Possibilities Unlimited

Why process discovery should be the first step in your automation journey

assist**edge** | Discover

Table of contents

Introduction

Technology is moving at an unprecedented pace today, often making it difficult to keep up. How we learn, interact, work or even live is now influenced by the technology at our disposal. Business enterprises and the way they carry out tasks have also changed drastically over the years due to technological innovation and digital disruption. Disruption often takes place industry-wide, resulting in a consequential shift in business models as well.

Automation and Artificial Intelligence (AI) have emerged as the key levers of an organization's path to successful digital transformation, and are also touted to have a massive impact on how business enterprises will operate in the near future. Automation is the use of a system of instructions to carry out a repeated set of tasks or processes with minimal human intervention. AI applies advanced analysis and logic-based techniques, including Machine Learning (ML), to interpret events and take action. From chatbots to self-driving cars, it has revolutionized the way business enterprises work by reducing the need for human interference and allowing systems to interact with each other.

The key benefits of automation include savings in costs, along with improvements in quality, efficiency and performance. When it comes to implementing automation, a good starting point is to identify tasks that are mundane, tedious and repetitive. Robotic Process Automation (RPA) is one of the most widely used technologies for automation. RPA powers digital dexterity and workforce transformation by designing and deploying virtual workforces across applications and systems in a business enterprise.

According to the Deloitte Global RPA Survey 2018, there will be a near universal adoption of RPA over the next five years.

RPA scenarios can range from something as simple as generating an automatic email response to deploying hundreds of bots, each programmed to automate jobs in an Enterprise Resource Planning (ERP) system. Though RPA has numerous, well-established benefits and remains the way forward for enterprises, several organizations that look to implement it often fail to realize its value, leading to promises and expectations surrounding ROI not being met.

Scaling RPA has proved to be more difficult than anticipated, with only 3% of organizations managing to scale RPA to a level of 50 or more robots.[2] Choosing the right processes to start the automation journey is key to RPA scalability and that's where Process Discovery comes in.

Process mapping

While organizations understand the benefits of RPA, several questions remain, such as how to optimize processes, and more importantly - where to begin? RPA has been successful with rules-based, high-volume, repetitive tasks but its success has been limited when it comes to non-standardized processes that require frequent human intervention. Therefore, in order to scale, businesses need to invest in identifying the right processes to automate and mapping all the steps at a granular level, including exceptions and deviations seamlessly. However, this can be a painstaking process when done manually and also involves some amount of guesswork.

For a successful automation strategy, it is important to have a deep appreciation and understanding of business processes with all the nuances of human and system interaction being recorded. Success hinges on this first step done right.
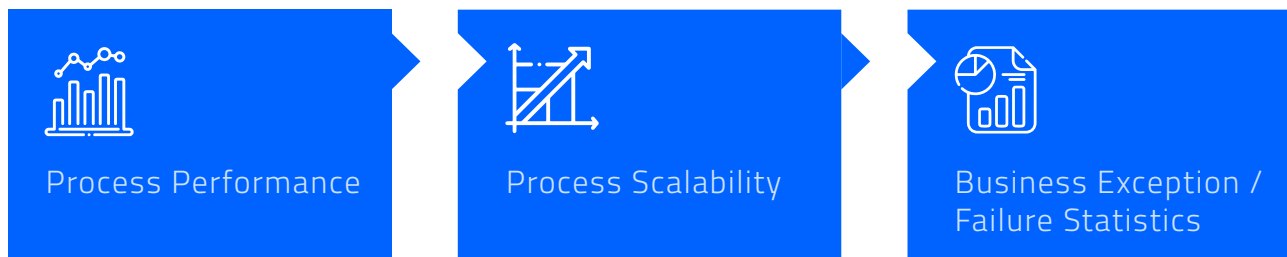

2.1 Manual process mapping

While process identification and mapping is of utmost importance, it is usually done manually by business analysts or consultants. This involves interviewing process users and capturing the process flow. This is both time consuming and expensive, and brings in drawbacks such as the user describing the most commonly followed process instead of the ideal process. Also, users mostly take a short-sighted view of the process without taking into consideration the interfaces and interactions with other processes. Business processes tend to change over time. However, in manual mapping, processes once mapped remain static documents and are not updated. In many cases, there is often no process documentation to refer as processes are user-dependent and only SMEs have process knowledge.

Other roadblocks include:

- Difficulty in identifying the right mix of SME / stakeholder

- Resistance from users when it comes to information and data sharing

Also, information on the following may not become available in manual process mapping:

Process Performance	Process Scalability	Business Exception / Failure Statistics

Thus, manual process mapping generates insufficient data and insights, leading to an ineffective automation strategy and reduced ROI.

2.2 Process mining

Process mining has been around for more than a decade, and is widely used by enterprises to automate process mapping. The technique helps to give a view of the process at different levels of the organization (single process, one operation or at an organization level). Process mining tools record system event logs and apply sophisticated algorithms to automatically identify and map business processes. The process flow generated by process-mining tools are more reliable than those created by interviewing process stakeholders. The event logs reveal the real process, rather than how it's perceived by its actors. This, along with user and SME interviews, helps to generate business process maps for enterprises to analyze. Process mining also helps to identify non-conformances (by comparing process maps generated by process mining to pre-defined processes), analyze and optimize processes.

Over the years, several challenges with process mining have surfaced. While concerns like data extraction and curation, and managing complex event logs - combined with other analysis techniques like pattern mining and visual analytics - have been addressed, there are some limitations that are yet to be addressed. These include the lack of expertize among process users to interpret inputs from process mining tools and also concept drift, with the business processes undergoing changes regularly.

Since process mining records system events, and not user and activity tasks, it fails to capture all the nuances of human and system interaction. There is an additional requirement of manual effort to interpret the information generated. It's compatibility with Citrix and other legacy systems is yet another challenge.

Process Discovery

Process Discovery is an AI-based method that helps organizations to identify process variations, and create detailed process maps to maximize the value of RPA.

Based on empirical data, it eliminates all human biases and sketches all the variations and nuances of human interaction with systems, establishing a strong basis to develop an ROI.

As Process Discovery captures task level data, it gives rich insights needed to design a comprehensive automation blueprint and to create a de-risked automation navigation strategy.

Process Discovery also facilitates change management and cross functional collaboration. It engages key stakeholders through data-driven insights to redesign processes, considering various Intelligent Automation technologies.

3.1 How Process Discovery works

Process Discovery captures users' key stroke data by running in the background on the organization's machines. Without disrupting work, Process Discovery bots collect data on how the organization uses various applications. Since the data being captured is key stroke-based, it records all tasks running through multiple systems in a seamless manner. This creates a foundation for an impactful automation strategy.

AI then goes through the data and suggests the best options for automation after analyzing the time, effort and money that can be saved. It then generates automation workflows that can be moved to an RPA tool for a smooth automation journey.

3.2 Benefits of Process Discovery

Improved quality and performance

Powered by empirical data, Process Discovery provides a clear picture in identifying, analyzing and determining tasks for automatable processes, rather than how employees or consultants think they should be performed. It is much more accurate and ensures up-to-date process workflows, deeper understanding and enhanced process optimization, without any guesswork.

Visibility

Process Discovery ensures there is visibility of ownership for specific process steps, as well as the overall process across the organization. With a complete map of the processes, enterprises can easily identify new pathways and future automation opportunities.

Less risks

It is possible to trim down risks by giving the access to business process information to less users. Moreover, process maps help to understand if the suggested changes will add value to the business, instead of a wait-and-watch method that is time, cost and effort intensive.

Cost efficiency

Process Discovery enables a measurable way for business improvements, avoiding unnecessary repetitions or other inefficiencies. Also, with less human resources, the automation development costs go down significantly

Improved scalability

Expanding RPA requires data analysis that takes significant time if done manually. But with the insights generated through Process Discovery, organizations can make intelligent decisions on which processes to automate next. It ensures that the automation solution evolves to unlock further growth and performance with minimal use of resources and time.

Maximized ROI

Empirical data-based business process maps help enterprises to navigate their automation journey from value creation to realization. The business process maps created by capturing user key strokes cover all process exceptions and variations, and provide visibility and options to scale. This helps in maximizing the expected ROI from the automation program.

AssistEdge Discover

AssistEdge Discover is a new offering from EdgeVerve that automates Process Discovery and mapping. It is a deep learning AI-based tool that helps to discover processes with a simple yet smooth user interface and process design. AssistEdge Discover is a non-intrusive product that leverages user key strokes and sophisticated neural network algorithms to create insightful business process maps. These maps, along with insights generated by the analytics engine, provide a powerful foundation for interfunctional collaboration, effective change management and continuous improvement. Here are the key features of AssistEdge Discover:

Process Management

AssistEdge Discover can create new processes for workgroups and enable process recordings. It can also view the visualization flow for each of the recorded processes.

Process Recording

With AssistEdge Discover, users can record the application usage and business flow for an individual process through process start and end markers.

Process Analysis

AssistEdge Discover features deep learning and neural network-based process mining to analyze the process flow variations and plots the basic visualization for the process flow.

Data Capture

AssistEdge Discover is highly configurable, supports multiple instances like development, product and user support, and can be run in offline mode. Keystrokes and click data are summarized at the client devices to optimize the data volume transmissions over wire and gain the advantage of the distributed computing. It also has inbuilt security features.

Legacy System Support

Works across customized and Citrix-based applications industry-wide.

Seamless Automation Deployment

The identified process maps are editable and can be integrated to configure RPA workflows.

Conclusion

To begin their automation journey, any organization - big or small - has to determine which processes are best suited for automation, and how they can benefit from RPA without hitting any roadblocks in the long run. After all, the key purpose of RPA implementation is to deliver efficiencies in business processes. Failing to choose the right process would mean the company's inability to maximize the potential of RPA through inaccurate judgements and automating wrong processes. This makes identifying the right processes early not just the first step, but the most crucial step in the successful implementation of RPA.

This calls for solutions that can automatically identify, analyze and recommend what processes your company must automate, agnostic of apriority data in a shorter span. Process Discovery results in more accurate and deeper understanding of processes at a granular level, eventually enabling process optimization to gain maximum business value. It shortens the path to automation, making it the first essential step towards the success of RPA.
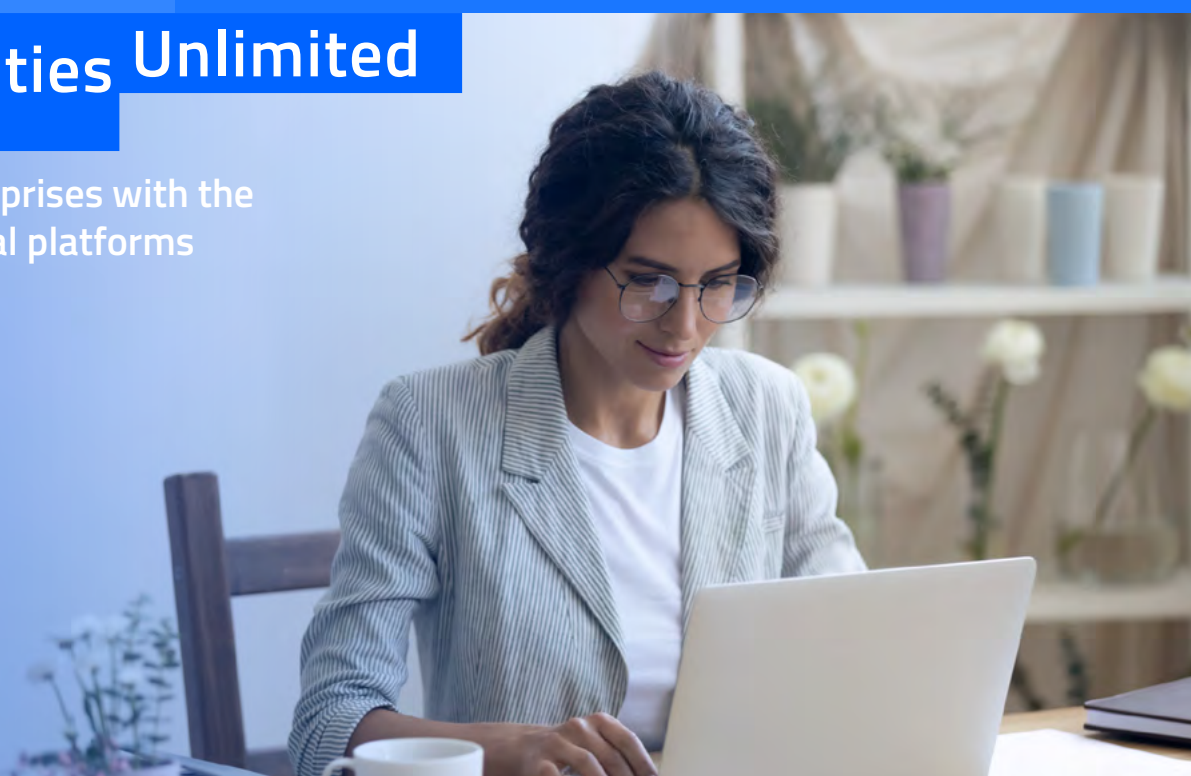
Contributor

Ravi Shankar Sugavanam

Director- Business Excellence,
EdgeVerve.

Human & Digital workforce, working together as one

Possibilities Unlimited

Inspiring enterprises with the power of digital platforms

www.edgeverve.com

About AssistEdge

AssistEdge, the cohesive automation platform brings to life your vision of building a connected enterprise - connecting people, processes, and data. It offers enterprises a comprehensive suite of products enabling them to drive process discovery, intelligent automation, and digital workforce orchestration enterprise-wide. Consistently rated as a leader, AssistEdge supports over 100 global customers in their automation journey powering some of the largest global automation implementations. EdgeVerve. Possibilities Unlimited.
www.edgeverve.com/assistedge/

AssistEdge Discover

AssistEdge Discover unlocks the hidden business value trapped in processes. It is a powerful foundation for enterprises seeking cutting-edge technology to drive intelligent automation and process excellence. From non-intrusively capturing human-machine interactions to leveraging AI to creating actionable process insights, AssistEdge Discover sets you on the right path to embrace continuous improvement with a relentless focus on creating a hyper-productive enterprise. EdgeVerve. Possibilities Unlimited.
https://www.edgeverve.com/assistedge/assistedge-discover/

About EdgeVerve

EdgeVerve Systems Limited, a wholly-owned subsidiary of Infosys, is a global leader in developing digital platforms, assisting clients to unlock unlimited possibilities in their digital transformation journey. Our purpose is to inspire enterprises with the power of digital platforms, thereby enabling our clients to innovate on business models, drive game-changing efficiency and amplify human potential. Our platforms portfolio across Automation (AssistEdge), Document AI (XtractEdge), and Supply Chain (TradeEdge) helps inspire global enterprises to discover & automate processes, digitize & structure unstructured data and unlock the power of the network by integrating value chain partners. EdgeVerve, with a deep-rooted entrepreneurial culture, our innovations are helping global corporations across financial services, insurance, retail, consumer & packaged goods, life sciences, manufacturing telecom and utilities, and more. EdgeVerve. Possibilities Unlimited.
www.edgeverve.com