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AVASANT

KRYON™

# Speeding Up Process Identification for Automation

*Intelligent Automation (IA) provides a powerful lever to rapidly improve business process performance while freeing up teams to focus on more value-adding activities. Establishing a successful automation program requires enterprises to identify the right processes for automation, driving cost savings, optimization, productivity, efficiency and business value. Avasant's Process Prioritization Framework assesses the readiness and suitability of IA implementation. The framework provides enterprises with a business driven choice of processes to automate and augments the capabilities of process discovery tools to select processes likely to have the greatest effect on the business' overall strategy.*

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## SPEEDING UP PROCESS IDENTIFICATION FOR AUTOMATION



50 %

Intelligent Automation has the potential to reduce operations cost by 35-50 percent

Intelligent Automation (IA) has weaved an ecosystem powered by robotic process automation (RPA) and artificial intelligence (AI) to drive innovation, efficiency, and utility across the value chain for all industries, improving customer experience and enabling enterprise growth. Defined as a combination of robotic automation with one or more AI technologies, Intelligent Automation allows enterprises to apply the power of infinitely repeatable, high velocity, highly reliable, machine-driven processes not only to the routine tasks, but also to highly-complex tasks which require real-time judgment and decision-making based on the processing of multiple, variable and conflicting inputs.



99 %

Intelligent Automation can reduce decision-making errors by over 99 percent

Intelligent Automation is redefining the way businesses operate, with the potential to reduce operations costs by 35-50 percent, replace close to two-thirds of human labor, and reduce decision-making errors by over 99 percent. IA enables a future of operations that is significantly more effective, rationalized and repeatable. With proven operational efficiencies for organizations, adoption and implementation of IA to business processes is widespread and across the value chain.

Vertical	F&A	Procurement	Human Resources	Contact Center	Industry Specific Processes
BFSI	●	◐	◐	◐	●
Healthcare	◐	◐	◐	◐	◐
Manufacturing	●	◐	◐	○	◐
Hi-Tech & Telecom	◐	◐	○	◐	◐
Energy & Utilities	◐	◐	◐	◐	◐
Retail	◐	◐	◐	◐	◐
Media	◐	◐	○	○	◐

RPA Adoption Extent ○ Low ◐ Medium ● High

### Speeding up Process Identification for Automation

However, despite widespread integration and the purported ease of implementation of IA, several engagements do not achieve the returns that enterprises expect. One of the major reasons for early failure in any IA implementation is limited visibility of the process landscape across the enterprise and targeting processes that have too little potential benefits. Establishing a successful automation program will require enterprises to identify the right processes for automation and to drive cost savings, optimization, productivity, efficiency and business value.

## PROCESS IDENTIFICATION FOR AUTOMATION

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The forefront and core of an organization's intelligent automation strategy requires identification of the processes best suited for automation. Organizations must identify opportunities for automation across business units to streamline and increase the speed of the execution under a valid business case. Identifying and prioritizing opportunities for automation will firstly require the following to be determined:

- Which function(s) in the business will have the most viable Intelligent Automation opportunities?
- What processes can and should be automated?
- Does IA align with business objectives and organizational strategy?
- Are the business processes sound? Should we re-engineer our business processes first before we introduce automation?
- What role should the process owners play?
- What benefits can be gained, and pain points alleviated?
- How to launch and measure the success of a pilot?

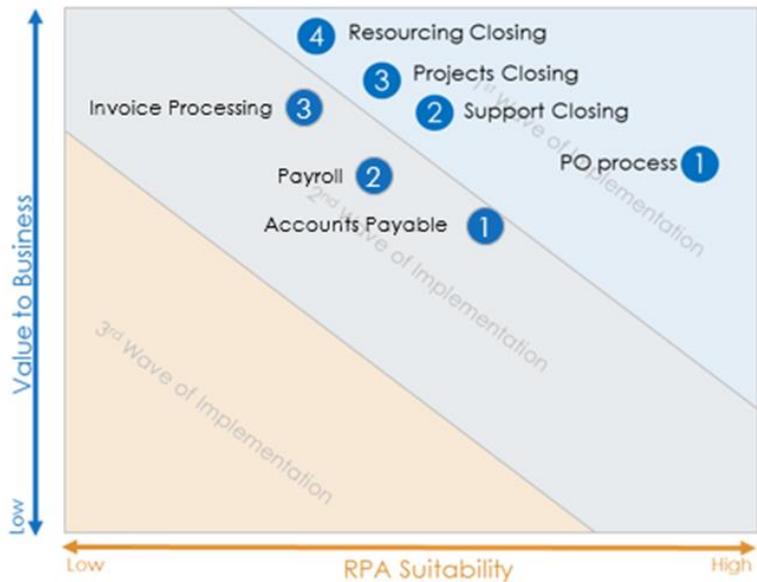
*A good process for automation balances the business value with the ease of implementation. This means measuring and assessing the value to the business, and the automation suitability with respect to each other.*

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Business Value vs Automation Suitability

Business Value	versus Automation Suitability
<ul style="list-style-type: none"> <li>• Criticality</li> <li>• Cost Savings</li> <li>• Human Effort Reduction</li> <li>• Hours back to the business</li> <li>• Process training cost</li> <li>• Reduction in cycle time</li> <li>• Hiring avoidance</li> <li>• Attrition avoidance</li> <li>• Reduction potential in audit and management overhead</li> <li>• Benefit scalability</li> </ul>	<ul style="list-style-type: none"> <li>• Error rate</li> <li>• Number of rules-based tasks</li> <li>• Number of exceptions</li> <li>• Degree of centralization</li> <li>• Degree of standardization</li> <li>• Degree of process maturity</li> <li>• Level of input consistency</li> <li>• Transactional volume</li> <li>• Frequency of system changes</li> <li>• Human decisions</li> <li>• Frequency of Process Required</li> <li>• Frequency of Process Changes</li> </ul>

The processes that score high in the above factors should be included in the first implementation wave. Processes with the next level of scores can be prioritized in the next series of implementation waves. This exercise can also help assess processes that need some level of redesigning before the IA implementation, to receive holistic benefits. Selecting the right process candidates also helps in establishing early wins, enhancing confidence within the stakeholder group and creating the much-required momentum to scale the initiative enterprise-wide.



## PROCESSES MOST SUITED FOR INTELLIGENT AUTOMATION

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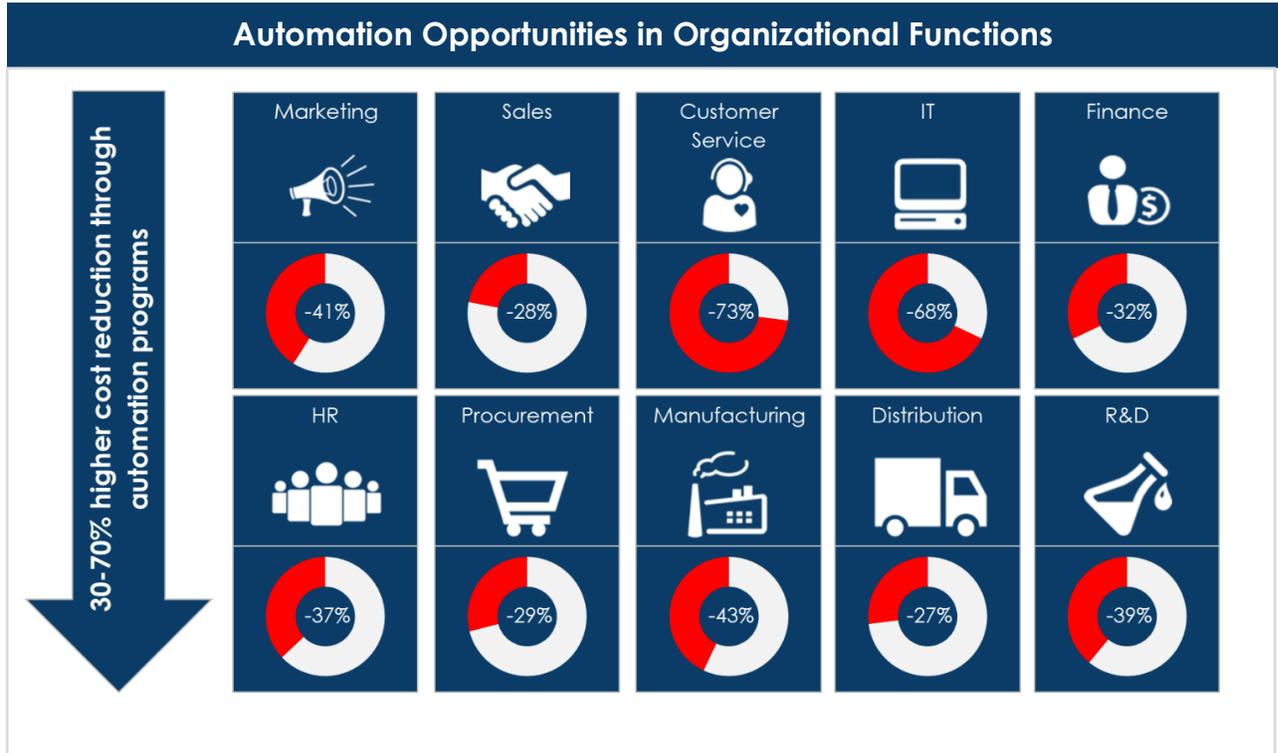
A process that is low volume, non-standardized, not leveraged across the enterprise and has a high exception rate is not the ideal process for automation. Automation is most suitable for the following type of processes, ones that are standardized, have medium to high volume, highly repetitive and leveraged throughout the enterprise:

- Repetitive keyboard & mouse tasks
- Mass email generation, follow-up & tracking
- Conversion of graphic format, presentations
- Data entry & processing
- Database creation, retrieval, queries
- Internet file transfers; reading & updating websites
- ERP transactions, image downloads, mass changes
- Surveys, approvals & data validation
- Automatic PDF reading and form milling
- Periodic reporting, analysis and calculation

Typically, industries and functions with a high volume of transactional activities present a stronger case for immediate adoption. Automating these activities have the potential to generate immediate cost savings. Generally, adoption rates are also higher in traditional B2C sectors such as retail, or banking.

Rule-based transactional services, e.g., Finance and Accounting (F&A), some Human Resources (HR) functions (for e.g. Payroll) and IT services (for e.g. support and maintenance), are also good candidates for automation. Processes that require higher level of human cognition, e.g., corporate planning, marketing, product development will most likely be late adopters.

Speeding up Process Identification for Automation



Some of the most common industries/candidates to benefit from RPA are indicated below:

Industry process-specific use cases				
<p><b>Banking</b></p> <ul style="list-style-type: none"> <li>Fraud detection</li> <li>Anti-money laundering</li> <li>Regulatory reporting</li> <li>Document extraction</li> <li>Payment reminders follow-up</li> <li>Real-time user-authentication</li> </ul>	<p><b>Financial Services</b></p> <ul style="list-style-type: none"> <li>Data extraction</li> <li>Data validation</li> <li>Breach identification</li> <li>Customer risk profiling</li> </ul>	<p><b>Government and Non-Profit</b></p> <ul style="list-style-type: none"> <li>Disaster alerts</li> <li>Relief management</li> <li>Traffic management</li> <li>Weather forecasting</li> <li>Tax compliance</li> </ul>	<p><b>Healthcare and Life Sciences</b></p> <ul style="list-style-type: none"> <li>Automated diagnosis</li> <li>E2B transmission</li> <li>Prescription management</li> <li>Drug discovery</li> <li>Clinical documentation</li> </ul>	<p><b>Insurance</b></p> <ul style="list-style-type: none"> <li>Claim data extraction</li> <li>Claims management</li> <li>Regulatory compliance</li> <li>Risk evaluation</li> <li>Adjudication</li> <li>Match to issued policy</li> </ul>
<p><b>Manufacturing</b></p> <ul style="list-style-type: none"> <li>Asset management</li> <li>Supply chain management</li> <li>Inventory management</li> <li>Energy management</li> </ul>	<p><b>Retail and CPG</b></p> <ul style="list-style-type: none"> <li>Distributed marketplace</li> <li>Food auditing</li> <li>Inventory control</li> <li>Loyalty programs</li> <li>Procurement optimization</li> <li>Supply chain traceability</li> </ul>	<p><b>Telecom, Media and Telecom</b></p> <ul style="list-style-type: none"> <li>Network operations</li> <li>Fraud detection</li> <li>Predictive maintenance</li> <li>Customer service</li> </ul>	<p><b>Travel and Transportation</b></p> <ul style="list-style-type: none"> <li>Cargo management</li> <li>Travel recommendation engines</li> <li>Price forecasting</li> <li>Traffic congestion management</li> <li>Route rationalization</li> </ul>	<p><b>Utilities and Resources</b></p> <ul style="list-style-type: none"> <li>Load forecasting</li> <li>Demand management</li> <li>Predictive maintenance</li> <li>Energy trading</li> <li>Consumption insights &amp; analysis</li> </ul>
Enterprise process-specific use cases				
<p><b>Customer Service</b></p> <ul style="list-style-type: none"> <li>Customer enquiry routing</li> <li>Customer self service support</li> <li>Customer feedback &amp; surveys</li> </ul>	<p><b>Finance and Accounting</b></p> <ul style="list-style-type: none"> <li>Order to cash</li> <li>Procure to pay</li> <li>Record to report</li> <li>Audit support</li> <li>Document review &amp; analysis</li> </ul>	<p><b>Human Resources</b></p> <ul style="list-style-type: none"> <li>Resume screening</li> <li>Candidate profiling</li> <li>Performance management</li> <li>Employee virtual assistance</li> </ul>	<p><b>Marketing and Sales</b></p> <ul style="list-style-type: none"> <li>Price optimization</li> <li>Shelf audits</li> <li>Social media marketing</li> <li>Lead management</li> <li>Customer data management</li> </ul>	<p><b>Procurement</b></p> <ul style="list-style-type: none"> <li>Demand forecasting</li> <li>Payment processing</li> <li>Goods receipt and confirmation</li> <li>E-auctions</li> <li>Contract management</li> </ul>
IT process-specific use cases				
<p><b>IT Applications</b></p> <ul style="list-style-type: none"> <li>Application code generation</li> <li>Application configuration</li> <li>Application performance management</li> <li>Application self-healing</li> <li>Rapid prototyping</li> <li>Error detection and remedy management</li> <li>Release and deployment support</li> <li>Automatic code refactoring</li> <li>Test case generation</li> <li>Application Deployment</li> </ul>		<p><b>IT Infrastructure &amp; Operations</b></p> <ul style="list-style-type: none"> <li>Auto resolution of tickets</li> <li>Endpoint preemptive monitoring</li> <li>Autonomous cybersecurity</li> <li>Predictive analytics-led server management</li> <li>Predictive maintenance</li> <li>Threat detection</li> <li>Log analysis</li> <li>Capacity planning</li> <li>Predictive infrastructure scaling</li> <li>Infrastructure cost management</li> </ul>		

## AVASANT APPROACH TO PROCESS IDENTIFICATION

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With a rigorous and detailed framework, Avasant's methodology focuses on selecting and prioritizing processes that are comparatively easier to automate and can produce high value business outcomes post automation. Our process prioritization follows a 3 step approach:

1. Understand business objectives and relevance of automation
2. Determine process characteristics
3. Validate impact on business & ROI
4. Build automation pipeline

### 1. Understand business objectives

Avasant starts its process by first understanding the drivers behind the push for automation. This typically includes interviewing the key stakeholders and reviewing documentation related to strategy, operating models, staff and processes to understand whether automation is due to either one, or a combination of the following:

1. Enhance customer experience
2. Optimize costs
3. Improve process performance
4. Standardize and scale

For our clients, we have also assessed current organizational and operational performance against desired targets by analyzing historical metric trends and tracking mechanisms. Based on which we have helped prioritize the business drivers for the automation initiative.

### 2. Determine process characteristics

Avasant enables an organization to select and prioritize the processes for automation by measuring and scoring the processes on various assessment factors. If the number of candidate processes are below ten, only the prioritization of the processes is required. Avasant's process prioritization tool captures the process characteristics and scores them based on a weightage determined by business objectives gathered in Step 1.

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Avasant's Process Prioritization Tool and Sample Criterion for Scoring



Automation Criteria	Automation Criteria Description	Business Unit Name	Process Name	Process Description	Location	Volume	Volume Unit	FTEs
Call Input Instructions (Please also refer to call comments)	Indicate business unit name or function where process is run	Indicate the process name	Describe the business or customer requirement that this process fulfills. See requirements for the process to be successful and amount of manual intervention reqd. Describe the input, output, data & technology requirements. Indicate whether the process is customer facing or internal. Provide documentation reference if available	Indicate where location and other process sites	Specify the transaction volume	Specify the volume unit	Specify the FTEs	

Automation Criteria	Automation Criteria Description	Business Unit Name	Process Name	Standardization	Quality	Data Security
Call Input Instructions (Please also refer to call comments)	Indicate business unit name or function where process is run	Indicate the process name	Describe the business or customer requirement that this process fulfills. See requirements for the process to be successful and amount of manual intervention reqd. Describe the input, output, data & technology requirements. Indicate whether the process is customer facing or internal. Provide documentation reference if available	Score based on number of different types of inputs	Score based on % of data that needs to be corrected before the input	Score level of data security requirements
Form of Input Expected	Type	Type	Type	Score	Score	Score
Example 1	Checkmate	SALES	SALES	2	2	2
Example 2	Checkmate	CREDIT SCORING	CREDIT SCORING	3	3	3
Example 3	Checkmate	COPY OF REGISTRY	COPY OF REGISTRY	4	4	4
Example 4	Checkmate	AUTOPAY	AUTOPAY	3	3	4
Example 5	Checkmate	MANUALITY	MANUALITY	3	3	4
#1	Checkmate	Checkmate	Checkmate	3	3	4
#2	Checkmate	Checkmate	Checkmate	3	3	4
#3	Checkmate	Checkmate	Checkmate	3	3	4
#4	Checkmate	Checkmate	Checkmate	3	3	4
#5	Checkmate	Checkmate	Checkmate	3	3	4

Criteria Group	Criteria Group Weightage	Criteria	Criteria Weightage	Description	Scoring Criteria	Score				
						1	2	3	4	5
Process Characteristics	30%	Rules Based	25%	Score based on how rule driven process is	Percentage of Rule Based	<=20%	20%-40%	40%-60%	60%-80%	80%-100%
		Training Duration	50%	Score based on number of days required to be 100% productive	Number of days	60+	30-60	15-30	7-15	0-7
		Exceptions	25%	Score based on volume requiring manual intervention	Percentage of Exception	80%-100%	60%-80%	40%-60%	20%-40%	<20%
Data Characteristics	25%	Standardization	40%	Score based on the number of different format or sources of inputs	Number of different inputs	1 - 2	3-5	5-7	7-10	10-15
		Quality	20%	Score based on % of data that needs to be corrected before the input	Percentage of Correction Required	80%-100%	60%-80%	40%-60%	20%-40%	<20%
		Security Requirements	40%	Score level of data security requirements	Data Security Requirements	Nil	Low	Medium	High	Very High
Technology Characteristics	25%	Application/Platform Complexity	55%	Score based on the number of applications, systems and interfaces required for the process	Number of applications, systems or interfaces	>10	7-10	5-7	3-5	1-2
		Application Modernization Roadmap	45%	Score based on how soon the relevant application or systems are expected to be modernized	Expected timeline for modernization	0-6 Months	6 - 12 Months	12 - 18 Months	18 - 24 Months	Not Planned
Delivery Model	20%	Sourcing Model	40%	Score the level of outsourcing in the process	Percentage of outsourcing	75%-100%	50%-75%	25%-50%	<=25%	0%
		Centralization	60%	Score the extent to which process rules are defined centrally	Percentage of centralization	<=20%	20%-40%	40%-60%	60%-80%	80%-100%

A – Selection

The selection stage helps shortlist the most suitable processes for automation, from a long list of business units/ functions recommended processes. This requires clients to provide inputs on the following characteristics:

- Transaction Volume and unit used to measure the transaction volume
- Total number of Full Time Employees (FTEs) working on the process and the total cost per process FTE

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- Error Rate - Number of times the process resulted in unexpected outputs
- Cycle Time - The average time in seconds that it takes from start to the end of the process
- Rules Centricity – Number of process steps that are rule based expressed as a percentage of total steps of the process
- Training Duration - Average number of days required to make a new hire 100 percent productive

Based on these inputs, suitability for inclusion of a specific process to be automated is determined.

**B – Prioritization**

For the processes shortlisted from the selection phase, further inputs are sought to determine the business priority on the following characteristics:

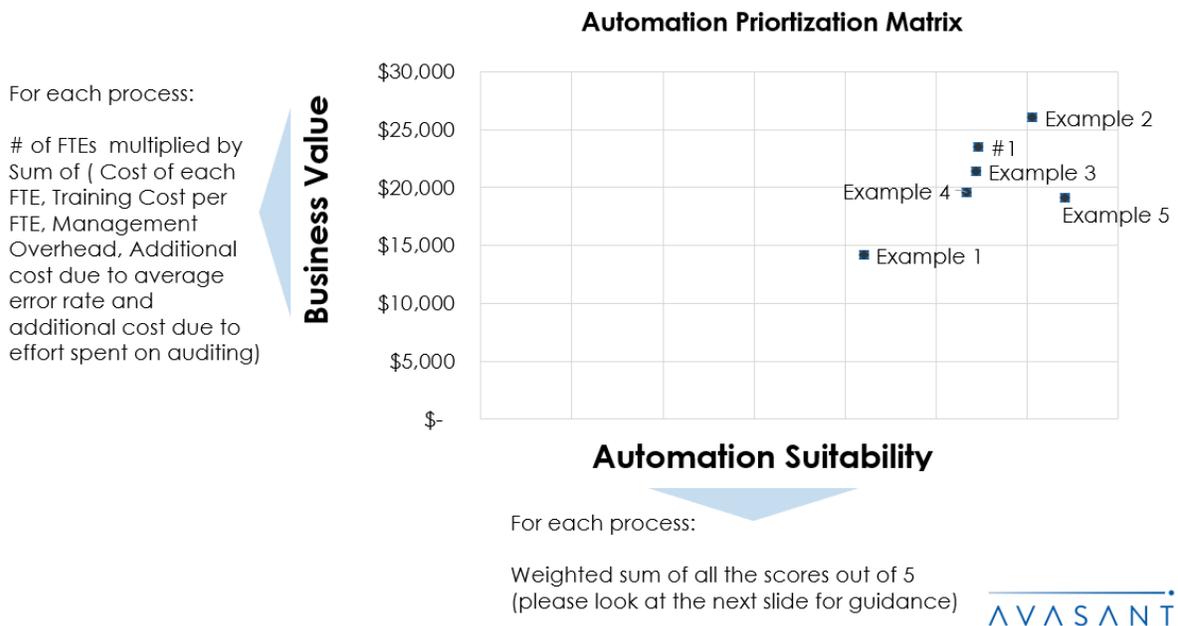
- Exceptions - Number of times the process has to run differently from the norm - expressed as the % of total Volume
- Automation Objective - Business or operational goal that will be addressed through the Automation initiative
- Volume Variance - The seasonal or sporadic differences in transaction volume measured over time
- Consumer Interactions - Whether the process has any direct consumer interaction
- Labor Attrition - Total monthly labor attrition observed within the process
- Training Costs - Average monthly spend on training a new hire expressed as percentage of total FTE cost
- Management Overhead - Cost calculated based on management effort spent on overseeing the process execution
- Effort Spent on Process Audit - Average number of hours spent for audit and compliance related efforts
- Process Run Periodicity and Frequency - Average process frequency in a month
- Degree of Input Standardization - Degree to which the input data follows a pre-defined format for the process
- Quality - Degree to which the input data is considered fit for its intended use in the process

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- Security Requirements – Data Security and Data Access
- Application Platform Complexity - Number of applications and interfaces required to run the process and the frequency of changes required by them
- Application Modernization Roadmap - Is there a roadmap for modernizing or upgrading current systems?
- Sourcing Model - Is the process outsourced to an external third party?
- Centralization - Is the entire process executed within a location?

Based on these inputs, the processes are prioritized through a weighted scoring model. Avasant's process prioritization tool displays the prioritization through an automated chart:

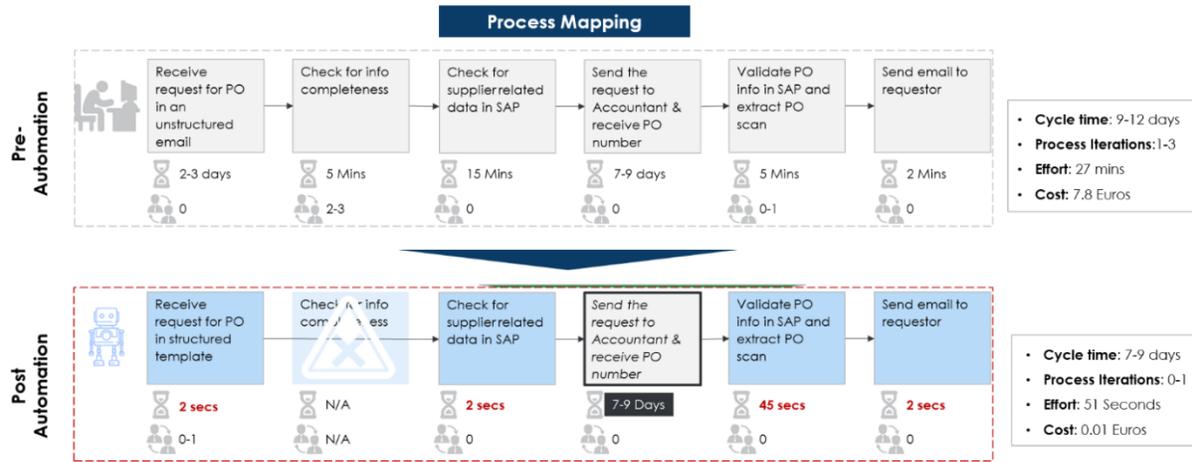
*Avasant's Process Prioritization Output – A Sample Snapshot*



**3. Validate impact on business & Return on Investment (ROI)**

Enterprise that are early adopters of Intelligent Automation typically require an additional validation through a Proof of Concept (POC) or a pilot. For such clients, Avasant conducts a process mapping and opportunity validation exercise for the top three to five process prioritized above:

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In addition to identifying the relevant opportunity, this helps assess the business value and benefits that can be potentially gained through intelligent automation. Often, clients do not have readily accessible process information due to lack of process documentation such as process maps or standards operating procedures. To circumvent this, Avasant conducts interviews and workshops with the concerned process teams. An effective way to address this gap is to use process discovery tools that provide a faster, more holistic and non-intrusive method to capture data.

### Conventional process mining

Conventional process mining tools analyze system event logs through sophisticated algorithms to identify and evaluate automatable work processes. This is faster than a manual decision-making process that typically takes a few months to identify processes well suited for automation. Additionally, the approach mitigates the following challenges:

- Lack of data integrity
- Subjectivity of decision-making process
- Extended time to collect data

Conventional process mining tools can also be used to test the accuracy of a given process map. However, there are several setbacks associated with this approach. The approach of analyzing logs is often incompatible with certain software environments, like legacy systems. These tools typically require the work of several employees, including both business analysts and technical experts, usually over a period of one to four months. Further, process mining tools are typically separate from RPA solutions, even if there is some degree of integration between the two systems. As a result, employees must create the relevant automation workflows from scratch within their RPA platform, once the organization has come to a decision as to which tasks to automate.

### Kryon Process Discovery™

Kryon's Process Discovery solution offers businesses a faster and more flexible approach than conventional process mining tools, designed to streamline the identification and automation of the processes best suited for RPA. Kryon's Process Discovery solution:

- Collects real-time data on user actions
- Analyzes work processes based largely on advanced visual recognition
- Identifies processes to automate for optimal time and cost savings
- Generates fully functional automation workflows

Kryon Process Discovery comes with advanced visual recognition that can gather essential data on employees' work processes in real time. Kryon's use of computer vision offers greater flexibility and speed than the system event logs that conventional process mining solutions use enabling it to automatically generate automation workflows, which process mining solutions can't do. As a result, it is fully compatible with all types of software – Citrix, legacy, web-based, and others. Process Discovery also uses visual recognition to create process maps showing details about user actions that are not reflected in system event logs. Kryon Process Discovery requires only 1-4 employees, as compared to process mining's 5-10 employees and typically takes 3-5 weeks, as compared to process mining's 1-4 months. Further, Process Discovery automatically creates automation workflows, saving companies a time-consuming step and cuts deployment time by up to 80 percent.

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4. Building Automation Pipeline

Based on the above assessments on business value of Intelligent Automation, certain processes can be reprioritized. Avasant develops a prioritized list of processes that can be tracked by the key stakeholders on a shared portal such as a share point.

Automation Pipeline Tracker – Snapshot

Process Name	Process Description	Location	Volume Processed	Volume Unit	Number of FTEs	Cost per FTE	Human Error / Re-work Rate	Training Duration	Inclusion	Inclusion comments	Exceptions	Automation C
EVS - I	By C		105,985	Searches	8	\$3,000.00		5	Yes		<Select Exception Score>	
EV SHD	LS		6,114	Emails	3.47	\$3,000.00		4	Yes		<Select Exception Score>	
BY	5		2,620	Orders	3.47	\$3,000.00		1	Yes		<Select Exception Score>	
LS/WF	LS/WF		11,418	Orders	7.52	\$3,000.00		1	Yes		<Select Exception Score>	
LS/WF	LS/WF		7,204	Orders	5.41	\$3,000.00		1	Yes		<Select Exception Score>	
BOA	BOA		475	Orders	6.66	\$3,000.00		1	Yes		<Select Exception Score>	
DOCX	DOCX		32,386	Orders (documents)	2.41	\$3,000.00		1	No		<Select Exception Score>	
LS Transcribe	LS Transcribe		13,728	Orders form 1005	3.44	\$3,000.00		1	No		<Select Exception Score>	
1005	1005		52,132	1005 forms	27.28	\$3,000.00		1	No		<Select Exception Score>	
292	292		292	Searches	0.73	\$3,000.00		5	No		<Select Exception Score>	
32	32		32	Orders	0.08	\$3,000.00		1	No		<Select Exception Score>	

CONCLUSION

Intelligent Automation provides a powerful lever to rapidly improve business process performance while freeing up teams to focus on more value-adding activities. This disruptive impact on all aspects of the business value chain may still be the tip of the iceberg, with Intelligent Automation enabling a fundamental rethinking of business models and partnerships even beyond what is evident today.

Avasant has developed a framework for assessing readiness and suitability of intelligent automation implementation. This framework provides the enterprises with a business driven choice of processes to automate and augments the capabilities of process discovery tools to select processes likely to have the greatest effect on the business' overall strategy.

A well thought out plan that clearly sequences out the processes to be included in different phases of the IA implementation while also setting the right expectations for all enterprise

**Speeding up Process Identification for Automation**

stakeholders is a cornerstone of success. The right choice and prioritization of processes is the next most important decision that will spell the difference between an implementation that advances the enterprise towards competitive advantage, or one that erodes internal confidence in automation and essentially take the enterprise backwards.

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## About the Authors



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### About Avasant

Avasant is a leading management consulting firm focused on translating the power of technology into realizable business strategies. Specializing in digital and IT transformation, sourcing advisory, global strategy, and governance services, Avasant prides itself on delivering high -value engagements through industry focused innovation and flexible client based solutions.

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### About Kryon

Kryon uses cutting-edge technology to make enterprise automation easily accessible, user-friendly, and profitable. Kryon's vision is to create seamless engagement between human and digital workforces whereby people's time and minds are freed to grow their potential, and businesses increase value and realize success.