

PROCUREMENT'S  
NEXT FRONTIER:

**HOW INTELLIGENT  
AUTOMATION  
DRAMATICALLY  
REDUCES COST  
AND TRANSFORMS  
THE GROWTH AGENDA**

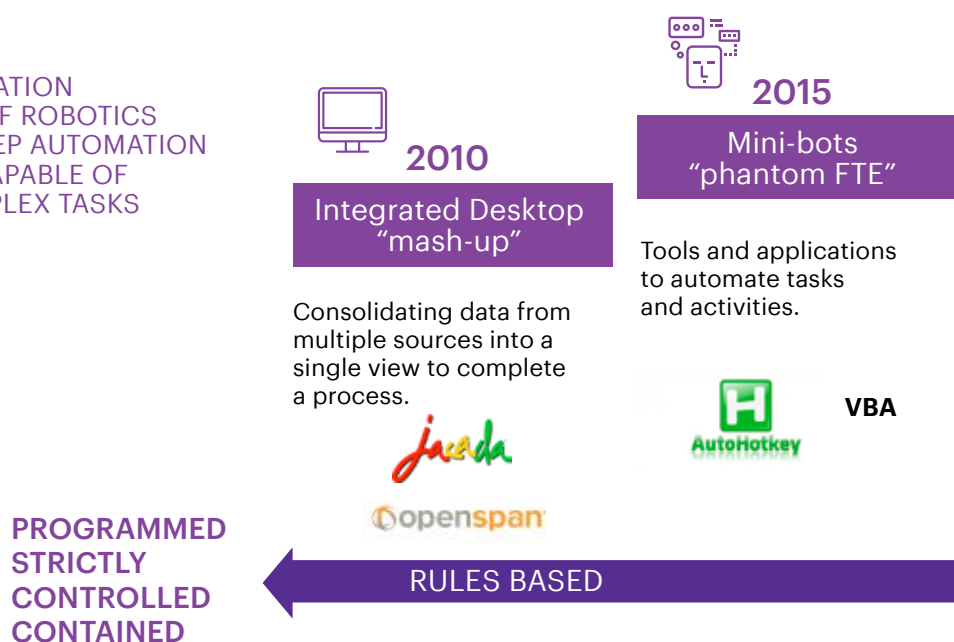


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# PROCUREMENT ORGANISATIONS STAND ON THE BRINK OF RADICAL TRANSFORMATION

By 2020, human involvement will have become limited to managing a virtual workforce and providing strategic oversight. Cognitive, self-learning machines will have the capability to undertake more complex activities, while routine tasks will be transformed through Robotic Process Automation (RPA). Organisations that act now to take advantage of this revolution can expect to achieve hyper efficiencies and magnified growth potential.

**FIGURE 1: ENTERPRISE AUTOMATION SPECTRUM – THE SPECTRUM OF ROBOTICS SOLUTIONS RANGES FROM STEP AUTOMATION TO COGNITIVE COMPUTING CAPABLE OF EXECUTING SIMPLE AND COMPLEX TASKS IN PROCUREMENT**



# PROCUREMENT FUNCTION OF THE FUTURE

Dramatic change is on the way for the procurement function. Automation technologies are rapidly evolving, allowing RPA to be integrated with cognitive capabilities and artificial intelligence.

At the same time, a wider range of perceptual and judgement-based tasks once reserved for humans are now being automated. These technologies promise to fundamentally transform key aspects of procurement, including changing or even entirely eliminating certain activities.

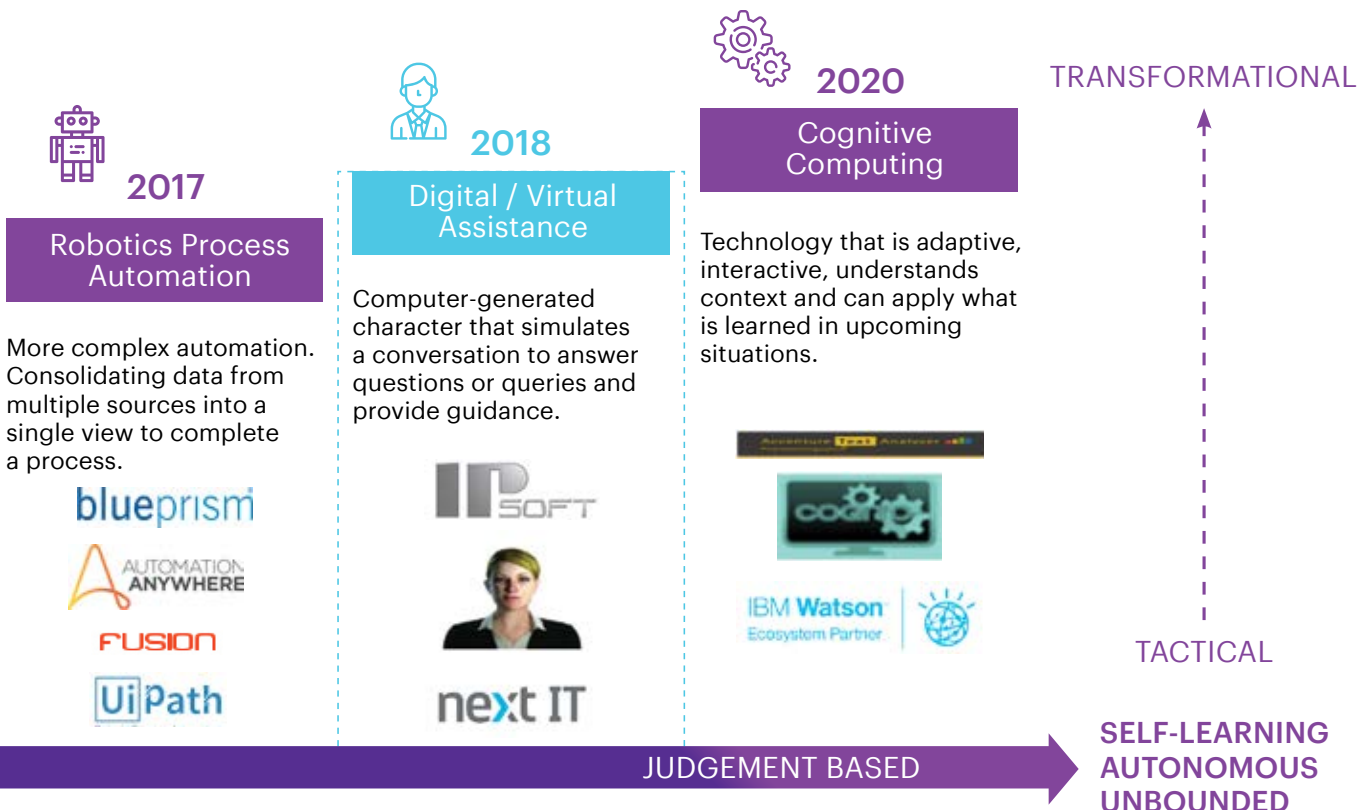
In ASEAN, companies in the consumer goods sector are already piloting and implementing automation for tactical procurement activities such as vendor data management, purchase order creation and invoice processing. This is allowing them to reap a range of benefits, from significantly improved productivity to dramatically reduced operating costs. Indeed, such is the growing focus on the digital procurement agenda,

it is estimated that by 2019, 72 percent<sup>1</sup> of enterprises globally will rely on RPA to manage their support functions, including procurement.

As more complex activities become ripe for automation, so will the function continue to transform. In the future, procurement will be defined as a compact nerve centre driven by a virtual workforce of AI, chatbots and RPA technologies, with only a lean management team to set priorities and strategic direction. Operational buying roles will become redundant, with the procurement workforce being recalibrated into a purely strategic organisation. A strong focus will need to be placed upon redeploying and upskilling procurement personnel, and nurturing multi-disciplinary skillsets, to be comfortable operating across the ever expanding digital landscape.

In this context, CPOs are now investing heavily to grow digital capability while reducing legacy costs related to tactical and transactional activities. As intelligent automation drives organisations to become more productive, procurement will increasingly be at the heart of the growth agenda driving a connected ecosystem driven by digital technology.

<sup>1</sup> ISG Automation Index, April 2017 - <http://www.isg-one.com/index/module-article-detail/automation-index-april-2017>



# A NEW WAVE OF INTELLIGENT AUTOMATION: MAGNIFYING VALUE

Across the enterprise automation spectrum in ASEAN, the most prominent application is RPA, which is changing the way high volume, repetitive middle and back office procurement activities are conducted. By replicating the actions of individuals as they interact with a procurement system's user interface, such tools eliminate manual input into tasks.

**FIGURE 2: PROCUREMENT ACTIVITY SPECTRUM – THERE IS SIGNIFICANT POTENTIAL TO AUTOMATE BOTH STRATEGIC AND TACTICAL PROCUREMENT ACTIVITIES USING ROBOTICS APPLICATIONS**

Managerial	Strategic Sourcing & Category Management		Tactical Procurement
Leadership, Control, & Compliance	Strategic Sourcing	Category Management	Sourcing Support
Governance, Oversight, Change Mgt.	Category Spend Forecast & Analysis	Contract implementation	Spend and Market Analysis
Define Policies & Procedures	Develop Sourcing Plan and Strategy	Supplier Relationship Ownership	Auction Services
Compliance Reporting	Approve Sourcing Plan and Strategy	Supplier Performance Management	Spot Buy
S2P Reporting	RFx Process	Compliance Reporting	
Supplier Reporting	Supplier Selection	Category Profile (Internally & Externally)	
Enforce Policies/ Compliance Management Reporting	Contract Negotiation Selection	Approve Category Profile / Baselines	
Stakeholder Engagement Reporting	Contract Review, Approval & Execution Selection	Savings Tracking	

**RPA Potential**

**Digital/Virtual Assistant & Cognitive Computing Potential**

LOW	MEDIUM	HIGH
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LOW	MEDIUM	HIGH
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Procurement	Procurement Operations		
Master Data & Technology	Master Data & Technology	Procure	Deliver
Set up and Develop Portal Content	Define User Authority & Workflow	Generate Demand/ Create Req	Coordinate Inbound Delivery
Review and Approve Content	Manage S2P Data	Help Desk Support	Expediting
Maintain Portal Content & Workflow	Manage S2P Technology	Assisted Buy Desk (Create Req)	Manage Exceptions/ Escalations
Contract Administration	Vendor Master Data Maintenance	Approve Req (Trigger PO)	Resolve Exceptions/ Escalations
Supplier Enablement		Enable PO Issue	Manage Return to Vendor Process
Catalog Enablement & Management			Record Receipt Of Goods & Services

As companies leverage RPA tools and applications, shrinking the pool of procurement resources required, our experience suggests that significant efficiency gains stemming from reduced human error and increased processing speed are now being realised.

# 75%

Increase in productivity by using RPA to analyse demand from SAP, Workflow, Outlook and Excel and to create purchase orders. This eliminated the need for operational buyers to manually index over 480K lines per year and toggle over 7,500 times daily.

## COMPETITIVE SOURCING<sup>2</sup>

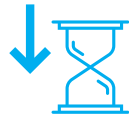
Using an AI-based solution from Elementum, customers were warned within minutes of a fire at a Chinese DRAM chip factory, which resulted in a 25 percent decrease in global supply. Customers were able to secure their orders up to 24 hours prior to the resulting price increase.

<sup>2</sup> "This Man Is Solving Every Product Company's Biggest Headache - and Billionaire Investors are Buying into It," Business Insider UK, July 11, 2015



# 40% - 60%

PRODUCTIVITY GAIN



# 83%

REDUCTION IN PO PROCESSING TIME



# 24 / 7

OPERATIONS



# 43%

INCREASE IN STAFF SATISFACTION



# 100%

REDUCTION IN HUMAN ERROR



# 45% - 65%

REDUCTION IN OPERATING COST

The next wave of progress will be characterised by AI-driven cognitive computing machines capable of absorbing and processing almost limitless amounts of diverse information. These will be capable of undertaking more strategic procurement activities, from category analysis to supplier selection. For contract negotiation, chatbots that are able to mimic a sophisticated range of verbal and written human interactions will become the focal point for setting, driving and realising successful outcomes with suppliers.

Such capabilities will elevate the procurement function far above and beyond the “Q0” level of performance which we define as industry leading practice and the current benchmark for mastery. For a start, they will deliver hyper-productivity gains by reducing procurement headcount up to 80 percent. At the same time, they will boost the efficiency of third party spend through cutting edge analytics and optimisation activities.

Through the intelligent automation of various procurement activities, self-learning machines will drive reduced total cost of ownership (TCO). Such technologies will also allow procurement functions to be more agile, responding more quickly to business opportunities. The deployment of data driven analytics will help nurture an ecosystem where procurement drives supplier collaboration to foster innovation.

For these reasons, we expect this trend to generate significant shareholder value, underpinned by an unprecedented growth in operating profit.

**FIGURE 3: PROCUREMENT MASTERY – INTELLIGENT AUTOMATION WILL SUPPORT OPERATING PROFIT (OP PROFIT) GENERATION BY REDUCING SELLING, GENERAL AND ADMINISTRATIVE (SG&A) COSTS AND COST OF GOODS SOLD (COGS)**

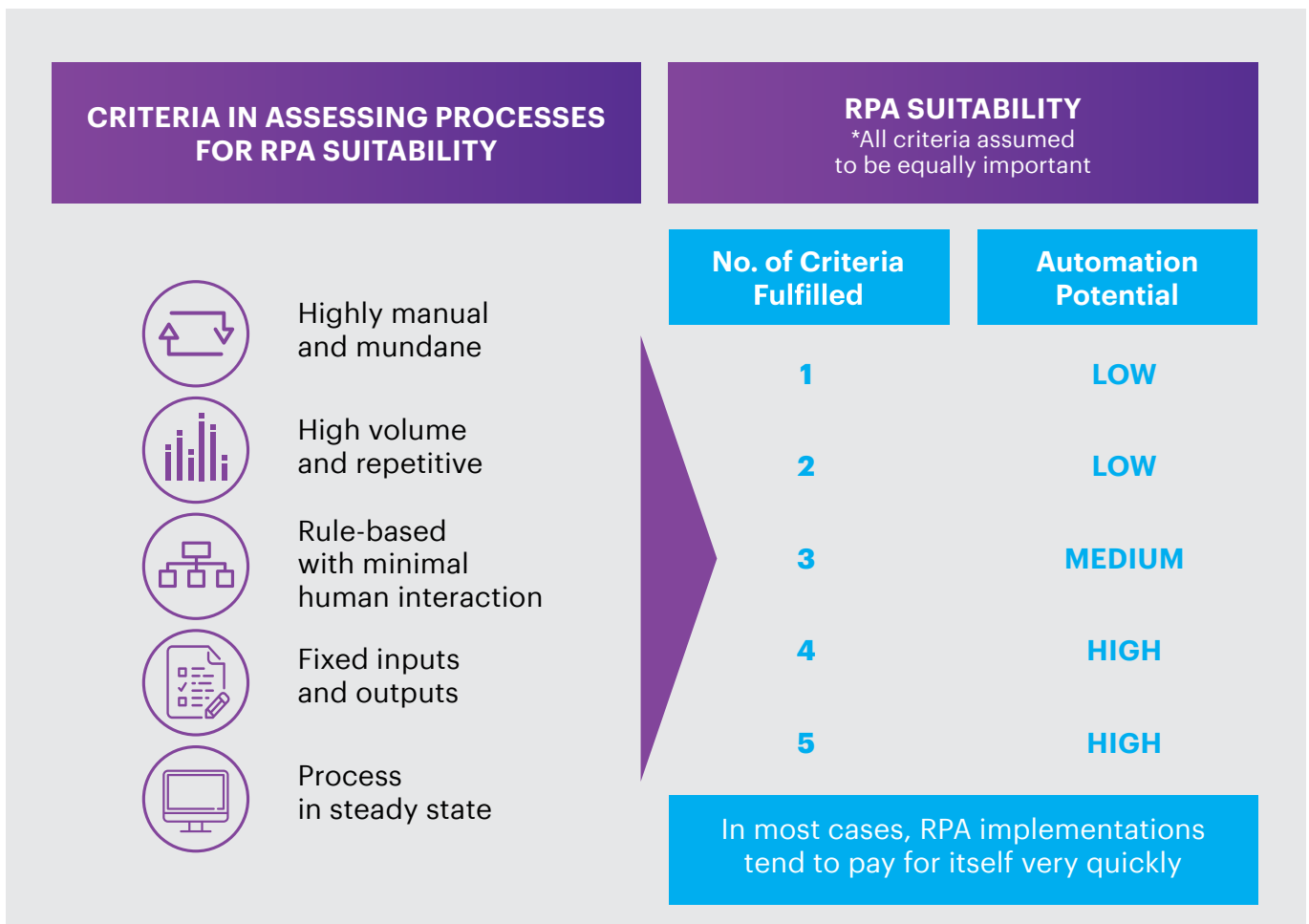


OP PROFIT SG&A COGS

# IMPLEMENTATION ROADMAP

The first step towards building the procurement function of the future is knowing how to implement an automation solution. The journey starts by assessing which routine operational processes are most suitable for RPA.

**Figure 4:** RPA Suitability Criteria – Five distinct criteria are used to determine the most suitable procurement activities for an RPA solution



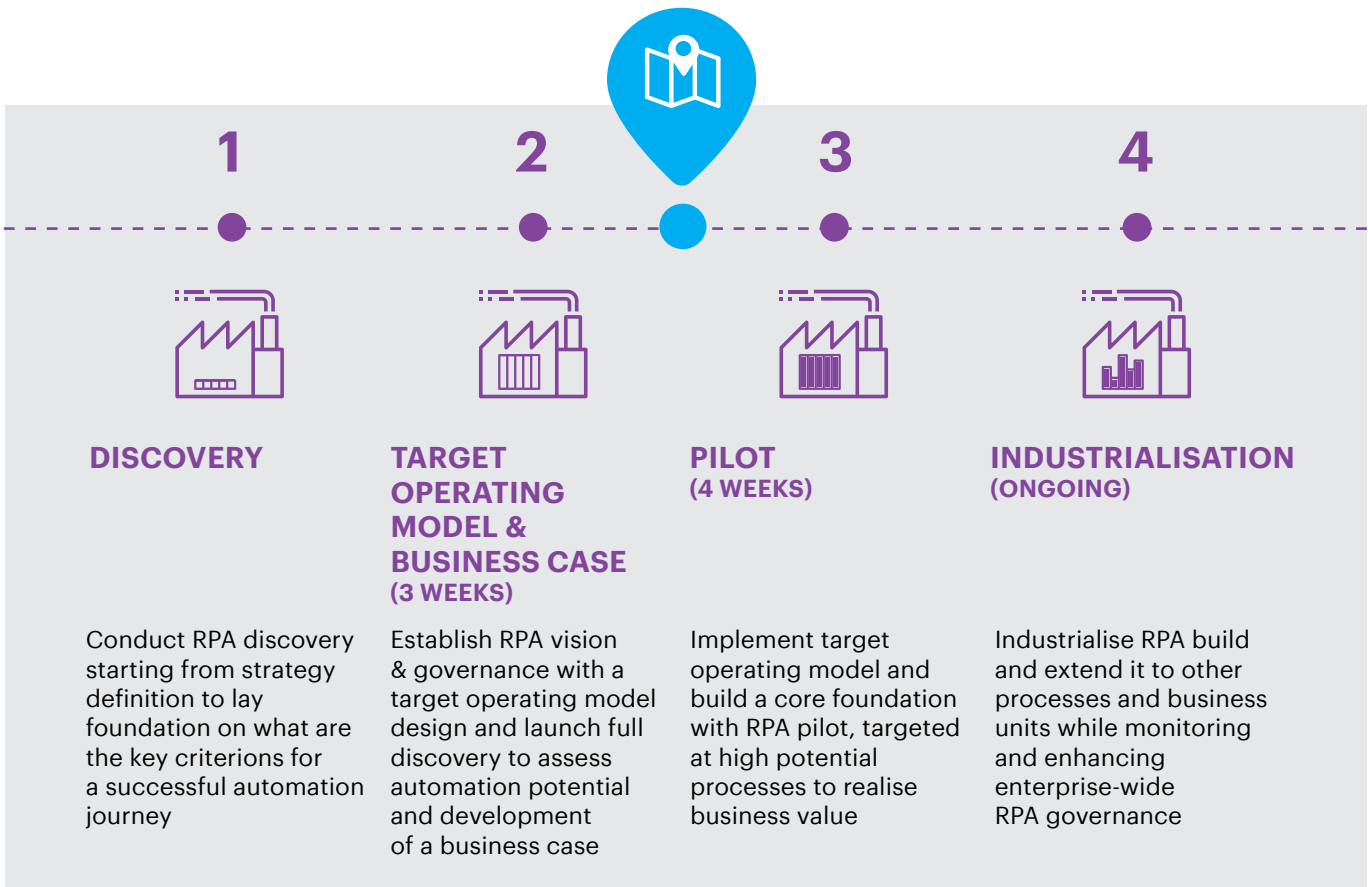
A typical RPA journey is broken down into four phases. The first three – which include generating a proof of concept for one or two processes – can be executed within two to four months. During this time, processes are reviewed and optimised based on leading practice, then automated.

After completion of a successful pilot<sup>3</sup>, the programme is scaled and additional procurement processes adopted as per the desired automation scope.

<sup>3</sup> A proof of concept (POC) may be executed prior to a pilot to test solution functionality and confirm overall value case in a non-production environment.



**Figure 5:** RPA Implementation Plan – An RPA pilot for a designated region or business unit typically takes 10 to 14 weeks to implement before the RPA solution can be industrialised and applied across other potential processes



Once an RPA solution has been embedded, the focus shifts to middle office processes that cannot be fully automated with RPA, as well as strategic ones that require a degree of human judgement. Here, cognitive computing machines driven by AI-based algorithms are deployed.

The development of intelligent automation solutions involves building intelligent robots that are able to meet the procurement function's specific requirements. The design process is underpinned by a range of iterative, self-learning algorithms that help ensure the AI solution is targeted and focused on specific procurement skillsets which can be nurtured and will self-improve over time.

These algorithms, grouped into families, are focused on solving a specific problem statement – identifying supply risks,

for example, or securing optimal-spot buy agreements. By analysing historical data, an initial set of algorithms can be generated and refined in an iterative process until the desired output is achieved.

## UNDERSTANDING ALGORITHMS

Algorithms are the building blocks or DNA of artificial intelligence and machine learning. An algorithm is a sequence of specified instructions or rules that are followed to complete a task. There are multiple types of algorithms with varying degrees of complexity and that underpin artificial intelligence and machine learning outputs.

# CRITICAL SUCCESS FACTORS

For any organisation, embracing the automation agenda in procurement is a long-term journey. Six critical success factors require consideration.

<b>CULTURE OF CONTINUOUS IDEA &amp; SKILL GENERATION</b>	<p>An automation programme which includes:</p> <ul style="list-style-type: none"><li>• Generation of large number of ideas on a continuous basis,</li><li>• Filtering and governance of the most applicable and practical ideas,</li><li>• Generation of talent that can convert ideas into reusable automation tools/apps</li></ul>
<b>A STRONG INFRASTRUCTURE SUPPORT FRAMEWORK</b>	<p>A strong infrastructure support network that has virtual environment hosting/management, server hosting/management, automation product installation and service capability</p>
<b>RIGHT TOOL FOR THE RIGHT OPPORTUNITY</b>	<p>Capability assessment of various tools used for automation to get the optimum output, expedite the journey and maximize the return on investment</p>
<b>IT SECURITY AND COMPLIANCE</b>	<p>Robust monitoring and security governance structure to ensure all the tools and related infrastructure developed are compliant with IT security policies and risks policies of the organisation</p>
<b>IMPLEMENTATION APPROACH AND GOVERNANCE</b>	<p>Comprehensive governance framework which should include:</p> <ul style="list-style-type: none"><li>• Change management to drive business process changes,</li><li>• Demand supply management to manage stakeholder expectations,</li><li>• Controls to ensure proper adoption of the “new processes” by the business</li></ul>
<b>BUILD TRUST IN AUTOMATED SYSTEMS</b>	<p>Explain methodology for automation, showcase the automated system and achieve early successes through pilots</p>

# DELIVERING ON THE PROCUREMENT AUTOMATION AGENDA

Developments in intelligent automation technology herald a major inflection point for the procurement function. Organisations that fail to invest now to take advantage of these developments will not capture the benefits and over time will become industry laggards. Conversely, those procurement organisations that embrace this revolution will be able to unlock more value, boost growth and deliver a superior return on investment. Knowing how to approach and implement this new agenda with a clear roadmap will be the key to success.

## MEET THE SUBJECT MATTER EXPERTS

### **JAMES LAYARD**

[j.layard@accenture.com](mailto:j.layard@accenture.com)

### **MANUELA MAIER**

[manuela.maier@accenture.com](mailto:manuela.maier@accenture.com)

### **RAVI BEDI**

[ravi.bedi@accenture.com](mailto:ravi.bedi@accenture.com)

### **GEORGE GREVETT**

[george.grevett@accenture.com](mailto:george.grevett@accenture.com)

### **ZEESHAN PANDJOU**

[zeeshan.pandjou@accenture.com](mailto:zeeshan.pandjou@accenture.com)



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Accenture’s Sourcing & Procurement Team helps clients in the ASEAN region enable Procurement through digital. We bring the latest digital trends to our clients’ procurement operating model, defining and enabling a digital procurement roadmap to realise functional objectives. The team is focused on ensuring our clients leverage emerging digital disruptor technologies such as RPA and AI to alter their procurement fundamentals.