UiPath

Accelerate Digital Transformation with RPA & Process Mining

Transformation defines us. It has done so since the beginning of time. And today we have the same quest we've always had, to better our productivity and our life. Becoming Digital is part of that.

This paper will explore the challenges organizations experience while transitioning to Digital and how two of the latest technologies - Process Mining and Robotic Process Automation (RPA) can handle them to simplify and accelerate the process.

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The Digital Conversation

It might be hasty to prophesy human obsolescence—don't frown, we recently found this title in the Economist—but let's face it, our world is transforming into what science fiction writers had prophesied. A world unprecedentedly intelligent, imponderable, and fast.
A Digital world.

With this quiet revolution underway, brands are under immense competitive pressure to adapt, and leaders push digital strategies at the top of their agenda, asking how they can get there faster.

How do I operate at the speed of the market, how do I respond to new consumer realities?

How do I transform so that I not only keep up but actually achieve full potential?

A triple - A trifecta

Analysts see a triple-A trifecta[1]: Analytics, Automation, and Artificial Intelligence (AI). Build on data, automate everything that can be automated, and infuse AI to achieve superhuman performance.

But these elements are not simple add-ons. And they're most definitely not plug-and-play. Becoming digital requires gradual integration of technology components and redesigned operating models, all governed by strategy, investment, and ongoing development.

A Place to Start

There's been a surge in digital assets that enhance business performance, yet many companies have not made the leap.

A reason for this is that many of these companies still find themselves bound to a legacy way of doing things.

For those who don't know, Robotic Process Automation (RPA) is the fast advancing, increasingly popular—bound to become ubiquitous—technology for the digital automation of office work.

The term 'Robotic' can be misleading. In reality, RPA is purely software that is smart enough to mimic a human user's work on a computer. It automates routine to complex business processes and can do it end-to-end. Bots interact in real time with humans who initiate and control robot tasks, as well as automate complete human functions, creating a digital workforce.

The prime benefit of having bots do the grunt work is speeding up operations by limiting manual activities that drive up the cost of errors. And because RPA can work across legacy ERPs, mainframes, custom applications, desktop applications, and any other types of IT platforms, it's the ideal tamer of legacy complexity.

OK, but is it scalable? Yes, and many companies are there already.

This year, Japan's Sumitomo Mitsui Financial Group, Inc. (SMFG) and Sumitomo Mitsui Banking Corporation (SMBC) implemented one of the largest RPA projects in the world across 200 operations including compliance and risk, support branch, routine operation center processes, and more. They have raised more than 400.000 hours of annualized savings since April 2017. Roughly 1 million hours of capacity are expected to be saved by the end of the year. [2]
In 2017 Everest looked at 60 enterprises in BFSI, Consulting, IT Services and Retail, all currently involved with RPA –

27% piloting, 38% scaling up, and the rest stably in between. They were asked what matters most for enterprise-grade RPA and revealed Security, Scalability, and Ease of Robot Maintenance: how secure the digital workforce is, how fast to scale, and how easy to maintain. In precisely that order the larger the enterprise.

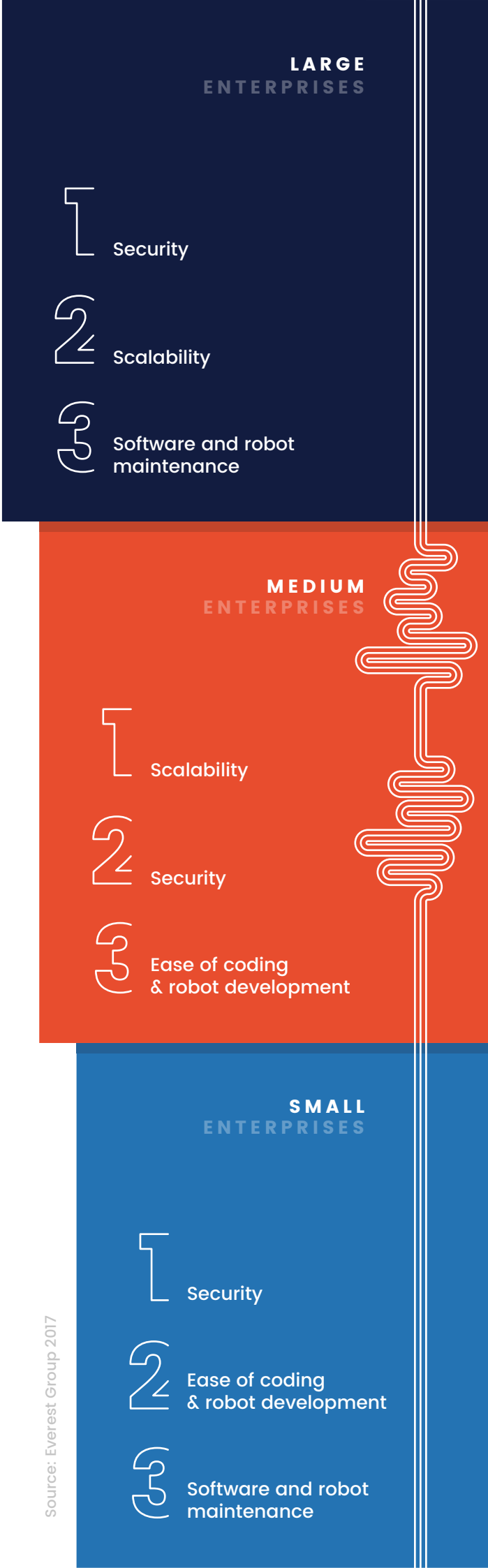
49% of them considered ROI satisfactory, 23% claimed it exceeded expectations, and 10% found it slightly below expectations.

In Financial Services, RPA is successfully used to improve regulatory compliance and reporting, client onboarding, exception management, reconciliation, and more. The automation potential of BFSI sits at 43%. [3]

In Insurance, approximately 40% of P&C insurers in the US have already deployed RPA on highly transactional processes like claims management and policy-serving. [4]

The Public Sector is increasingly interested to have people relieved from decluttering an ever-growing workload. Automation is estimated to save about 1 billion of government hours annually, with potential savings of $41.1 billion in the US alone. [5]

The BPO industry has also felt the pressure to adapt to new market demands: better quality with less cost. In 2016, Deloitte was asking outsourcing leaders from Europe, Asia, and the Americas about their plans with RPA, and found that 70% of them were already discussing, evaluating or implementing. [6]



Source: Everest Group 2017

Bring Automation and Data Closer Together

RPA is good for change. When you automate, you digitize processes and drive cost down fast. In this way, you speed up the transition to Digital while actually creating the resources to fund it.

And as a nexus for other technologies, RPA is best fit to govern that change and become a much-needed gate to bring in more AI.

But if RPA drives change, there are other technologies that help as well by painting a 1:1 picture of where in your operations you need that change the most. And where it actually matters.

This is where data comes in. Data is everywhere, and the more we make, the higher the complexity. But equally high the pleasure of surfing its waves. And thanks to powerful analytics solutions, businesses are becoming data-savvy and are realizing that potential.

When you begin RPA, you must first assess your processes in order to find the best opportunities for automation and establish the business case. A process expert can do that, but what if you also had the data to back it up?

This is the territory of Process Mining.

Imagine you are scanning an invoice or creating a purchase order. These activities always leave a digital footprint through your systems in the form of event logs. Process Mining follows that trail and outputs a visual blueprint of the business process as it is.

The key aspect of this technology is that it leverages the data that already exists in the systems. It connects to the systems through standard connectors and pulls out the data to show where inefficiencies and bottlenecks are, and identifies root causes in the business process — how respective processes have been working to date, what level of complexity they involve, where the exceptions are occurring, how mature those processes are for automation, and also how they perform once automated.

Companies understand the value of automation, from cost savings to enhanced performance, which makes it easy to get excited. But the larger the potential, the more difficult to prioritize ideas and determine a starting point. Decision makers and automation project sponsors want to see meaningful results from RPA quickly, and they want to understand the bigger picture.

The start determines the journey

A large European telecommunication company started an automation initiative in its Accounts Payable process. The goal was to significantly reduce cost per invoice while speeding up processing.

Robotic Process Automation was a natural choice for achieving these targets. However, the company had just recently migrated regional processes to its Shared Service center, resulting in a wide variety of invoice processing methods. Process complexity became an impediment since the company did not know where to start with RPA. Consequently, there were significant

challenges to get the buy-in from key executives, since the potential was not yet tangible.

The organization turned to Celonis Process Mining to develop a clear assessment of their as-is processes. They were able to identify subprocesses across regions that had to be harmonized before the RPA implementation could deliver value. Process Mining showed them exactly what they had to change to be robot-ready.

They also found that some of the initial ideas around automation use cases did not occur as often as expected since different types of invoices were processed in different ways. Based on these insights, the company was able to assess the maturity of their processes and prioritized their automation potential accordingly.

In the end, the project team was able to reduce the throughput time of invoice processing for one of their regional organizations by 25%, proving the value of Process Mining technology during the pilot, and making the benefits for a full roll-out clear, and quantifiable, to the key stakeholders.

Welcome to the Journey

RPA is a journey. Said time and time again, this sentence has ultimately proved useful. The idea is not to treat automation as an isolated cure, but as an ecosystem of possibilities, something to take further than securing immediate wins.

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Initialization

Any RPA project starts with a Proof of Value (PoV) that should prove automation potential, get the management's buy-in and incite cultural adoption. This is where Process Mining adds immediate value by assessing the situation and identifying the automation potential based on transaction volume, complexity, and business impact. You should be able to answer:

Where are the manual, time-consuming interactions in your processes?

How complex are these

- Select target processes
- Reconstruct process based on digital footprints in the IT systems
- Identify best automation opportunities
- Get management buy-in with business case
- Record manual processes in the front-end

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processes, and what is the potential business impact of automation?

Not every process (step) is suitable for RPA. Process Mining helps find and prioritize the ones that are. Identifying the most effective process automations based on real data is critical to the success of the entire automation project, and strengthens two of RPA's most valuable assets: speed of implementation and scale of deployment.

And by providing the insight for a solid, data-driven business case, Process Mining helps secure the management's buy-in.

Change management is also an important factor, and involves counteracting cultural resistance and fear of disruption. Overcoming conceptual barriers can be one of the hardest challenges in your RPA journey. Process Mining not only helps accelerate RPA but also takes into account the human factor. With the help of data-driven process transparency, you can have an honest, objective discussion about the potential for RPA, and you can secure buy-in from different stakeholders.

- Reconstruct front-end process based on recording
- Develop RPA pilot
- Benchmark different robots to verify business case

2 Implementation

Once the PoV has been finalized successfully and the organization is aligned with the project, it's time to deploy RPA across targeted processes.

One of the biggest challenges here is that the business user needs to work closely with a technical RPA developer to develop and finalize the automation successfully.

Despite the fact that the business user can record all activities and design an automation workflow, it needs to be tuned and finalized by an RPA developer, who is not necessarily a process expert. Process Mining helps to ensure that you do not have to depend on the, say, 60% cases that the business user would recall, but on real data, and in this way speed up the implementation and avoid unnecessary loops.

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- Acting on Lessons Learned from the pilot — Celonis, UiPath
- Scale from pilot and run live operations in parallel — UiPath
- Ensure resilience in automations — UiPath
- Manage automation lifecycle — UiPath
- Link automation and platform lifecycles — UiPath

3 Industrialization

With the first batch of processes stabilized in production, the project can be extended. This third and final phase concerns industrializing the automation to a full digital workforce that is optimally monitored, governed and controlled.

Here Celonis adds value by monitoring processes over time, but also the workers involved in those processes, whether they are digital workers or human agents. It tracks processes end-to-end and can tell you how much work the bots are doing, whether there are any variations in the processes, any unwanted patterns, and whether the processes are consistent in output or not. If the processes are not performing as intended, Celonis can investigate where changes are needed, and provides valuable insight into how to best approach these changes.

All this ensures continuity in automation and in your operations throughout. It allows you to react quickly to system changes and keeps automation working at full capacity.

Now the path is clear to close the loop and begin anew, by probing for new processes to automate and scale fast. You can read a more detailed, step-by-step guide on how to scale your RPA here.

You cannot control what you cannot measure

Gartner offers several key guidelines for effective RPA implementation. [7]

The first is to formalize an enterprise-wide automation roadmap. Again, it is tempting to treat RPA as a driver for quick wins, but the true benefits will come to those who implement it strategically. Identifying the most suitable processes for automation will help you plan for full scale from the beginning.

The second guideline refers to aspiring for revenue generation but acting on short-term results rapidly. Being able to isolate the low-hanging fruits in your current processes and act on them first, will speed up your transition to full scale.

An especially important aspect consists of formalizing the IT team's involvement as early as possible to maximize business outcomes. By providing process transparency, Process Mining can help develop a joint understanding between business and IT teams so they can work together throughout the entire project. This is an absolute prerequisite for an enterprise-wide RPA deployment.

Also critical to the success of the initiative in the long-term is getting external help and building internal skills for RPA. UiPath has built an extensive program to train and certify RPA users for all the key roles, and both Celonis and UiPath offer a strong partner network that combines consulting and technology skills.

Remaining guidelines refer to building the business case for RPA, communicating what RPA means to your organization, and visualizing the cycle of a bot's deployment. With support from Process Mining, you can define and prioritize automation potential, support change management, and monitor the deployment process throughout.

Process Mining and RPA make a strikingly good match. Used together they can speed up automation implementation by an additional 50%. And what makes this percentage really exciting is the thought that the typical cost for implementation runs 9 times that of the software. Here are the key takeaways from deploying both RPA and Process Mining when you start your automation project:

Depend on data to determine the value of RPA for the business case.

Reduce the time spent on opportunity discovery, drive down the number of iterations in the initial PoV and piloting of the project, and limit reliance on external resources.

Start with the best process automation opportunities. This is vital to ensure a successful RPA implementation at large scale.

Reduce project risk through 100% process transparency. Based on the actual volume of process data, the implementation risk is minimised since all exceptions are known and set out in phases accordingly.

Measure, sustain and adapt digitized processes over time, and spot new automation opportunities as soon as they arrive.

Moving Forward

Gartner[8] predicts that by 2020 autonomous bots will participate in 5% of all economic transactions.

Forrester foresees that in 2018 RPA will create 500,000 digital workers in the US alone[9]. This will make the RPA market one of the fastest-growing.

With Process Mining, RPA is off to a good start. More predictable, therefore faster. It not only speeds up the implementation time but also increases the success rate of automation, ensuring its full potential.

Yet there's more. A process is a pattern. The more regular the pattern, the easier to capture and automate. Discerning more intricate patterns requires a bit of extra help. Although you can mine the data behind your processes, the more complex ones at the front-end of your business will still require observation, explanation and a degree of manual mapping to be successfully set-up. You cannot automate the initialization phase entirely. At least not yet.

On the roadmap that UiPath and Celonis are creating, there is a new feature—currently[10] in beta—which we believe will prove very interesting.

The Smart Recorder

RPA helps make business decisions faster, but Process Mining is an invaluable insight to making better decisions, faster.

How does a day of normal work look like? What are the users actually doing when executing a business process? Where are they clicking, how are they spending their time? Which screen elements are they interacting with? Put simply, what is the behavioral pattern of your end-to-end processes? And can we chart it?

Yes, we are building a tool for that. It's a smart recorder that you can install on user machines and simply register what the users are doing, while they are doing it: where they click and type, the screen elements they interact with, and other metadata like timestamps, user IDs, etc.

Soon we will be able to create a ready to automate replica of a process end-to-end. Especially of the more complex ones at the front end of the business.

With the Smart Recorder, business analysts will work on real data, both quantitative and qualitative, to calculate the business case, and RPA developers will have a clearer idea of what they have to do, and how to do it best by anticipating complexities.

Ready-made RPAs?

If we can map a front-end process end-to-end, we are one step closer to creating ready-made RPA solutions. And with RPA already advancing into specific AI/Machine Learning use cases, we will also be able to account for complex decisions involving Natural Language Processing (NLP), intuition, and unstructured data. Once RPA generates all possible rules via Process Mining, AI/ML can more easily be applied where it actually makes sense, on top of a predictable and controllable process.

Does it make sense to jump into AI without having first built a sound foundation of properly digitized processes?

Not really.

Appendix

1 https://www.hfsresearch.com/pointsofview/triple-a-trifecta-automation-analytics-and-artificial-intelligence

2 https://www.uipath.com/blog/one-of-the-worlds-largest-rpa-initiatives-powered-by-uipath

3 McKinsey&Company, A future that works: automation, employments and productivity, 2017, p. 44 (https://www.mckinsey.com/~/media/McKinsey/Global%20Themes/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works_Full-report.ashx);

4 Everest Global, Inc., Accelerating Digital in P&C Insurance to Weather the Perfect Storm of Uncertainties, 2017 (http://www.everestgrp.com/wp-content/uploads/2017/06/Digital-in-PC-Insurance-InsurTech-2017.pdf);

5 Deloitte University Press, AI-augmented government, 2017, p. 3 (https://dupress.deloitte.com/content/dam/dup-us-en/articles/3832_AI-augmented-government/DUP_AI-augmented-government.pdf);

6 Deloitte, 2016 Global Outsourcing Survey, 2016, p. 7 (https://www2.deloitte.com/content/dam/Deloitte/us/Documents/process-and-operations/us-cons-sdt-gos-exec-summary-2016.pdf);

7 Robotic Process Automation: Eight Guidelines for Effective Results, Published: 12 October 2016, Cathy Tornbohm

8 Forrester, Predictions 2018: Automation Alters The Global Workforce, 2017, p. 3

9 https://www.gartner.com/doc/3506217/market-guide-robotic-process-automation

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Celonis is the world market leader in enterprise-proven Process Mining software. Celonis applies machine learning across company data to provide full, unbiased visibility into all IT-supported business processes, uncover hidden problems, and give prescriptive recommendations on how to resolve them quickly. Enterprises of all sizes—including companies such as Siemens, Bayer, Adobe, Vodafone, Dow Chemical—trust Celonis to act as an automated advisor and provide transparency into their operations.

UiPath

Built for both business and IT, UiPath is the leading platform for Enterprise Robotic Process Automation (RPA). The company is at the forefront of the digital business revolution achieving over 500% yearly revenue growth since 2015. A global community exceeding 30,000 users and over 450 enterprise customers and government agencies use UiPath's Enterprise RPA platform to deploy attended and unattended software robots quickly and accurately resulting in better business outcomes, stronger security and compliance, and higher job satisfaction.

Based in New York City, US, UiPath also maintains offices in Australia, France, India, Japan, Romania, and the United Kingdom with an employee base over 400 people.