EBOOK:

Intelligent Workflow Automation:

The Evolution of RPA

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CONTENTS

THE **EVOLUTION** OF **RPA**

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One of the world's most influential research and advisory firms, Forrester advises on the existing and potential impact of technology on business.

In July 2019, they published their Analysis of the RPA Services Market and this white paper expands on that report to explore RPA in more detail.

Modern organisations are still burdened by a patchwork of legacy applications that hamper the running of basic business processes. Instead of having one holistic system of data, the simplest of requests typically involves retrieving information from multiple sources which makes processing cumbersome and inefficient.

So as IT developed, this slow, highly repetitive, typo-ridden way of working was identified as a process that could be scripted, coded and automated by task robots. As a result, robotic process automation (RPA) was born and, two decades on, it's now deployed in two ways, unattended and attended.

Unattended RPA

Unattended RPA is used to orchestrate frequent, routine, rules-based interactions with IT systems that lack integration APIs, principally to automate clerical administrative tasks. Bots are able to scan and generate volumes of data with superhuman speed, at a continuous rate and minus keystroke errors, slashing the time it takes to process information. They're typically used in finance and accounting (36%), IT services (15%), contact centres (10%) and HR (7%).[1]

Attended RPA

Attended RPA differs in that bots don't complete tasks end-to-end; they're deployed by staff and act as automated assistants, working in the background to complete a defined string of actions such as gathering or updating information across multiple legacy systems. Seen as a valuable augmentation of workflow processing, attended RPA is driven by knowledge workers who can achieve more reach and depth by using sophisticated research sweeps to collate the data they need for case evaluations. However, the value of the work lies in the sophisticated human reasoning that weighs up the gathered data and determines how each case will be handled.

Initially, the use of RPA was seen as a way of speeding up administration and cutting costs. The advantages of these automations were immediate and quickly generated ROI so, over the past 15 years, RPA use has burgeoned across Europe, where its easy configuration and non-invasive integration with existing business infrastructure has been driving efficiencies round the clock.

A typical model of RPA success within an organisation is based on a shared services platform that can support multi-tenant architecture so that every business division shares the infrastructure but each department designs and runs its own automations in support of their specific requirements.

However, as RPA use has evolved and matured, it's become more than just a cost mitigation strategy; RPA is now a key element within broader digital transformations.

The demand for RPA is exploding. Gartner's 2018 report[2] written in 2018 and revised in July 2019, identified RPA as the fastest-growing software subsegment in the market, with year-on-year growth of 63%.

Similarly, the demand for RPA software platforms over the past three years has exceeded 100% while the growth in RPA services is following the S-curve typical of emerging technology markets.

Echoing these results, Forrester's report sees RPA as the key growth area for the next 4 years, anticipating that the market will triple in size and value from $3.9 billion to $12 billion by 2023.

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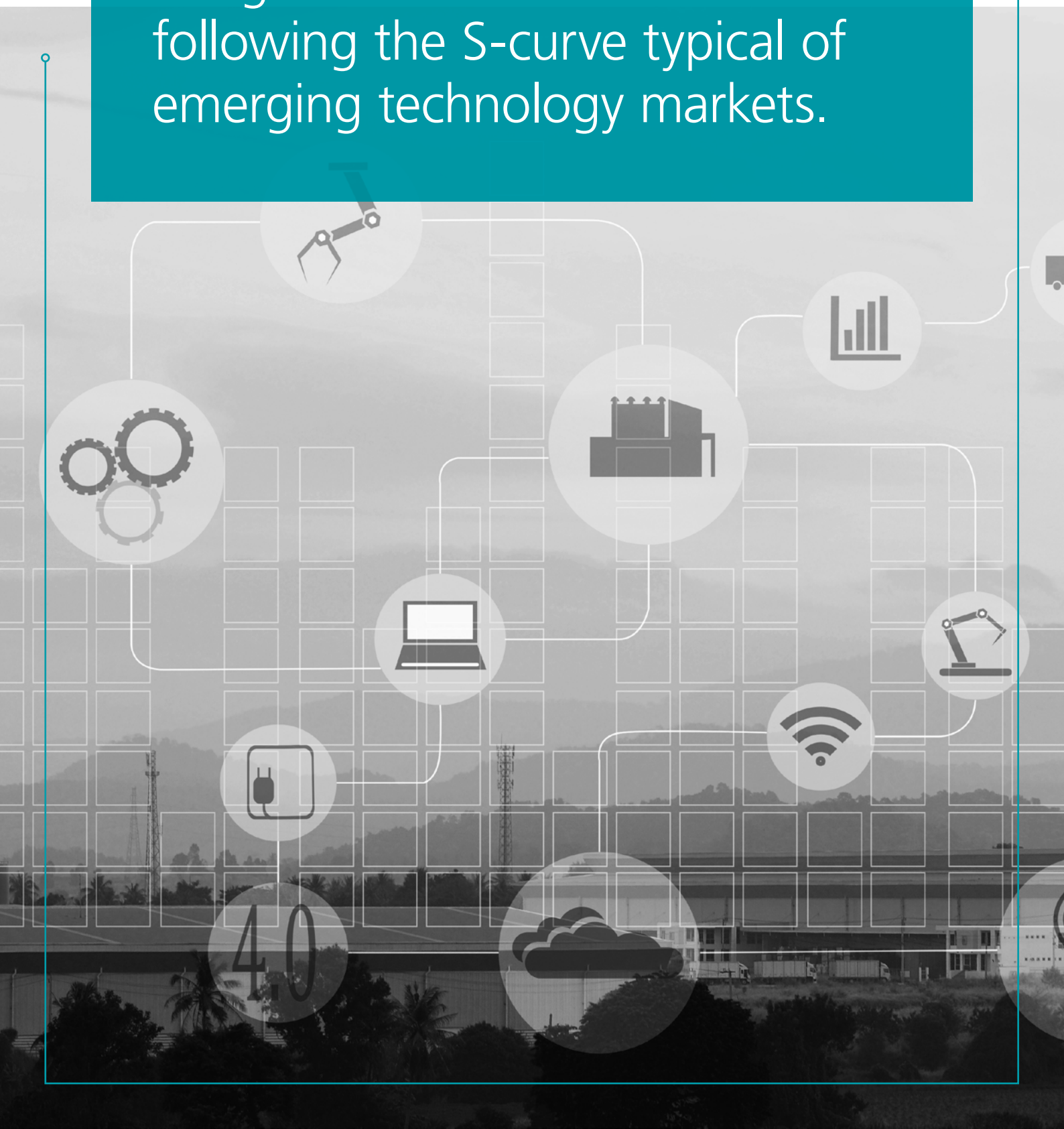

Further fuelling the deployment of RPA is a shift in the way organisations now use content, both in-house and externally. Chasing the elusive solution that could harmonise data and processing across multiple systems, organisations focused on content management methods that would provide a centralised approach to operational goals via a single centralised platform. In essence, enterprise content management or ECM concentrated on using technology to convert paper documents into electronic information that could be stored and shared.

But as digital content has proliferated to many formats, businesses have had to re-evaluate how these types of content are handled by individuals and teams. They've also had to examine how digital information can be mined and leveraged to give insight into business operations.

Gartner calls this new approach Enterprise Content Services (ECS) and defines it as "A set of services and microservices, embodied either as an integrated product suite or as separate applications that share common APIs and repositories, to exploit diverse content types and to serve multiple constituencies and numerous use cases across an organisation."

So this shift has been from a unifying technology (ECM) to an all-encompassing strategy (ECS) that can accommodate data repositories on numerous platforms by deploying multiple tools to create a holistic solution.

Put simply, content services allow organisations to solve multiple business process issues by using various integrated solutions throughout the business that connect dissimilar applications, harmonise data from multiple sources and make best use of a range of digital tools. And key among these tools is RPA.

SECURING BEST VALUE & MAXIMUM ADVANTAGE

Initially, organisations were quick to capitalise on the simple efficiencies that RPA could achieve in terms of enhanced staff performance, increased task through-put and dramatically accelerated administrative efficiency. But there came a point where growth through continued efficiencies stalled. So to find new ways of achieving incremental advantages and retaining a competitive edge, RPA deployments have become more complex, and the platforms and service offerings supporting them have also grown in sophistication.

As many businesses have discovered, the key to leveraging RPA for maximum advantage now lies in grouping, managing and synchronising many disparate bots – each of which is producing strings of simple tasks – in order to handle longer-stepped processes.

These longer-stringed automations now form an essential part of content services offerings since they allow organisations to exploit the potential of existing data. By linking RPA with intelligent tools like optical character recognition and augmented content analytics, it means companies can use machine learning to read, find and extract data dynamically, accelerating business performance and producing analytic insights with absolute accuracy at high speed. The resulting leap in RPAs' handling of more complex tasks is therefore setting the new gold standard of robotisation.

While joining automated processes may seem obvious, Forrester's report notes that fewer than 10% of organisations have linked or scaled up their RPAs so the low-level maturity seen across Europe means the potential power of RPA remains largely untapped. The three key reasons for this are that RPA isn't being used widely (typically, it's deployed for administrative tasks), the functions it performs are basic (gathering only small strings of data) and its responsiveness is limited by the speed of the applications RPA accesses (which load at the same rate as they do for people).

Huge untapped potential

Fewer than 10% of European organisations have linked or scaled up their RPAs so the potential power of RPA remains largely untapped[4].

THE POWER OF PARTNERSHIP

The untapped potential of RPA offers organisations huge opportunities in terms of integrating their existing automations and scaling up their operations with cloud-bases services. As companies wake up to their dormant growth potential, those leading service providers who can demonstrate proven experience, technical expertise and the vision to help organisations transition are dominating the market. And this relatively small band of transformational visionaries are revolutionising the business landscape by harnessing RPA to help deliver comprehensive digital metamorphoses.

The reason these service providers are able to propel growth so dramatically is that they link a range of automations which include RPA, and then combine the resulting outputs with machine intelligence to create a cross-business, cross-technology operating model geared towards an organisation's strategic goals. What sets these providers apart is the long-term fit they have with clients and their customers, based on a deep understanding of broader business targets, which means they can connect organisational objectives back to automations that will increase specific metrics around revenue, growth, efficiency, etc. Skilled RPA service providers are therefore in high demand and Forrester sees this trend continuing over the next few years, likely peaking in 2023.

In terms of their methodology, top service providers create automation centres of excellence that routinely monitor all robotic activity to ensure legal compliance, maintain operational alignment, track activity, detect system failure and ensure business continuity.

RPA Service providers in high demand

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ELIMINATING RISK

As with any automation, once you programme a task, the system will follow the instructions it's been given. There are times when tasks fail though so it's essential that businesses put good governance in place to oversee, manage and maintain the full range of robotisations within their organisations.

Identifying a problem is critical to on-going success so a series of procedures are needed that can pinpoint if and when a bot has failed. Processes for damage limitation, system review and analysing the ramifications of bot failure need to be in-place so that, should an RPA fail for any reason, the error can be seen, contained, fixed rapidly and any knock-on effects rectified.

To avoid as many potential issues as possible, best practice requires a thorough scoping of each robotic element at the process-mining stage. That way, fail-safes can be incorporated into system building, operational management and all the reporting functions that will guard against security breaches and legal infringements.

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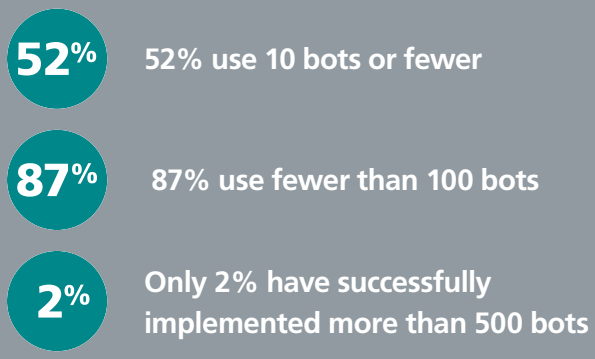
The challenges of scale

Many organisations using an RPA service provider still haven't scaled up their use of RPA so aren't maximising potential gains while wasting millions of euros on underutilised robotic processes[4].



Maximising the efficiency benefits of RPA has proved difficult for many organisations, who find scaling up the use of bots to be a challenge, even when using an RPA service provider.

Forrester's comprehensive review of the global RPA service provider market found that 52% of the organisations they advise deploy 10 bots or fewer – a staggeringly low number that implies half of the organisations being advised still have huge efficiencies yet to be exploited.

And 9 out of 10 organisations (87%) are using fewer than 100 bots – so although they're starting to harness RPA, their deployments are falling a long way from delivering maximum ROI.

So widespread is this issue that only 2% of organisations have successfully implemented more than 500 bots, the corollary being that 98% of businesses are wasting millions through their inability to upscale robotic processes.

Based on the current trend in RPA adoption, Deloitte predicts nearly every company will be using it in some form by 2023, meaning there will be a near-universal uptake over the next three years… though how many of these organisations will be able to scale up their implementations is hard to gauge.

LONG-TERM GOALS OF RPA

The issues hampering greater RPA deployment are both strategic and tactical and require a long-term view to ensure success. For automation to really benefit a business, there has to be a natural fit for the way bots perform. Efficiencies and cost-cutting were the initial quick wins for users of RPA but organisations should now be looking for value beyond simply reducing spend, by focussing instead on how bots can grow revenue and enrich customer experience.

SECRETS OF SUCCESSFUL RPA DEPLOYMENT

Different types of tasks require different automation technologies, each of which is specialised to handle particular functions and processes. RPA is well-suited to administrative jobs and companies using robotisation typically deploy a range across their business functions. While this generates many incremental efficiencies, to really capitalise on these advantages, organisations find they need to create centralised systems that will group technologies by type and give managers the oversight to orchestrate longer-tailed tasks. It's this integration of technologies that enables businesses to maximise the digitisation of their operations and achieve greater scalability and exceptional ROI.

Those organisations that have successfully-scaled their use of RPA report the following common features.

They have a division dedicated to the design, coding and maintenance of their automations, run by seasoned developers.

This division also comprises internal business analysts who work on thorough process-mining to find increasingly beneficial streamlining opportunities.

Operationally-speaking, the automations division is overseen by a C-suite champion who ensures it works in partnership with every business function in turn, to review processes, find efficiencies and implement robotic solutions wherever possible.

Given the natural fit between RPA and repetitive admin tasks, some of the largest RPA deployments are seen in shared services operations, which act as global automation hubs for their parent companies.

SUSTAINABLE GOVERNANCE GUARANTEES CONTROL

In addition to centralised control, sustainable governance is vital to the success of all robotic implementations because it creates the infrastructure to assess and document an organisation's automations.

Every robotic process needs to be reviewed at intervals against its proscribed design to ensure each bot still produces the results intended. Also, as legislation, management, operations and processes change, so will an organisation's automation architecture. It's therefore essential to have a documented control framework in place that includes the maintenance of security checkpoints, business continuity plans and sets of coding standards.

However, another Forrester report* highlights that fewer than 10% of organisations implementing RPA have a documented control framework, which suggests 90% of businesses are somewhere on the scale between poor awareness of their automation efficiencies and exposed to challenges about their data management.

Sustainable governance is vital

Fewer than 10% of organisations deploying RPA have a documented control framework, leaving 90% of businesses unaware of automated efficiencies and exposed to data management challenges.

THE RIGHT EXPERT HELP

As a result, there's extraordinary demand for service providers who can help customers to scale up their RPA deployments, typically putting these services out to the cloud. And there's an even greater demand for industry-recognised providers like Ricoh who enable organisations to achieve the centralised co-ordination of multiple types of robotisation and a governance framework for best practice automations management.

Only when an organisation has a comprehensive programme of oversight in place, covering management, maintenance, review and risk avoidance, can they capitalise on robotisation tools and achieve the wider programs of digital transformation designed to deliver success.

Bearing out the value these service providers create, Deloitte's Third Annual RPA Survey (2018) found that 92% of respondents cited improved compliance as the biggest benefit of RPA, with other key advantages being ranked as improved quality and accuracy (90%), improved productivity (86%) and cost reduction (59%).

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RICOH'S RECORD

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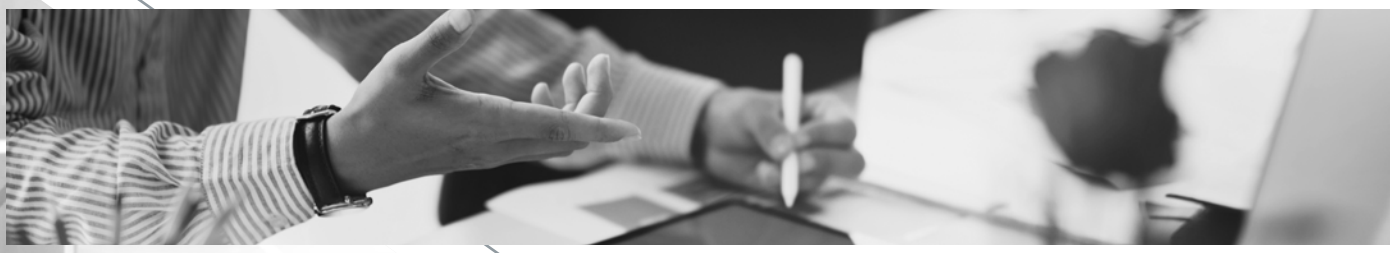
Ricoh's years of experience at the forefront of digital workplace solutions means we have the tools, systems, expertise and infrastructure to help our customers evolve their workflow practices into highly collaborative, agile environments supported by IT services management.



The value of workplace investments

Ricoh's research in partnership with Oxford Economics demonstrates that investing in workplace technology and creating an agile business environment yield significant productivity gains. In May 2018, the value of these investment initiatives for the UK Economy was estimated to be €38.9 bn.

Our recent research in partnership with Oxford Economics* demonstrates how investing in workplace technology and creating an agile business environment yield significant productivity gains. In May 2018, the value of these investment initiatives for the UK Economy was estimated to be €38.9 bn. As a result, Ricoh's services are geared towards enabling opportunities for growth and efficiency, reinforced by best practice governance tools that future-proof the use of automation.

With a suite of business process services and a range of service applications, Ricoh supports organisations of all sizes by assessing each company's ecosystem of people, procedures and policies, identifying which processes to streamline and devising the best solutions for each type of task.

More than simply implementing new technology, Ricoh provides tailored solutions that deliver innovative document management solutions and streamlined document workflow processing to achieve the greatest value from your data.

Our Production Centres offer document outsourcing services, from secure printing, scanning and archiving to mailroom management as a service, and the automation of essential document-intensive processes such as invoicing. And hybrid versions of these services can take elements of these processes in-house, as each organisation's needs dictate.

In addition, Ricoh's software and applications boost productivity further by streamlining workflows, controlling costs, facilitating mobile and flexible working, and centrally managing all aspects of an organisation's print devices. With print software solutions designed to support flexible working, accelerated efficiency and end-to-end device management, Ricoh software co-ordinates output while tracking operations and metering usage in order to give businesses centralised visibility of their operations.

INSTILLING A CULTURE OF ROBOTISATION FOR DRAMATIC EFFICIENCIES

Staff at Dutch financial institution, Rabobank, were looking at how to make their processes increasingly efficient by reducing the time staff spent on core tasks which, in turn, would save costs and improve their customers' experience.

They turned to Ricoh, whose business process analysts were able to map the organisation's internal systems landscape and identify the steps where permissions and authorisation would be needed. At the same time, Ricoh helped business units to analyse their operations, highlighting slow, admin-intensive work that was sapping people's time.

The Operations Chain Support business unit was keen to use automation but didn't know where to start so, with Ricoh's help, they began small, initially focussing on just one project. The preparation of annual redemption statements for business customers involved checking information in multiple systems and collating it all into a standardised template. Typically, the process took 70 minutes to complete and staff prepared more than 27,000 statements per year.

Working with a test environment first, they succeeded in building a robot that can access and collate all the necessary data into a client statement, producing the final sheet in just 5 seconds - 840 times faster than was previously possible. The resulting statements are highly accurate and enable staff to work much more efficiently, which results in greater customer satisfaction. "Thanks to robotisation, we deliver even higher quality and the process is much faster for customers," explains robotics engineer, Max Nuij.

To embed a culture of automation throughout the organisation, Rabobank has created a centre of excellence - an incubator of robotic solutions - housed across its locations. It's here that business analysts and robotics engineers work full-time on identifying processes ripe for optimisation and building RPA bots to support the company's business units.

Eugenie Wouterse, Corporate Finance improvements Team Leader, was the person initially pushing for robotisation; now, she's full of praise for the robotics team who partnered with her division to deliver transformative change.

Staff are similarly delighted to be relieved of the mundane, repetitive tasks now being done by bots; it's made way for them to accept more challenging work and new opportunities, including process optimisation, robot building and acceptance testing. As Wouterse explains, "Several functional managers in our department expressed the desire to become robotics engineers and they now build robots on a daily basis, finding the work very fulfilling".

Many projects later, Wouterse highly recommends a process of continuous review. She holds week-long kaizens several times a year to discuss the new ways RPA can be harnessed, involving staff at every stage - from initial discussions through developments to testing - to ensure their buy-in while building best-solution efficiencies.

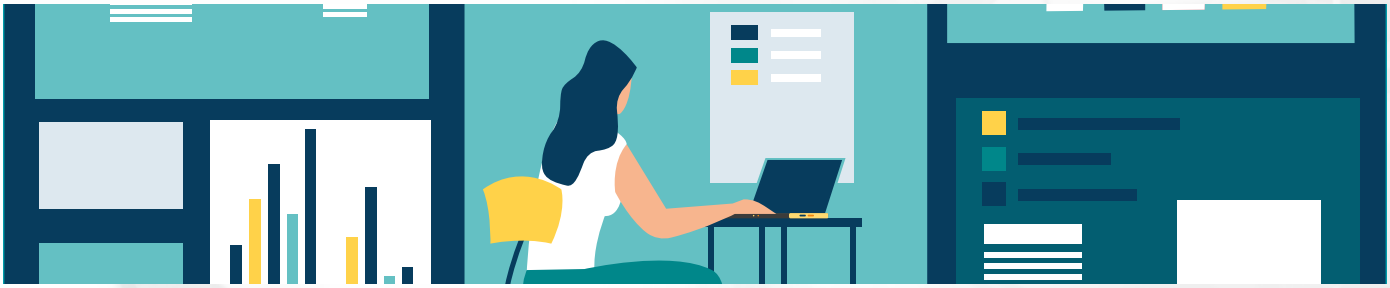
“IF YOU WANT TO MAKE ROBOTISATION A SUCCESS, AN INTEGRATED APPROACH IS ESSENTIAL.”

PWC Tax started using RPA a few years ago to help with data migration from systems that had reached the end of their life cycle. Rather than using employees to perform these repetitive tasks which require little intelligence, they opted to use robots that could mine old applications for data and transfer it to the new system. Not only did RPA transfer data but robots also checked the accuracy of that data as they entered it into the new application.

Bob Wagemans was closely involved in this process from the outset and, as Tax Technology RPA Lead, he’s learned the best ways to harness RPA for successful implementations. His most important advice is that business processes must lead how and where automation can be deployed so that it fits in with the company’s vision and fully supports its strategy.

“I often see the responsibility for RPA placed squarely with the IT department; the organisation and business are hardly involved yet, to make robotisation a success, that is precisely what is needed,” he states. This is especially true when it comes to introducing robotisation and the changes that process necessitates because “Knowledge of business processes is becoming increasingly important”.

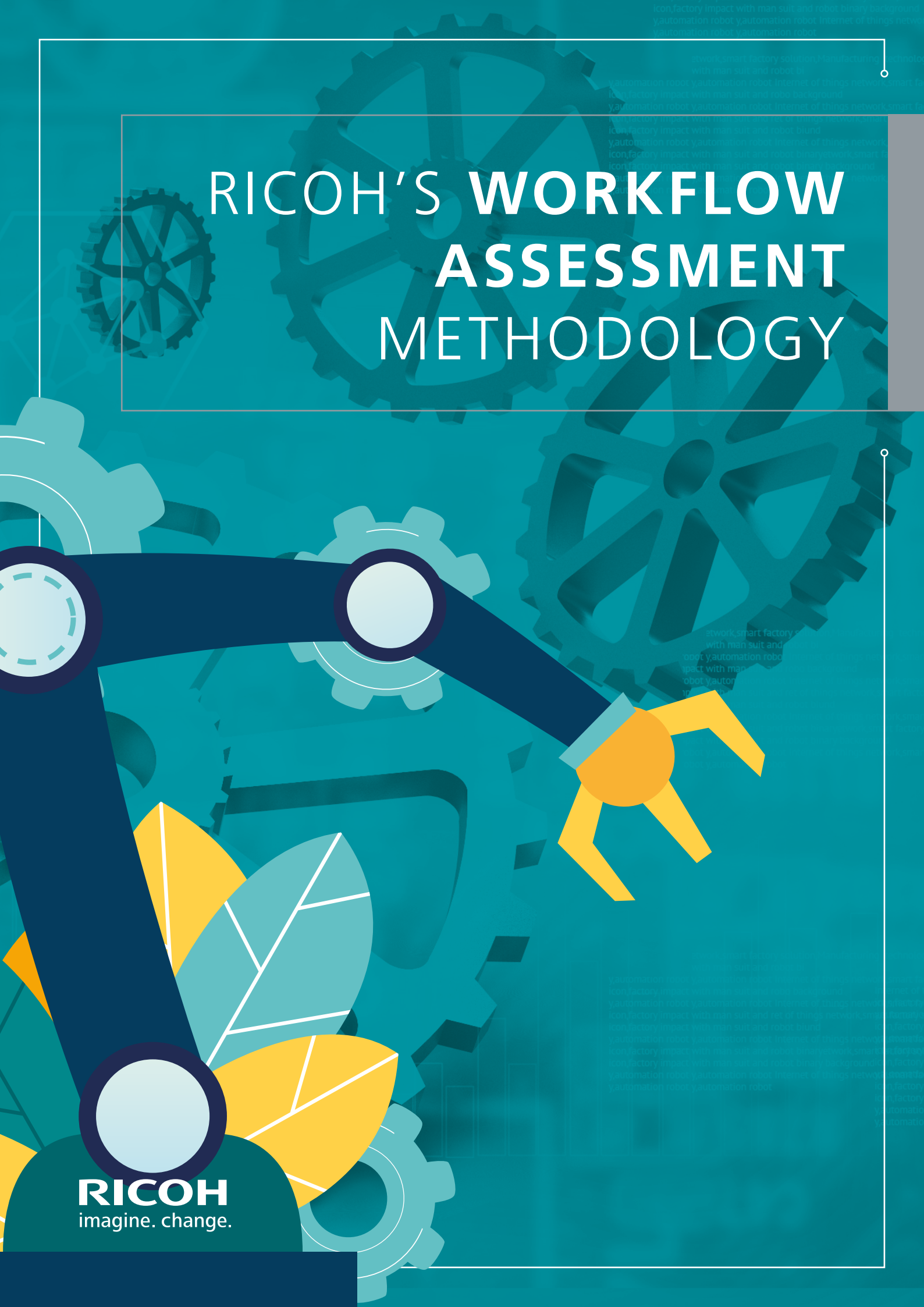
Wageman’s advice is to take a comprehensive approach, looking at where simple tasks can be automated to save costs but, just as important, to free up time and energy that staff can apply to primary business processes such as customer advice.



PWC Tax is using RPA for data migration and data accuracy, as mentioned above, as well as to extend the functionality of software packages in cases where features are no longer being updated. Instead of adapting software functionality, using machine learning, bots can be 'taught' to work with a diverse ecosystem of applications, which generates huge savings for PWC in terms of delaying system upgrades and avoiding downtime during staff training.

As other RPA users suggest, Wagemans recommends starting with a small project in a controlled environment to gradually gain experience and discover the benefits of automation organically. He also insists that employees within each business process are involved from day one to create support and enthusiasm and because, ultimately, they will be responsible for their robots. "This automatically leads to a creative snowball effect among staff, and new ideas for robotisation soon follow."

RICOH'S **WORKFLOW ASSESSMENT** METHODOLOGY



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Ricoh uses a rigorous approach to assess workflow and translates that information into workplace automations. This methodology is used with all its customers, whether it's to help organisations adopt RPA, to enhance their existing automations or to achieve greater scales of robotisation.

Adaptable and designed to handle complexity, Ricoh's 5-step process first records existing activity, interrogating the process and established decision routes, to build a clear picture of what happens on any given day. This initial phase also captures data sources, access points and the timing of each element to create a process baseline.

These findings are used to visualise a process from end to end, including systems, documents, storage locations and any hand-offs, in order to make the representation accurate. The resulting model is then validated by users to authenticate the process assessment.

But with any system, there are anomalies, problems and failures so the next stage of Ricoh's process-mapping examines what happens when things go wrong. We identify potential failure modes, looking at the impact of each issue, and find measures that will generate error alerts if a process fails.

Having scoped out a process, we define inputs, outputs and test criteria and design a build. This gets developed to include failure modes and is refined before initial testing. When the build matches the process, the customer is invited to review the automation along with its test results, to approve the robotised version.

Once ready for implementation, the RPA, bot or workflow is deployed and integrated, a step that involves archiving the designs and test results, creating periodic reviews and reports, applying governance procedures, scheduling regular function vetting and allowing for potential change management. Finally, employees are trained to use the automation and a fall-back process is established in order to round off completion of the project.

THE FUTURE OF RPA - CONNECTING ROBOTS FOR **GREATER SCALES** OF **AUTOMATED EFFICIENCY**

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Ricoh's Intelligent Workflow Automation (IWA) comprises a portfolio of products that can be incorporated in the robotisation mix, as required. Utilising cloud-based, on-premises or hybrid software, these offerings digitise and automate business processes by using a range of capabilities, such as RPA, outsourced scanning and archiving, on-site services (like mail and print rooms) and production centres for high volume print work.

Our comprehensive expertise in document processing and automated workflow lets us leverage these products by strategically implementing whichever tools are best suited to augment productivity, one of which is RPA. It's how Ricoh creates added value for our customers, helping them choose the right services for process improvements that will deliver the greatest efficiencies.

INTELLIGENT WORKFLOW AUTOMATION

Ricoh's experts use management information and optimised technology to implement solutions that will improve document workflow, limit paper processes and reduce cost. Underpinned by a host of market leading capabilities, our solutions simplify key processes by automating tasks that accelerate your business.

We give you the bandwidth to focus on your core business. Intelligent workflow automation means your people can acquire new skills, transform business processes and drive innovation whilst continuing to run a profitable organisation.

To learn more:

Visit our Website

Contact your representative

SOURCES

1 Based on figures from a Forrester study of 5,800 customer deployments supplied by 25 global RPA service providers, Q2 of 2019.

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3 Forrester – The RPA Services Market Will Grow to Reach $12 Billion by 2023 (July 2019)

4 Forrester – Analysis of the RPA Services Market (July 2019)

5 Forrester - Global Robotic Process Automation Services - Wave Online Survey (Q2 2019)

6 Oxford Economics & Ricoh - The Economy of People: Why Workstyle is Worth €39.8 Billion (May 2018)

7 IBM Technology Vision (2019)

8 Deloitte Global RPA Survey - Deloitte's Third Annual RPA Survey (2018)

9 Everest Group with UI Path – Smart RPA Enterprise Playbook (October 2018)

10 HFS - Top 10 RPA Service Providers (October 2018)

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12 The Enterprisers Project – Kevin Casey (September 2019)

13 Tech Mahindra – International Trends in Robotic Process Automation (April 2018)

CASE STUDIES

Rabobank

PWC Tax

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ABOUT RICOH

Ricoh is empowering digital workplaces using innovative technologies and services enabling individuals to work smarter. For more than 80 years, Ricoh has been driving innovation and is a leading provider of document management solutions, IT services, communication services, commercial and industrial printing, digital cameras, and industrial systems.

Headquartered in Tokyo, Ricoh Group operates in approximately 200 countries and regions. In the financial year ended March 2019, Ricoh Group had worldwide sales of 2,013 billion yen (approx. 18.1 billion USD). For further information, please visit www.ricoh-europe.com

To learn more about how Ricoh can help your organisation, please **visit here.**