New skill sets

An RPA strategy requires learning new skills - through training existing staff, bringing in new talent, or even outsourcing - to effectively design,



monitor and optimise automation and the roles within a CoE should reflect that.

At a fairly basic level, a CoE team should comprise an RPA sponsor, or leader – someone who oversees strategy and implementation across the business; an analyst who has responsibility for the roadmap, assessing business processes and tracking the reporting on ROI; and a developer in charge of creating, testing and deploying bots, as well as providing technical support both in terms of maintenance and development.

Managing change

There are other positions too that will become necessary as a business's RPA strategy evolves. One of the most important is that of the change manager.

It may sound simplistic, but as RPA becomes more bedded into a company, what is happening to all intents and purposes is that robots are taking on more roles. The company makeup is changing. It's therefore vital that change management is not overlooked, as it so often is. Effective change management will smooth the path towards greater automation.

Meanwhile, as RPA begins to permeate multiple elements of a business, the importance of IT support will become more pronounced. The CoE should therefore engage with IT functions such as infrastructure, service and support, security and compliance. This is why many companies appoint

"I think Centres of Excellence are needed to ensure digital transformation initiatives are delivered consistently and well. Mature CoEs have internal and external value-based quotas. e.g., certified headcount, processes automated, digital capabilities, and savings."

Amahl Williams, Director, SYKES Digital Services

an IT liaison to the CoE, someone from IT who will synchronise automation requirements with the department.

Council of excellence

Finally, a business might also consider founding a CoE council that meets regularly and acts as a steering committee for overarching governance and direction. This should be a group of key representatives from across the business – from IT, finance, auditing and HR, for starters. The council will ensure that objectives are in line with company direction and meet management goals and expectations, and encourage and facilitate greater take-up of RPA across the business.

Clearly, establishing an RPA strategy is just one aspect of a business's digital transformation. It therefore follows that a CoE is aligned with a business's vision for the future. Given that RPA's raison d'être is to bolster efficiencies, cut costs and improve customer relations, a CoE should be a driver of that transformation.



What next for RPA, IA and DA?

This report has shown that there are numerous opportunities to consider in the future of RPA, IA and DA. We hope that the report has provided some useful talking points about the future and how helpful this technology will continue to be.

Here are some final questions for you to consider, that we expect will form part of this debate:

To what extent will businesses have eliminated the need for staff to handle administrative tasks, in five, ten and 20 years' time?

What tasks will it be possible to hand over to the combination of chatbots and NLP?

Will the future hold more opportunities for open-source RPA platforms, or less?

What added support can be provided to organisations looking to implement an RPA strategy?

How do we bring more recognition to the leading edge developers of RPA, IA and DA tools, such as awards events?

How can the business world be trained to improve the skills of its employees to better grasp the opportunities brought by RPA, IA and DA technology?

What kind of events would help to bring these technologies to life?

What work needs to be done to provide more opportunities to bring new talent into the industry to build better tools?

When it comes to integrating RPA into a business, how can all levels of the business – from board level down - work together to ensure a smooth transition?

What help can organisations be offered in terms of best practice for setting up Centers of Excellence?

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