Everest Group
RESEARCH

Service Delivery Automation (SDA) Market in 2014 – Moving Business Process Services Beyond Labor Arbitrage

Finance & accounting (F&A), Procurement (PO), Human resources (HRO)
Market Report: October 2014

EGR-2014-1-R-1264

Our research offerings for global services

Subscription information

- This report is included in the following subscription(s)
  - **FAO, PO, and HRO**
- In addition to published research, a subscription may include analyst inquiry, data cuts, and other services
- If you want to learn whether your organization has a subscription agreement, or request information on pricing and subscription options, please contact us:

Corporate Headquarters
Office: +1-214-451-3000
info@everestgrp.com

European Headquarters
Office: +44-207-129-1318
unitedkingdom@everestgrp.com

Market Vista™
Global services tracking across functions, sourcing models, locations, and service providers – industry tracking reports also available

BFSI[1] information technology	PricePoint™
BFSI[1] business process	Finance & accounting
Healthcare information technology	Procurement
Information technology	Human resources
Cloud Vista™	Recruitment process
Global sourcing	Contact center
Locations Insider™	Transaction Intelligence

Custom research capabilities
- Benchmarking | Pricing, delivery model, skill portfolio
- Peer analysis | Scope, sourcing models, locations
- Locations | Cost, skills, sustainability, portfolio – plus a tracking tool
- Tracking services | Service providers, locations, risk
- Other | Market intelligence, service provider capabilities, technologies, contract assessment

1 Banking, financial services, and insurance

Everest Group RESEARCH

Table of contents (page 1 of 2)

Topic	Page no.
Background and methodology	**5**
Introduction and overview	**6**
• Business process automation – why now?	7
• First principles of Service Delivery Automation (SDA)	8
• Major segments of SDA	9
• Business Process Service Delivery Automation (BPSDA)	10
• Advances in technology driving adoption	11
• Automation at different stages of processes	12
• Everest Group's SDA automation architecture	13
• Five segments of common automation technologies	14
• BPSDA – the focus of this report	15
Summary of key findings	**16**
Market overview and buyer adoption trends	**18**
• Summary	19
• Landscape of SDA and key definitions	20
• Market size and growth	24
• Drivers and benefits	28
• Approach to adoption	30
• Barriers	32

Table of contents (page 2 of 2)

Topic	Page no.
Value proposition and solution characteristics	**33**
• Summary	34
• Business case	35
• Process and solution scope	39
• Case studies	41
• Implementation and ongoing considerations	43
Section III: Service provider landscape	**47**
• Summary	48
• Service provider landscape and categorization	49
• Service provider challenges	57
• SDA threat and opportunity	58
• Impact on pricing	59
Section IV: Outlook for 2015	**60**
Appendix – List of SDA software vendors and consultancy providers	**63**
Additional research references	**66**

Background and methodology

Background of the research
Outsourced and internal service delivery models for both IT and business processes have gone through a decade of focusing on labor arbitrage to generate cost savings. With increasing demands for additional value from services and the maturation of enabling technologies, the opportunity for lowering costs through automation is rapidly emerging.

In this research, we analyze the market that we broadly refer to as "Service Delivery Automation" (SDA) and with a primary focus on business process services. This SDA report is focused on technologies that are currently the most disruptive in the market – these are robotic technologies and artificial intelligence.

The analysis covers trends, key applications of automation technology, indications of market size and geographic spread, and the broad service provider landscape. We focus on:

- Overview of different types of process automation technologies
- Key definitions to describe the automation landscape
- Market size, value proposition, drivers, and challenges
- Solution characteristics
- Service provider categories and capabilities

The scope and methodology of this report includes:
Uses of SDA in business processes, while excluding IT services (which has a very broad spectrum and will be covered in other Everest Group research). Coverage across all major industries and functional areas.

Contents

- **Introduction and overview**
- Summary of key messages
- Market overview and buyer adoption trends
- Value proposition and solution characteristics
- Service provider landscape
- Outlook for 2015
- Appendix

Business process automation – why now?

- In the 1990s, ERP and shared services concepts fuelled the emergence and growth of centralized finance & accounting, HR, procurement, and other business functions. In addition to providing cost savings, these provided other benefits such as more predictable and transparent business operations
- Since the turn of the century, offshore labor arbitrage has driven a new round of cost savings by lowering the human costs of performing the associated services
- As the use of offshore has begun to reach saturation, organizations are looking for further ways to cut costs and achieve additional objectives, such as improved service, optimize processes, and reshoring
- The next wave of cost savings is gathering pace and is focused on replacing manpower with technology in service delivery. Although this basic trade-off has a long history, what is new is the ability to complement existing legacy technologies with new automation technologies that minimize disruption, while also having more easily justifiable business cases
- In short, automation of service delivery is the next big trick – one that promises cost savings, while also creating other benefits such as reduced errors, faster operations, and 24X7 coverage

First principles of Service Delivery Automation (SDA)

1

Automation – at its most basic level – must utilize technology to replace a series of human actions. Correspondingly, not all technologies provide automation, and replacing a single human action with technology (e.g., a mathematical equation in a spreadsheet) is not automation. At the same time, automation can be done by degrees, but some steps will still require human interaction

2

Much automation is already embedded in software systems (e.g., linking customer information across finance and procurement functions), but since it is part of the normal feature-functionality of a system, it is generally not considered as automation, but rather simply a more powerful system(s)

3

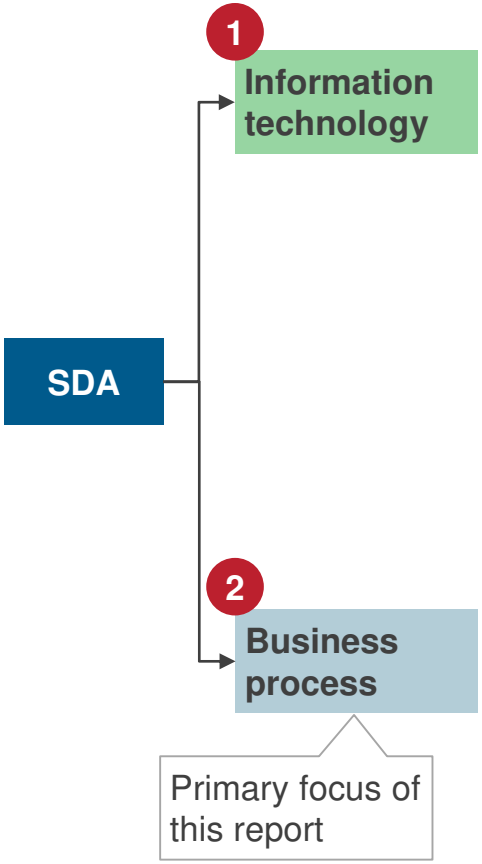
Automation for IT is very different than for business processes:

- In IT, automating is generally addressed by improving the core functionality and handled by the IT system management tools. Further, these activities are owned by central IT, which is naturally incented to create more efficient IT operations
- In business processes, the limitations of systems are generally much more difficult to overcome and follow a process which stretches across many systems in the organization. As such, the business case for significant system change is generally unappealing. Finally, the benefits of improved processes accrue to the business and are hard to quantify with a ROI which can motivate central IT groups to invest its resources

4

Service delivery automation can be accomplished by combining multiple technologies. For example, traditional Business Process Management (BPM) technologies can be further enhanced by combining with newer UI/robotic process tools. Or, a cognitive artificial intelligence tool can help structure and clean data before it is passed through a process tool that will identify exceptions to be handled manually. Further, the entire process need not be fully automated – partial automation is also highly valuable and the most common approach

SDA has two major segments that cover computer- enabled service delivery



	Uses	Examples
Information technology	• Infrastructure deployment • Fix and repair • Run book automation • **Note:** Can include other elements of the software development lifecycle as well	• Automate infrastructure such as: – Networks; demand increasing with the rise of software-defined networks – Hardware or service provisioning – Performance monitoring, management, and self-healing • Software development and life cycle management: – Repeatable activity – Dealing with scale and complexity • Transformation and modernization – using performance data to find areas for improvement and modernization
Business process	• Transactional process execution	• Handling high volumes of repetitive administrative tasks, e.g., invoice settlement or benefits application processing • Seeking and identifying patterns that can indicate unusual situations or activity, e.g., a deadline about to be breached or potential fraudulent activity • Gaining commercial intelligence, e.g., used in price optimization in the travel and hospitality sector • Front-office services such as automated voice as well as in-bound document handling

Business Process Service Delivery Automation (BPSDA) is primarily driven by the opportunity to further reduce costs

Business case benefits

- The business case for automating repetitive high volume transactional business processes is based upon large savings on FTE costs
- Some case studies indicate accumulative FTE reduction over time of 80 to 85%, although the likely common range is 30 to 50% in areas for which automation is feasible
- Some see automation as an alternative to offshoring, keeping work onshore, but automated
- Additionally, automation can help further enable initiatives such as consolidation, standardization, and offshoring
- Increasing productivity for competitive advantage and growth

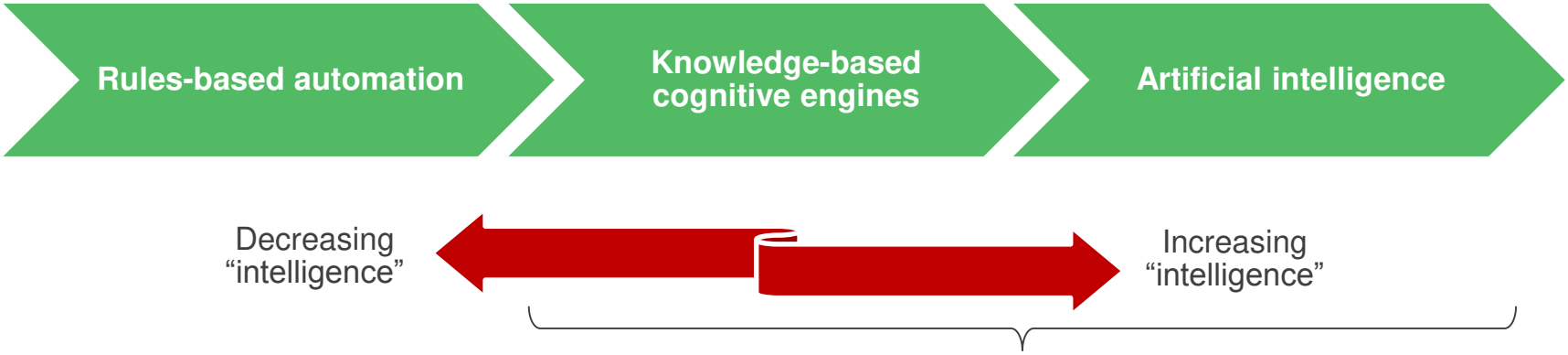
Service Delivery Automation (SDA)

Other benefits

- Freeing up resources to do higher-value work
- Improving process quality by embedding quality standards in rules
- Improving governance and regulatory compliance by embedding requirements processes
- Enabling ability to scale up operations to cater for growth, or run machines longer at times of high demand (more than what typical human-based staffing would allow)
- Enables reallocation of work including reshoring

Increased adoption is boosted by advances in technology that are expanding the spectrum of automation tools and with increasing intelligence

- In BPSDA, the term “robotic” is often used to mean all types of process automation
- In actual practice, robotic is only a type of automation where software interactions are undertaken through the User Interface (UI)
- Robotic tools typically have no in-built intelligence, but are ***highly rules-based*** with underlying screen- scraping capabilities
- RPA is focused on automating tasks that depend on ***structured data*** (data in spreadsheet, CSV, and XML)
- Easier implementation and management of this type of automation is increasing adoption



- Knowledge or cognitive tools work largely with ***unstructured data*** as input (e.g., email and documents)
- They have the ability to learn from experience to expand their knowledge base and, therefore, learn how to process different requirements
- These typically interact through connectors and Application Programming Interfaces (APIs) – they are not robotic

Automation tools can be applied at different stages of processes and can be combined for maximum efficiency

- The output of one process can also act as an automatic trigger for the next to start
- The automated triggering can be done through traditional workflow or complex event processing, or as a step in the automation process to activate the next process in the chain of operations
- AI and robotics combined can lead to automated processing of unstructured inputs end-to-end

Everest Group's SDA automation architecture

Automation can be applied at different layers of the process stack and from the supporting IT and platform, all the way up to actual business processes

Business process level

Generic automation
Enabling tools which can be applied to many situations regardless of the context of what the automation is accomplishing

Activity-specific automation
Tools which are designed to be relevant only in the context of certain types of activities (e.g., contact center, doc. processing)

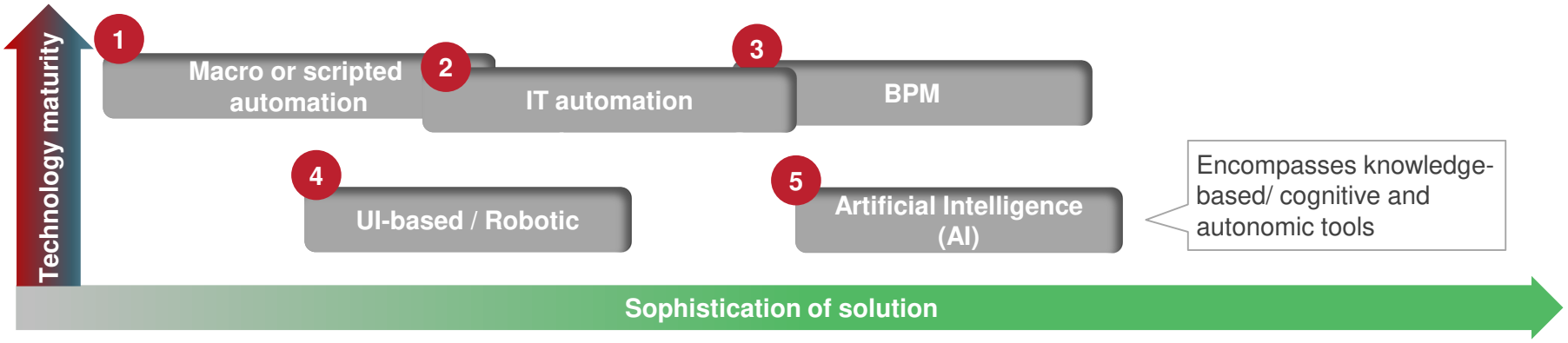
Industry-specific automation
Tools which are configured to be applicable to industry-specific activities (e.g., price comparisons and compliance)

Technology level

Application development, management, and testing automation
Managing the entire application life cycle from concept, design, build, to test, resulting in reduced time-to-market and increased product quality

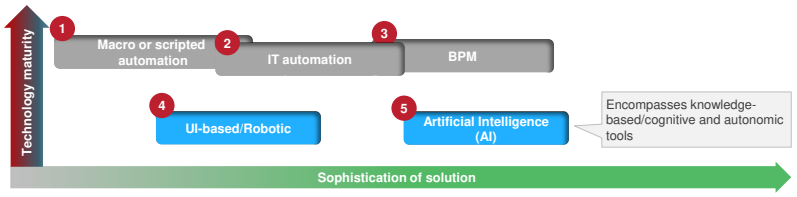
Infrastructure automation
Addressing the complete infrastructure cycle across architecting, deploying, provisioning, and support functions

The most common automation technologies can be segmented into five basic areas



	Maturity	Scope of effectiveness	Limitations
Macro or scripted automation	Very high	Can be highly effective for specific tasks	Typically tactical deployments, that are difficult to maintain over periods of time
IT automation	High	Highly effective in a number of areas including software life cycle and service provisioning	Less effective in application production and run book environments
BPM	Very high	Can be highly effective as it can be deployed at scale	Can be tactical or strategic with ability to deal with scale. Can become too complex/costly
UI-based / Robotic	Recent – new take on old screen-scraping technology	Can be highly effective for repetitive administrative tasks	Often deployed tactically. Potentially low resilience to change, e.g., operating environment
Artificial Intelligence	Relatively new technology	Can be highly effective, particularly for repetitive administrative tasks, or ITSM	Robustness and resilience to change to be demonstrated in large scale operations, but AI technologies learn from experience to find ways of handling unexpected scenarios

For the purpose of this report, we focus on a sub-segment of the technologies and uses



Generic automation
Enabling tools which can be applied to many situations regardless of the context of what the automation is accomplishing

Activity-specific automation
Tools which are designed to be relevant only in the context of certain types of activities (e.g., contact center, doc. processing)

Industry-specific automation
Tools which are configured to be applicable to industry-specific activities (e.g., price comparisons and compliance)

Application development, management, and testing automation
Enhancing application performance and testing by converting repetitive human activities into pre-determined rules

Infrastructure automation
Managing infrastructure operations such as issue identification, resolution, escalation, and reporting

Scope of the report

- Focuses primarily on the intersection of UI-based / robotic technologies and artificial intelligence, with uses in generic tools for business activities and activity-specific automation
- This intersection is where the greatest disruption to traditional service delivery centers is being debated and observed

Areas out of scope of the report

- Automation, not covered in detail in this report, includes bespoke coding of macros/scripts, IT automation, and BPM (one, two and three in the above diagram)
- Excludes vertical tools such as price web scraping software for the travel industry
- For more information on IT infrastructure and application development, management, and testing automation, see Everest Group's IT service research

Contents

- Introduction and overview
- **Summary of key messages**
- Market overview and buyer adoption trends
- Value proposition and solution characteristics
- Service provider landscape
- Outlook for 2015
- Appendix

Summary of key findings

The market

- The market is driven by buyers becoming increasingly focused on higher value, beyond labor arbitrage and basic process efficiency
- BPSDA is an emerging and disruptive trend that is changing offshoring, pricing, and the service provider landscape
- An indicator for growth is third-party automation software vendor revenues and forecasts - Everest Group estimates a conservative growth rate of 32% CAGR, to 2015 for BPSDA
- Dominant sectors and geographies are banking and financial services in United States and United Kingdom

Buy-side adoption

- Buy-side deployments continue to be tactical, driven by specific requirements such as a major backlog of orders generated by system, staffing problems, or by external factors (e.g., a flood leading to peak in insurance claims or a change in regulation/legislation)
- Deployments driven by such needs are, therefore, typically tactical in their vision and initial scope
- The approach typically involves building a Proof of Concept (POC) or a pilot, and if successful, extending to full rollout
- Deployment is typically undertaken by business – not by IT

Service provider strategies

- Service providers are responding differently to the BPSDA disruption:
  - Some, such as Sutherland Global Services, have embraced it as a competitive differentiator
  - Others, such as Capita, Infosys, and Steria, are only just starting to increase visibility of their capabilities
- Others are yet to formalize a strategic approach in place of ongoing tactical deployments
- The approach to adoption is mixed, with use of their own IP and/or partnering with third-party technology providers
- A new wave of service providers focused on automated Business Process-as-a-Service (BPaaS) is emerging

Contents

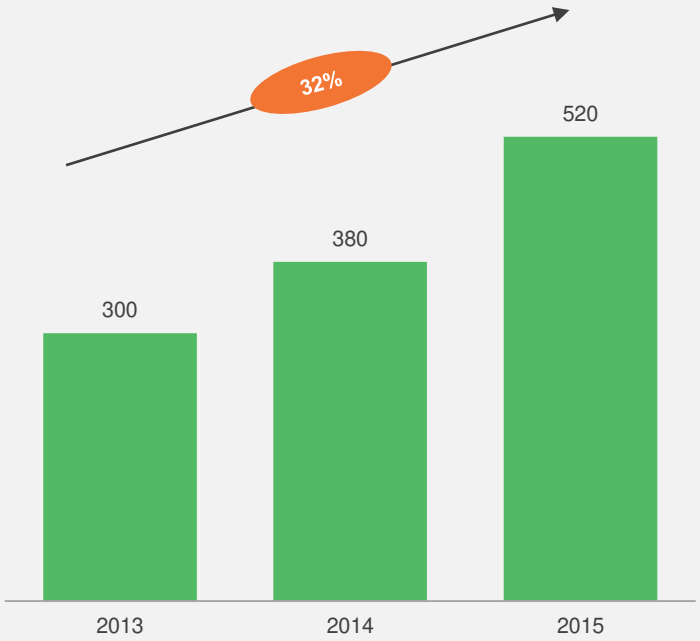
- Introduction and overview
- Summary of key messages
- **Market overview and buyer adoption trends**
  - **Summary**
  - **Landscape of SDA and key definitions**
  - **Market size and growth**
  - **Typical motivations for automation**
  - **Adoption trends and challenges**
- Value proposition and solution characteristics
- Service provider landscape
- Outlook for 2015
- Appendix

Summary of key messages

Market overview and buyer adoption trends

- Advances in software integration and increasing availability of cognitive engines are increasing the appeal of BPSDA
- The developments in technology have coincided with increased focus on automation as the next lever for cost reduction, in particular by organizations that are mature in outsourcing
- While labor arbitrage and lean methodologies have generated on-going year-on-year efficiencies, it is the promise of a step change that is driving demand for automation
- Benefits include increased speed, volume, and quality of transactions
- Inhibitors include conceptual barriers such as whether robots can perform as well as people when delivering business processes
- The market for business process SDA technology is set to grow very strongly
- Based on third-party automation software vendor revenues and forecasts, Everest Group estimates a conservative growth rate of 32% CAGR, to 2015 for BPSDA
- This estimate excludes automation software capabilities of service providers which are hidden within their offerings
- Although third party vendors have accumulated a large number of major organizations as clients, their revenues remain relatively small, indicating small tactical deployments by large organizations
- The banking & financial services sector leads adoption of business process automation third-party software
- United States and United Kingdom show the highest propensity for adopting automation technologies

Market size by third-party process automation software vendor revenue
US$ million



Business process SDA is a burgeoning market, driven by intelligent tools, modernized techniques, and good marketing

Technology

While the ability to automate processes has been around for a long time, it is the increasing ease of software integration and the emergence of cognitive / self-learning tools that are increasing its appeal

Appeal of RPA

Transformation of screen-scraping concepts and clever marketing & branding by some vendors has led to a good deal of buzz about RPA

Case studies

In business process management, the availability of successful case studies (such as that of npower's use of Blue Prism) has coincided with organizations looking to go beyond labor arbitrage and offshoring to generate bigger cost savings

The role of cloud

Cloud is both a driver and an enabler of automation:

- Driving the need for automation as part of orchestrating services across hybrid environments and growing scale of IT operations in every organization
- Robotic software solutions are now often "in the cloud" rather than on thousands of desktops and, thus, are relatively easy to deploy

Key definition #1: Business process SDA

BPSDA can encompass three different portions of the process:

Automation of inputs to a process

- Contact management
- Content scraping from websites

Automation of the business process

- Administering PO and invoices
- Checking for unusual patterns in transactions
- Dealing with specific scenarios, e.g., exceptions that can be handled based on known rules

Automation of outputs from the process

- Outward contact management, e.g., e-mail confirmations
- Internal notifications
- Events generated to activate follow-on processes in other functions

Key definition #2: Robotic Process Automation (RPA)

Robotic Process Automation (RPA) is a subset of BPSDA

It refers to automation which interacts with a computer-centric process through the UI of the software which supports that process

It processes structured data

This type of integration through the UI is sometimes referred to as non-invasive. In other words, data is entered/extracted through the UI of the software with no need for deeper software or data integration – in effect, behaving as if an actual user was at the keyboard using the software

This is important to outsourcing service providers who cannot modify client's IT systems

Example use cases

- Transaction processing
- Data entry in high volume, repeatable, computer-centric processes
- In system upgrade scenarios, double and concurrent data entry into old and new systems during the period of change

Some examples of robotic automation technology vendors

AUTOMATION ANYWHERE Go be great.

blueprism

DESKOVER

Key definition #3: Automation based on cognitive tools

A subset of SDA, cognitive tools build a process-related knowledge base and use it in combination
with a set of business rules to automate processes.
These can be used in IT services as well as business processes

Cognitive tools handle unstructured data

Cognitive tools have machine learning capabilities which equip them to learn from experience and to expand their knowledge base. Cognitive tools use business rules to automate processes, but can also use predictive tools to infer some operational decisions. This allows them to infer the correct way to deal with situations that might not match pre-compiled rules

Example use cases

- High volume, repeatable, administrative and computer-centric processes
- In-bound document processing for contact centers
- Claims processing for the insurance sector
- Rewards processing for the telecom sector

Example of cognitive automation technology vendors

arago

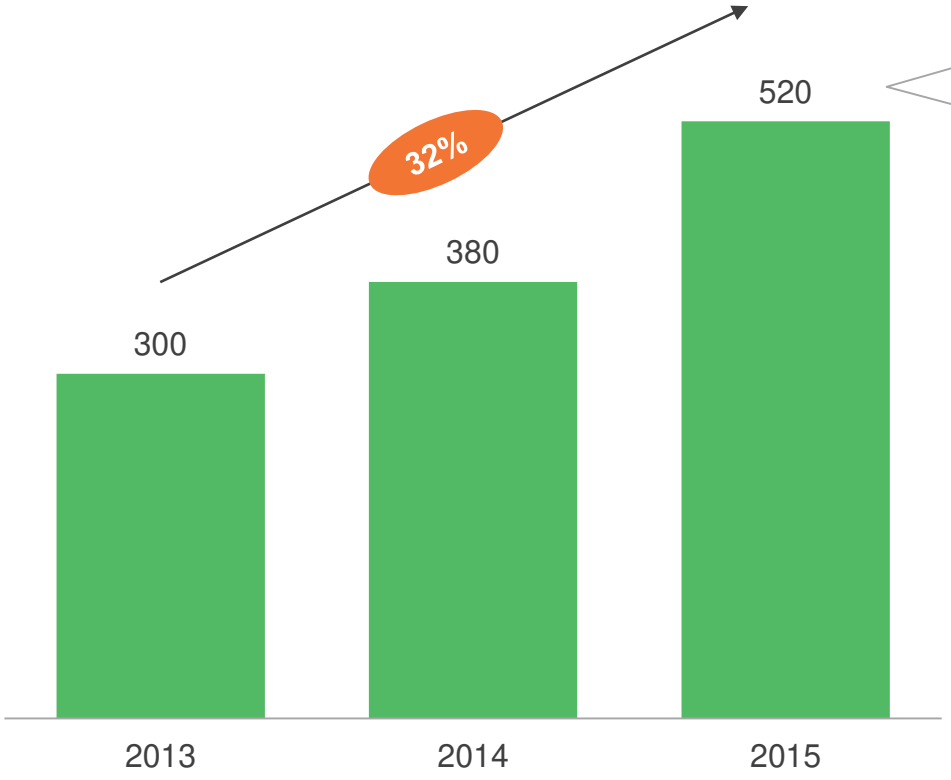
Celaton

IPSOFT

Note: arago and IPsoft are used in IT automation currently. However, IPsoft is due to release a cognitive engine for business processes soon. arago has a cognitive engine

The market for business process BPSDA technology is set to grow strongly, by 32% CAGR, by 2015

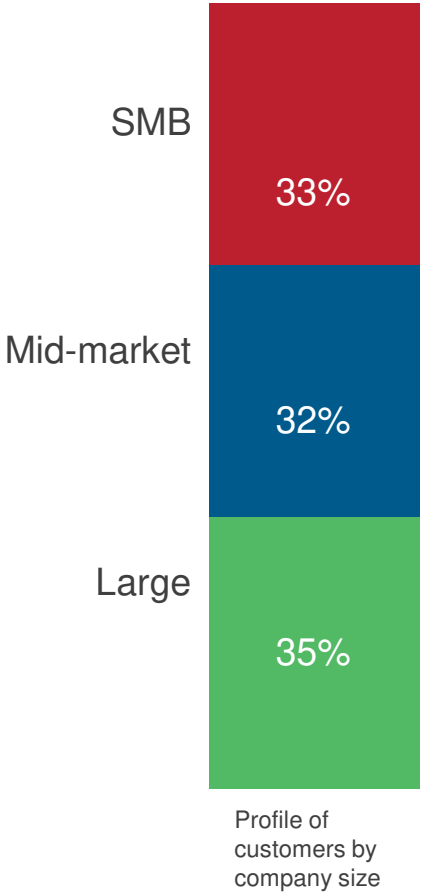
Market size by third-party process automation software vendor revenue
US$ million



- Many service providers have their own automation software
- The market size estimates exclude any revenue from the sale of service providers' own software

Estimates are based on third-party automation software vendor revenue and estimated growth
Sample size: 10 automation software vendors
Source: Everest Group (2014)

Organizations of all sizes are interested in SDA



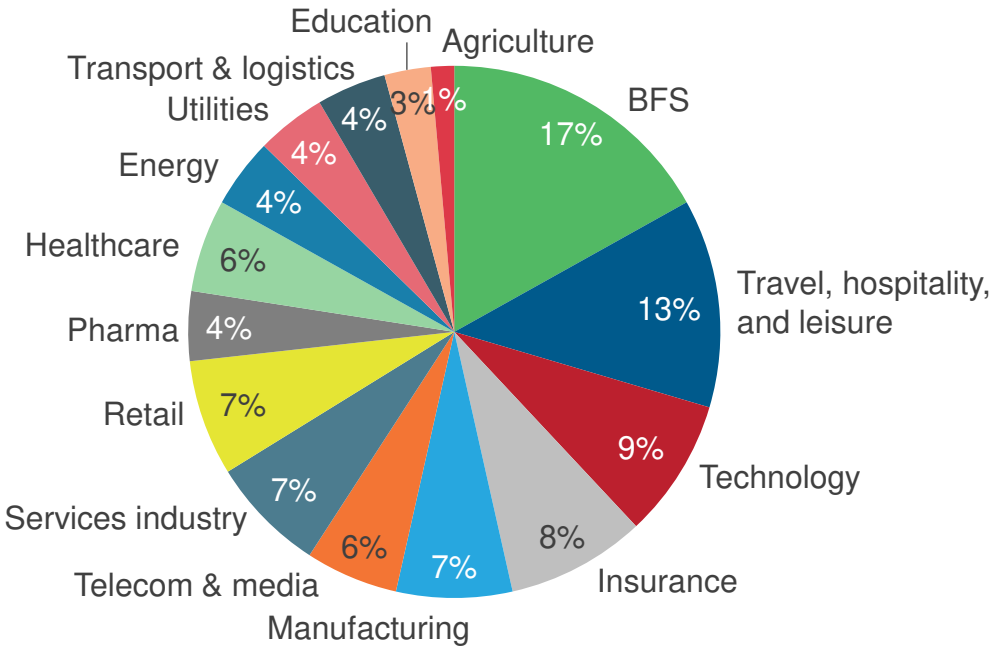
Profile of customers by company size

Analysis[1] of existing clients of third-party automation software vendors indicates that:

- The vendors have accumulated a large number of major organizations as clients
- The contrast between the software vendors' relatively small revenue and the large client base indicates small tactical deployments – even by large organizations:
  - Many buy-side organizations are yet to tackle strategic deployments of SDA technologies
  - This provides opportunities for service providers who embed automation in their offerings to mitigate the chance of strategic deployments from clients

1 Everest Group analyzed profiles of the customers that were listed on automation vendor's websites with a sample size of 72
Note: Large is annual revenue greater than US$10 billion, mid-market between US$1 billion and US$10 billion, and Small Medium Businesses (SMB) is less than US$1 billion
Source: Everest Group (2014)

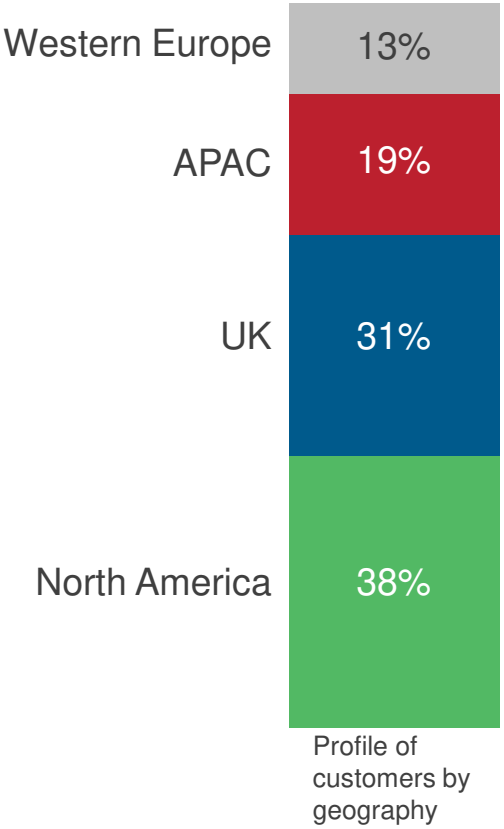
Banking & financial services sector leads adoption of business process automation software



- The highly transactional and regulated nature of the banking business makes it an ideal candidate for process automation with built-in compliance
- Travel hospitality and leisure business is also highly transactional and data driven
- The fact that the technology sector is adopting automation is unsurprising. It is more surprising that the adoption is not higher, given the nature of the business of the industry
- The move by the manufacturing sector to automate business processes is an extension of what the sector has largely achieved in the assembly line
-

Sample size: 71
Note: Everest Group analyzed profiles of customers that were listed on automation vendors' websites
Source: Everest Group (2014)

North America and United Kingdom show the highest propensity for adopting automation technologies



- Almost 70% of the SDA technology customers[1] are based in North America and United Kingdom
- Adoption of automation shows opportunities for outsourcers to leverage automation capabilities to win contracts:
  - Service providers can appeal to clients' readiness for process automation, and help them take more advantage of technology through capabilities built into outsourcing services

1 Everest Group analyzed the profiles of customers listed on automation of technology vendors' that were listed on their websites
Sample size: 72
Source: Everest Group (2014)

Continuous pressure on costs is driving automation to achieve a step change in performance

Drivers

- Organizations and service providers alike, are looking for the next cost lever that they can pull
- The pressure on margin is continuing
- Repetitive high volume transactions can become a commodity, with staff moving to higher-value activity

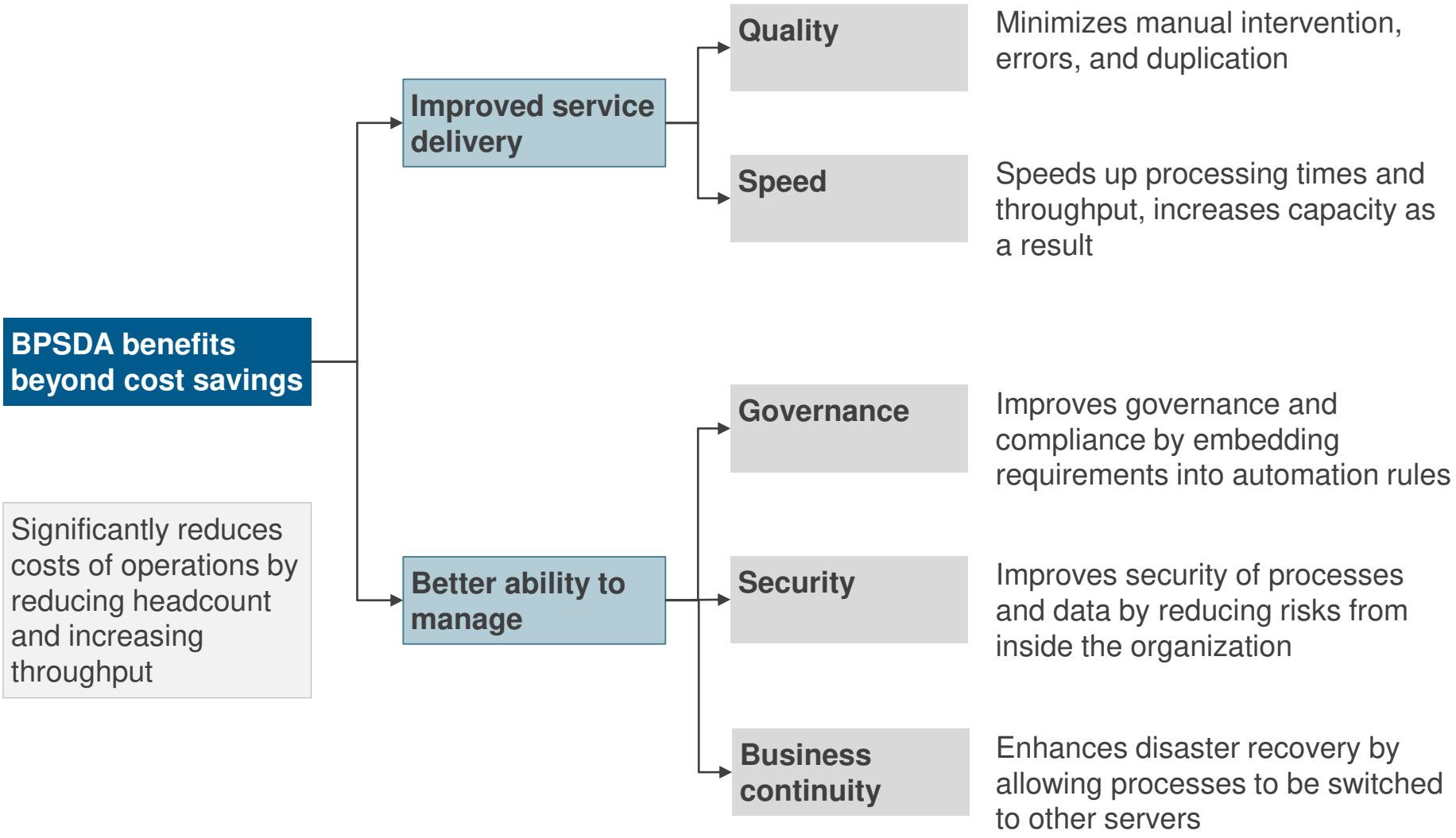
Beyond lift and shift

- Adopters of business process SDA are typically organizations which have already lifted and shifted services to a central group and/or to outsourcers for industrialized delivery
- They have moved service delivery to lower-cost locations - offshore, nearshore, or onshore

Need a step change in improvements

- There is a need to significantly improve performance year-on-year, going well beyond the levels that are achievable through traditional approaches such as Six Sigma and lean
- Automation can offer significant accumulative cost savings against the costs offshore FTEs

Importantly, the benefits of BPSDA go beyond costs to improve service delivery plus better ability to manage



However, most buy-side organizations are largely piloting BPSDA through tactical deployments motivated by an urgent requirement vs. strategic vision

Drivers for change

- More and more organizations are looking to automate repetitive tasks such as F&A subprocesses
- The main driver is usually an urgent requirement such as processing a major backlog of orders, generated by system or staffing problems, or by external factors (e.g., a flood leading to peak in insurance claims or a change in regulation/legislation)
- Deployments driven by such needs are therefore typically tactical in their vision and initial scope

Approach

- Organizations tend to start small, first build a Proof of Concept (POC) or pilot automation
- Once successful, the POC or the pilot is extended to full rollout
- Deployment is typically undertaken by business – not by IT
- Business architecture groups that bridge business and IT are ideally placed to build implementations
- These groups often become an automation center of excellence (and may emerge from a process reengineering group, taking on additional scope of work)

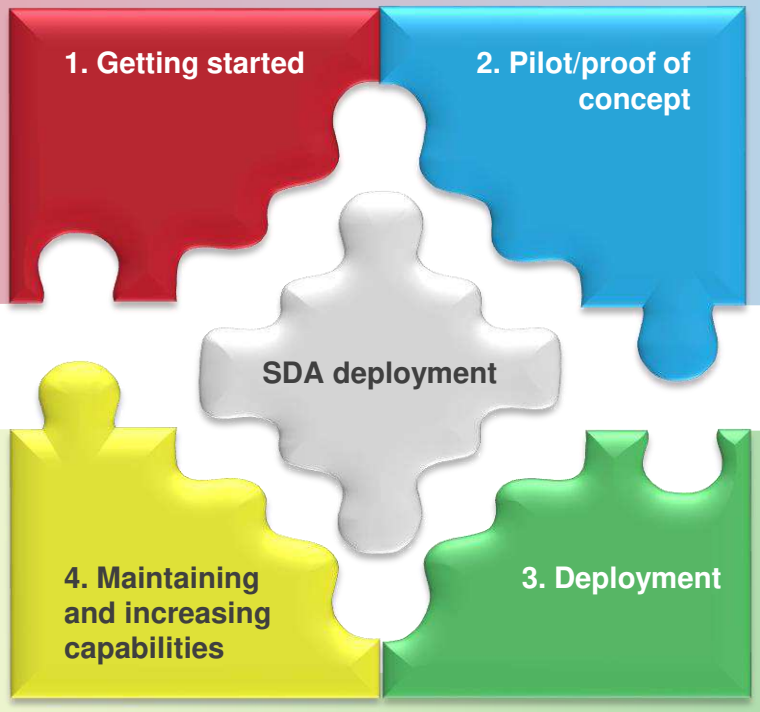
Future direction

- As organizations become more experienced, tactical deployments will be replaced by more strategic ones
- Global in-house Centers (GICs) are likely to begin adopting automation to reduce their costs as part of their strategy to remain competitive to avoid being replaced by, or outsourced to service providers

As a result, organizations end up adopting a pilot or "proof of concept" approach in order to gain organizational buy-in and learn how to utilize automation

Getting started
- Overcoming conceptual barriers to automation
- Selecting the right processes
- Choosing the right technology
- Developing the skills for automation

Trying it out
- Getting backing and funding for a pilot or Proof of Concept (POC) Defining the scope of the pilot/POC
- Benchmarking existing operations
- Managing stakeholder expectations

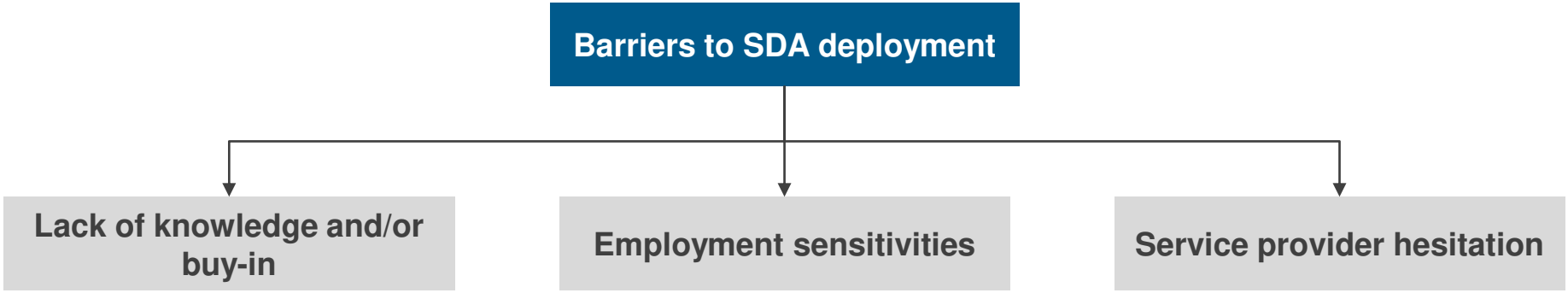


Running automations
- Keeping automations working when changes to systems happen
- Maintaining rules
- Ensuring operations with governance and controls
- Ensuring continuity of operations
- Identifying other processes for new automations

Moving to full scale roll out
- Acting on lessons learnt from the pilot/POC
- Scaling up from the pilot/POC and parallel running with live operations
- Ensuring resilience in automations
- Managing automation lifecycle
- Linking it to platform lifecycle

Although most organizations use an incremental approach to testing and applying BPSDA, a more strategic and holistic program would provide increased benefits.

The primary barriers to successful deployment include lack of knowledge about software robots and their effectiveness in process delivery



- Lack of knowledge about types of automation technology
- Concerns that robots can do as good a job as people when delivering business processes
- Can be seen as counter to personalization of services
- IT departments, in particular, are resistant

- Replacing staff with robots in some sectors such, as government, could become a political minefield in countries where there are still high-levels of unemployment and lingering recession
- However, most adopters redeploying resources versus eliminating roles

- Some service providers are resisting change to protect the FTE-based pricing model
- Few providers seem to have a coherent strategy to adopt SDA to gain competitive advantage

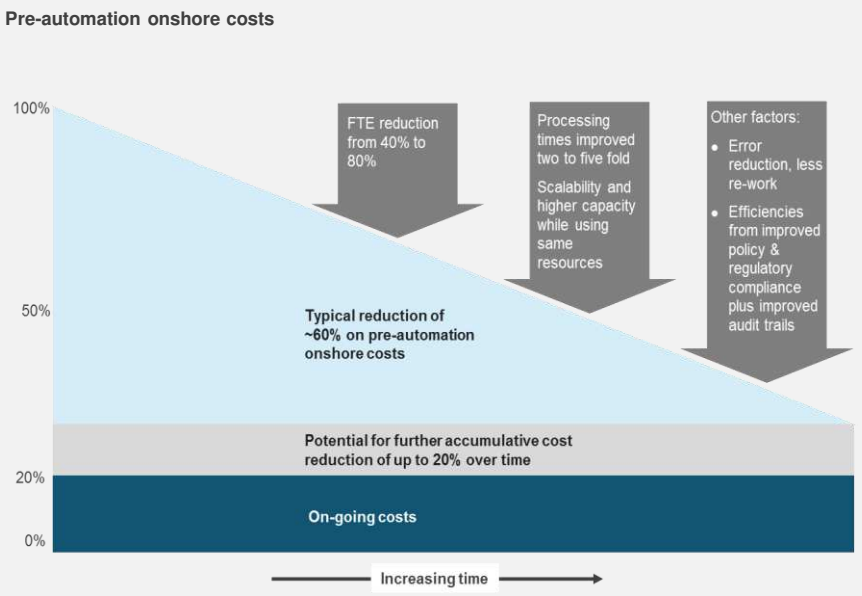
Contents

- Introduction and overview
- Summary of key messages
- Market overview and buyer adoption trends
- **Value proposition and solution characteristics**
  - **Summary**
  - **Business case**
  - **Process and solution scope**
  - **Case studies**
  - **Implementation and ongoing considerations**
- Service provider landscape
- Outlook for 2015
- Appendix

Summary of key messages

Value proposition and applications

- Typical reduction of ~60% on pre-automation onshore costs is possible through combining offshoring and automation
- Over time, there is potential to further reduce costs by up to another 20%
- The BPSDA value proposition goes well beyond labor cost savings, though. Benefits of scale, speed, and quality are enhanced by aspects such as ability to apply policy, governance, and legislative compliance uniformly across processes
- Achieving benefits comes with some hidden, non-financial costs such as:
  - A reduction in FTEs who know processes in detail, leading to a loss of skills and knowledge
  - Increase in likelihood of very large-scale errors in highly automated and high-volume transaction processing (e.g., getting an aspect of a particular type of payments wrong, leading to overpayments or fines)
- Business processes of many types are candidates for SDA (e.g., insurance claims processing, invoice processing, and benefits payment processing)
- Automation of high-volume transactions offers the biggest cost savings opportunity
- Automation can be applied at different stages of a process - input, the core, and the output – with the benefits accumulating at every stage

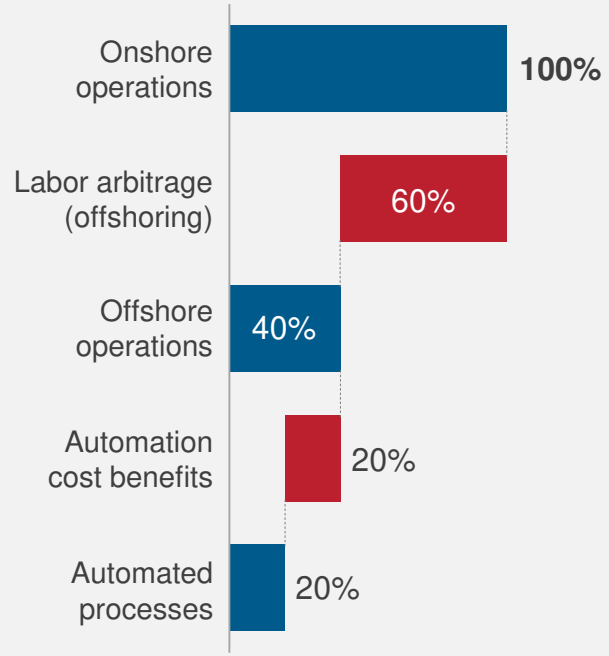


Advantages of automation and offshoring add up to significant value realization and a compelling business case

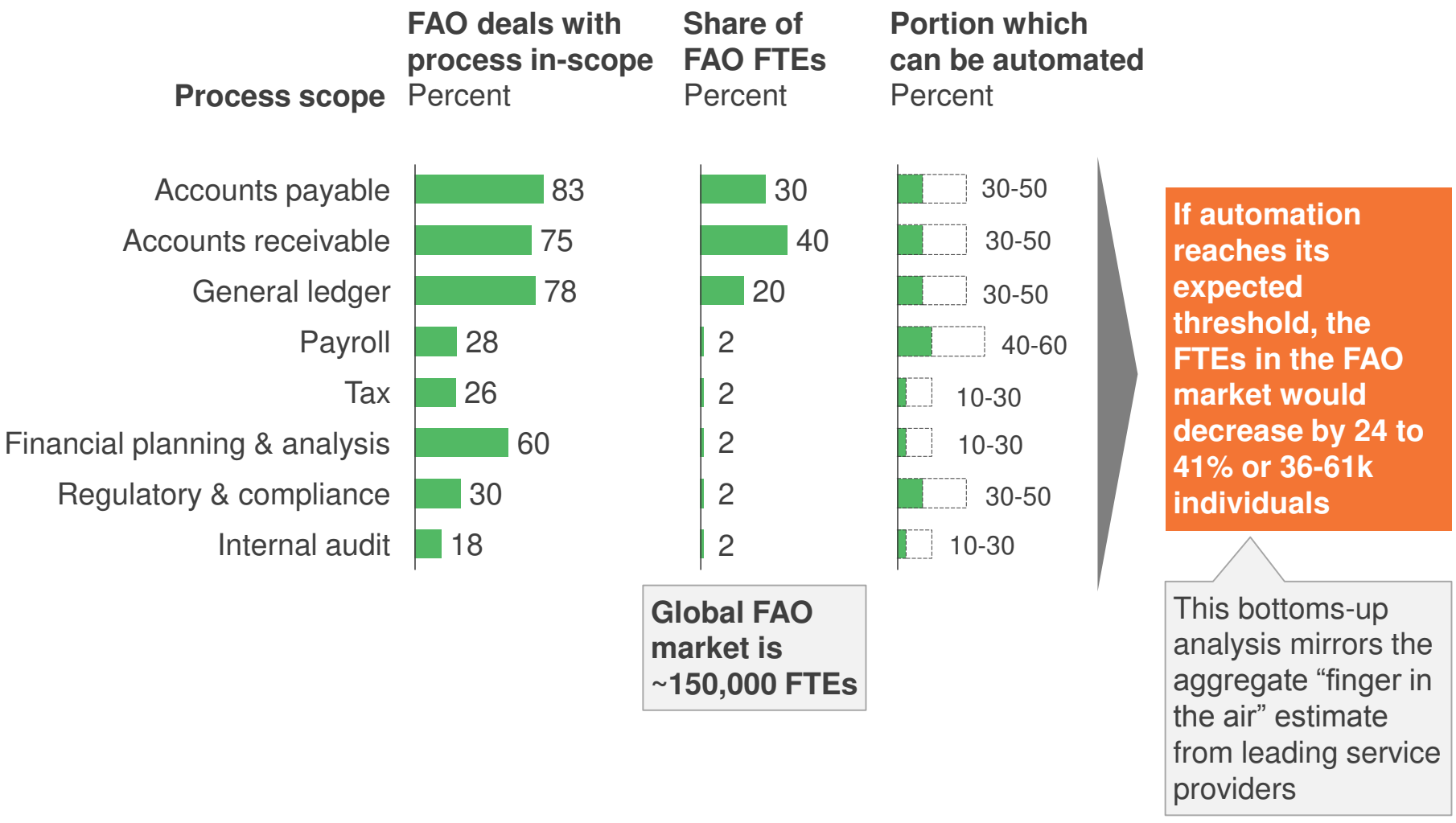
Value proposition of SDA

Productivity and efficiency	Automation tools are at least twice as fast as human FTEs, and can function 24x7 depending upon server up-time. Automation enables people to focus on value-add tasks
Accuracy	Automation eliminates manual intervention, thereby reducing the number of errors created
Cost savings	Automation tools are up to 65% less expensive than offshore-based FTEs (accounting for productivity)
Compliance	Besides increased accuracy, automation allows data and processes to be retained onsite
Scalability and flexibility	The ability to replicate & increase automation using SaaS enhances scalability and flexibility
Process & data security & DR	Reducing internal risks of staff walking away with passwords and data; easier to transfer operations in Disaster Recovery (DR)

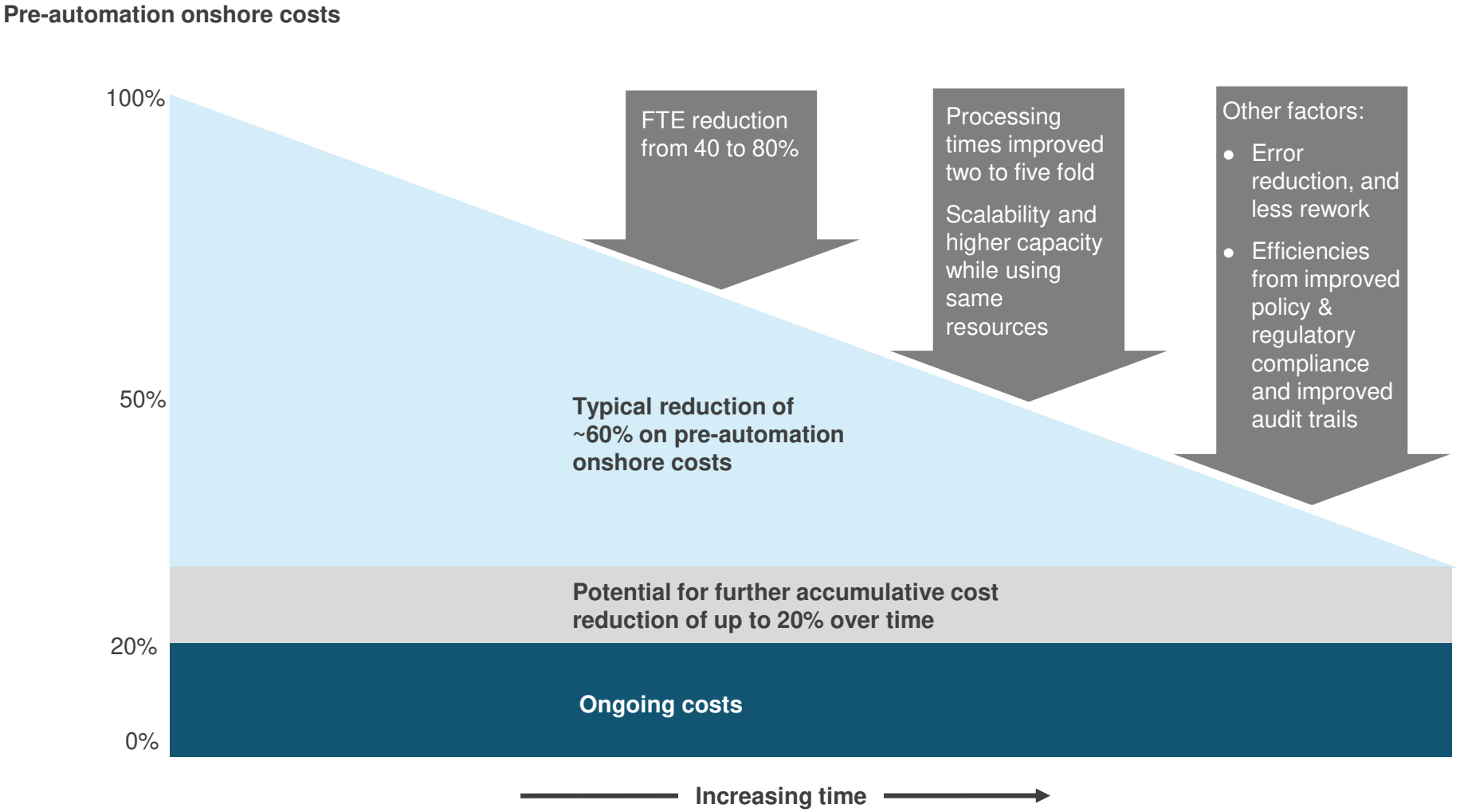
Potential impact of automation on process cost
Percentage



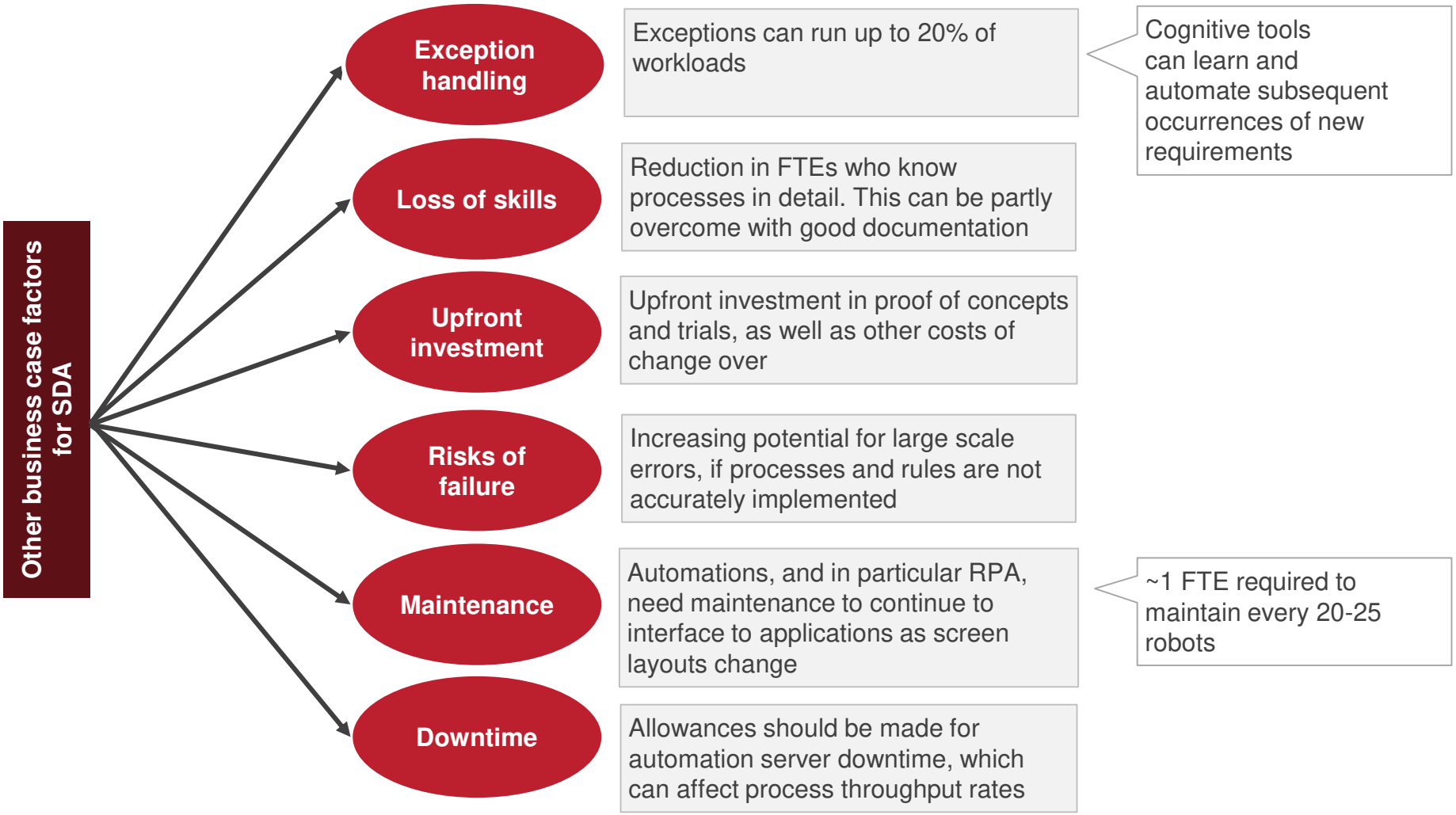
Although the journey may take considerable time, leading opinion suggests 25 to 40% of FTEs working in major BPO markets like FAO could be replaced by automation



Overall automation and offshoring cost benefits accumulate over time from FTE reduction to scalability and ongoing efficiencies

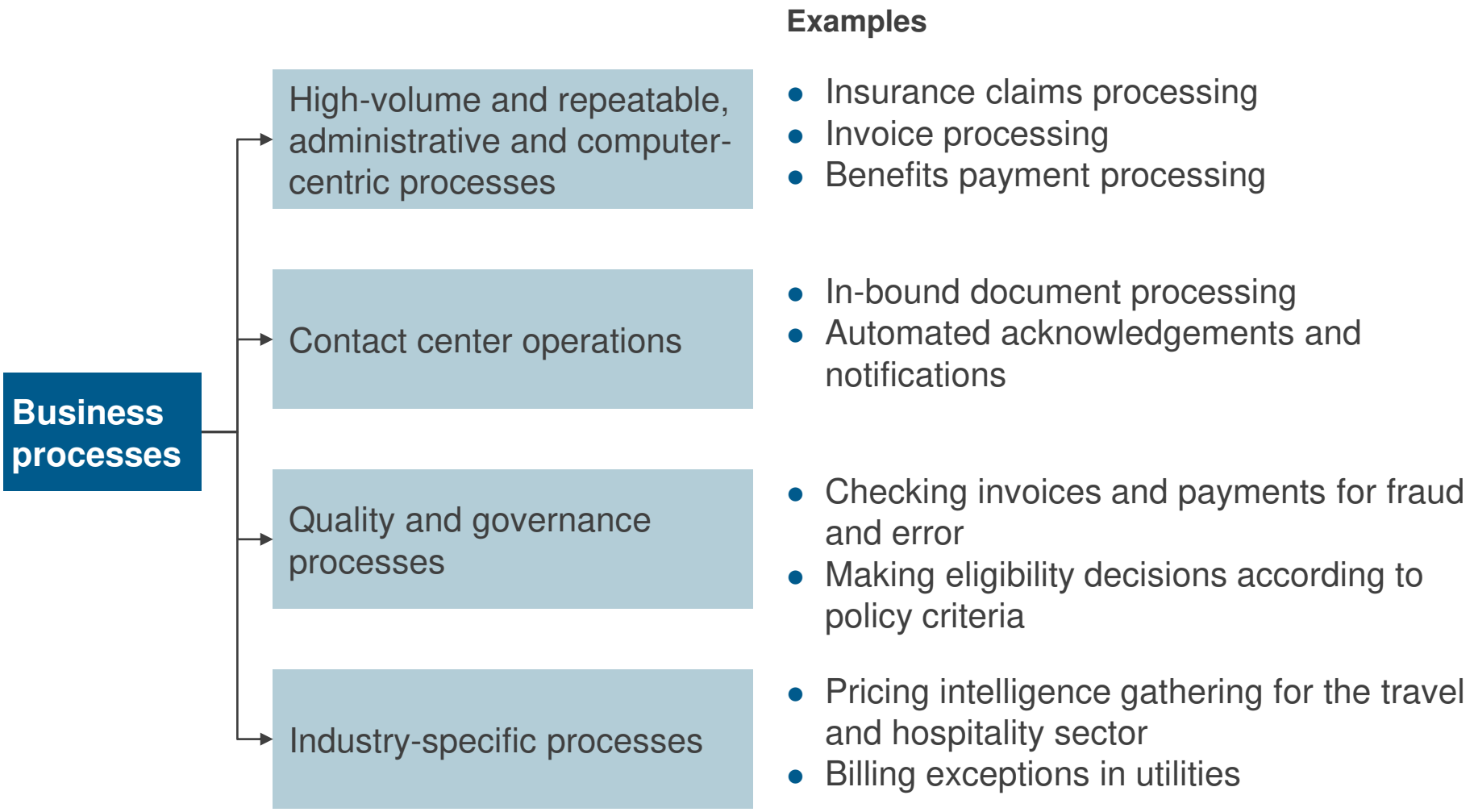


Hidden costs of automation should also be taken into account

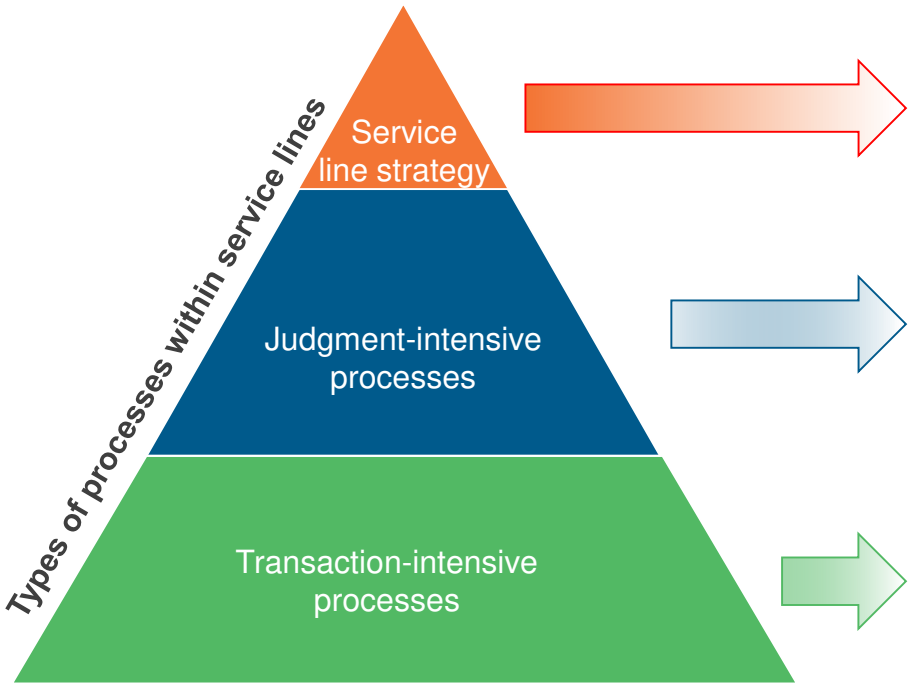


Source: Everest Group (2014)

Business processes of many types are candidates for SDA



Automation can be applied to different types of processes, but transactions offer the largest opportunity for scale. Analytics often works hand in hand with automation



Most relevant type of automation	Role of analytics
Not applicable	Reporting and ad hoc
Knowledge-based and cognitive	Predictive and embedded into some operational processes
Rules-based	Analytics embedded into operational processes to calibrate the rules

Increasing scale

Case study 1: An insurance loss adjuster increased claims processing capacity with document automation

Drivers for change

- The process of handling correspondence had become inadequate, including the document capture system
- The organization needed to scale up to process a large number of claims; 20,000 per month, each with 56 to 60 different types of documents received via multiple channels including emails, photos, and paper mail
- There were also cost pressures in an increasingly competitive market

Implementation

- After initial investigations, the company chose Celaton's inSTREAM
- Inbound claims processing was moved to the inSTREAM platform
- Today, the content and meaning of claims are automatically recognized on receipt, and key data extracted and verified, then uploaded to the customers' claims management system for processing

Benefits

- The company had previously moved services offshore, and in the process had reduced headcount from 60 to 40. This has been reduced to six today
- Today the company has the capacity to scale on-demand, with the number of claims at peak times increasing to over 250,000 per month

Case study 2: NHS Scotland increases capacity for diabetic retinopathy screening with robotic process automation

Robotic process automation

Background

- The NHS in Scotland performs diabetic retinopathy screening for 250,000 people per year. This number was increasing by over 4% each year, all requiring to be completed within set times
- The organization decided to prototype Robotic Process Automation (RPA) to help it manage the increase in demand
- An RPA system based on Blue Prism was chosen. This accesses the diabetic retinopathy screening system, which is a centrally-controlled web application, accessed from all NHS health boards in Scotland. After the initial deployment, the RPA was reengineered and rebuilt by Genfour

Today's set up

- Processes automated today include:
  - Filtering and sorting a grading task list, and then extracting data and images from this list before sending the information via XML to an auto-grader
  - The auto-grader analyzes the images and produces a result which a robot retrieves and uses to update the screening IT system
- Quality controls are in place with a number of error checking processes
- One robot is used for both processes
- Throughput has reached 600 patient episodes per day over a seven-day week
- The robot deals with the majority of cases where no follow-up is needed

When adopting BPSDA, both process suitability and organizational readiness should be assessed

Process suitability[1]	Organizational readiness[2]
• Volume of transactions	• Data stewardship
• Stability of operating environment	• Adoption strategy
• Degree of exceptions handled	• Stakeholder buy-in
• Process documentation	• Document of process governance and controls

These are examples and simplified dimensions to illustrate the fundamentals of readiness assessments for BPSDA

1 Details on the following page
2 Details on the second page

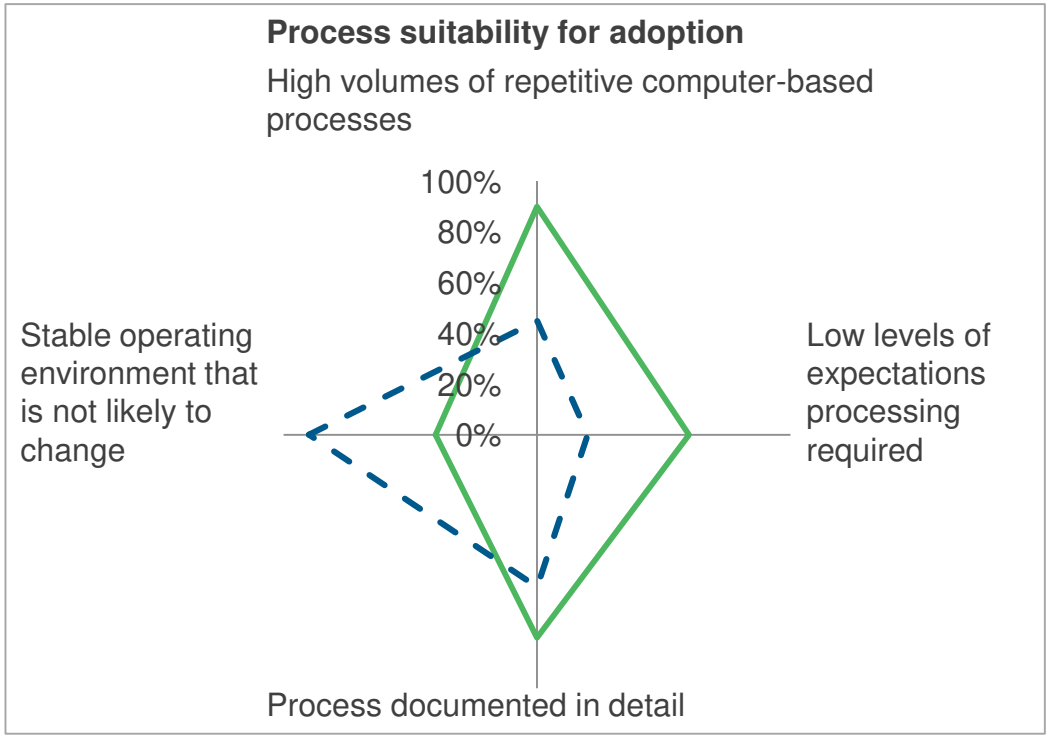
Process suitability | By assessing processes along four dimensions, the most attractive processes for initial pilots can be identified

Are there large volumes of repetitive, rules-based, and computer-based transactions?

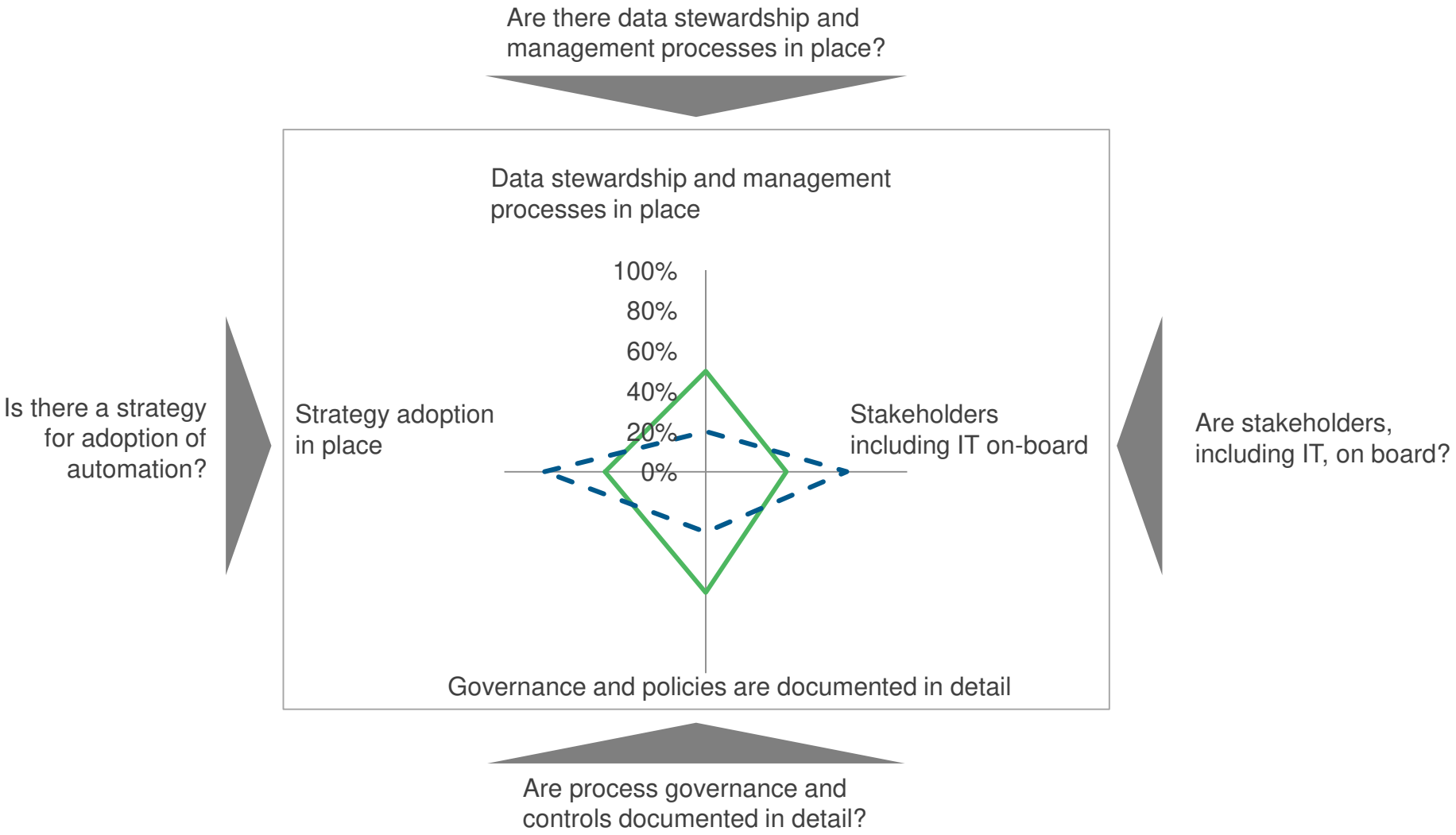
Is the operating environment stable and not prone to frequent changes?

Does the process entail handling many exceptions?

Is the process documented in detail?



Organizational readiness | Beyond basic buy-in, process and data management sophistication are important factors for enabling a successful implementation



Finally, managing an ongoing automation implementation must consider multiple factors

Resilience	Resilience of the automation to changes in business applications and the operational environments is very important, if change management is not to become a major burden for enterprises
Standardized interfaces	Tools that use web services with standardized interfaces and published APIs are less likely to suffer from changes in applications/upgrades
Proprietary interfaces	Screen scrapers / UI-based tools, that use own interfaces to access data via the UI, are more likely to suffer from changes in business applications
Maintenance	As a rule of thumb, one FTE will be required to maintain 20 to 25 robots – that means updating the automations to handle changes to the UI of the platform that supports the process

Contents

- Introduction and overview
- Summary of key messages
- Market overview and buyer adoption trends
- Value proposition and solution characteristics
- **Service provider landscape**
- Outlook for 2015
- Appendix

BPSDA is accelerating the BPO market evolution, disrupting the status with new pricing and service delivery models

- A new wave of service providers aim to make onshore delivery costs lower than offshore:
  - They are banking on the buy-side's appetite for more onshore delivery
  - The cost efficiency comes form an accumulation of benefits such as 1:2 robot to FTE ratios, as well as economies of scale and utility pricing through use of cloud
- The buzz in the market about RPA is driving large and established providers to highlight use of automation in their services, which had been previously been within their service delivery capabilities
  - Many, such as Infosys, Steria, and EXL, have developed and used their own automations
  - Some, such as Capita, Steria, and Sutherland, are also building partnerships with third-party automation software vendors such as Blue Prism
- These are likely to be challenging times for established service providers
  - **Pricing:** The FTE-based pricing model no longer reflects the complete picture, resulting in a move towards more varieties of hybrid pricing
  - **Delivery centers:** Existing large investments in offshore delivery centers are under threat from increasing appetite for BPSDA – change in scale of physical presence is very much on the cards

The BPSDA service provider landscape can be categorized into three segments – global majors, BPO providers, and new wave BPO providers

- This landscape is not a complete listing of providers, and has largely been selected to represent a sample of providers (vs. those with the most advanced capabilities). Additionally, firms that specialize in automation are included
- Further, approaches in this space are changing quickly, and the information presented in this section is likely to be out-of-date within a few months. Look for future research from Everest Group on the technology capabilities of BPO service providers

Global majors are increasingly highlighting their use of automation, previously hidden within their BPO delivery (page 1 of 2)

NOT EXHAUSTIVE

	Use of automation	Tools & partnerships	Strategy
Accenture	• Accenture uses automation in its offerings in many different ways. For example, a bolt-on to invoice automation in its P2P services	• It uses BPM automation and Business Activity Monitoring (BAM) tools. It also uses the newer style of automation from the likes of Blue Prism	• Accenture has a strategic partnership with IPsoft for IT automation, and most likely will deploy IPsoft's new cognitive engine for business processes, called Amelia
Capgemini	• Capgemini applies automation to processes as part of the bigger picture within its Global Enterprise Model and associated process models	• Capgemini uses BPOpen, an abstraction layer on top of client's ERP, that includes BPM technology	• Cagemini is pursuing a strategy of offering ERP application provisioning and management combined with BPO, to gain more opportunities for value realization through various measures including automation
HP	• HP has been using its own automation solutions in business process offerings for some time	• HP has not publicly disclosed its partnerships or specific approaches to automation	• HP considers automation a part of the bigger digital picture and a good fit to its new style of BPO, which builds on a foundation of technology

Global majors are increasingly highlighting their use of automation, previously hidden within their BPO delivery (page 2 of 2)

NOT EXHAUSTIVE

	Use of automation	Tools & partnerships	Strategy
IBM	• IBM has been a strong proponent of smarter working and operations with automation and analytics built into processes	• IBM has a wealth of its own BPM, middleware, analytic and robotic tools for automation including ERP wrappers, workflow, and analytics. It also uses third-party software such as Blue Prism, Open Span, and others	• Automation has been a significant part of IBM's service delivery model. IBM is also investing in building Watson's cognitive computing capabilities into more everyday processes
Infosys	• Infosys uses automation in a number of its BPO offerings including human resources, finance and accounting, procurement, supply chain, customer experience management, and legal processes	• Infosys' RPA Platform is designed to be independent of underlying application/ technology; focused on mimicking user actions to eliminate repetitive steps	• Infosys is currently focusing heavily on cross-leveraging technologies, including RPA, across its services. It has sponsorship from top management for service automation, and leverages its Infosys Lab & EdgeVerveIPs to develop new capabilities
TCS	• TCS uses both robotic and cognitive technologies to automate business processes, focusing on process- specific capabilities	• TCS relies on its own IP for process automation	• TCS is investing heavily in IP-based automation for service delivery to orchestrate automation of repeatable tasks across technologies

Among pure-play BPO service providers, Sutherland Global has the most aggressive approach to deploying SDA
(page 1 of 2)

NOT EXHAUSTIVE

	Use of automation	Tools & partnerships	Strategy
Agilisys	• Agilisys is focusing on Celaton technology as a reseller	• Agilisys has a reseller partnership with Celaton. Together they have won a number of deals with London local authorities to provide document services	• Early days for Agilisys and automation. It will implement Celaton within its BPO portfolio as and when the opportunity arises
Capita	• Capita has been using Blue Prism in various BPO offerings for sometime	• It will also work with other automation technology providers such as Celaton	• Capita often wins contracts on price, and automation should help it maintain that competitive advantage
EXL	• EXL uses automation in its service delivery. Its new Business EXLerator Framework includes taking advantage of automation	• EXL's portfolio includes 60+ business process automation applications that the company has developed in-house	• EXL will implement automation, combined with other components of EXLerator. The aim is to deliver a step change in year-on-year performance improvements

Among pure-play BPO service providers, Sutherland Global has the most aggressive approach to deploying SDA
(page 2 of 2)

NOT EXHAUSTIVE

	Use of automation	Tools & partnerships	Strategy
Genpact	• Genpact uses automation to enhance business processes and create improved systems of engagement	• Recently announced partnerships with Automation Anywhere and Automic. Acquired Akritiv in 2011, a SaaS system of engagement software suite	• Accelerate the application of automation technologies through its Rapid Automation approach, Process Lifecycle Manager tool, and couple to analytics capabilities
Steria	• Steria has been using its own automation capabilities for a long time, including in P2P and HR	• It recently formed a partnership with Blue Prism and uses the technology as part of its Enhanced Lean methodology	• Steria is set to continue to use automation, driven by the on-going need to improve performance year-on-year
Sutherland Global	• Sutherland has by far the most mature and strategic approach to SDA, having developed an automation capability as a core service delivery competency	• It works with many automation technology providers • It has its own RPA software layer which links to and supports third-party automation technologies and a centralized control tower that runs 24x7 to manage and maintain automations	• Sutherland focuses on leveraging technology for efficiency. It combines resources from its four incubator labs and development teams to take advantage of the latest technologies including automation

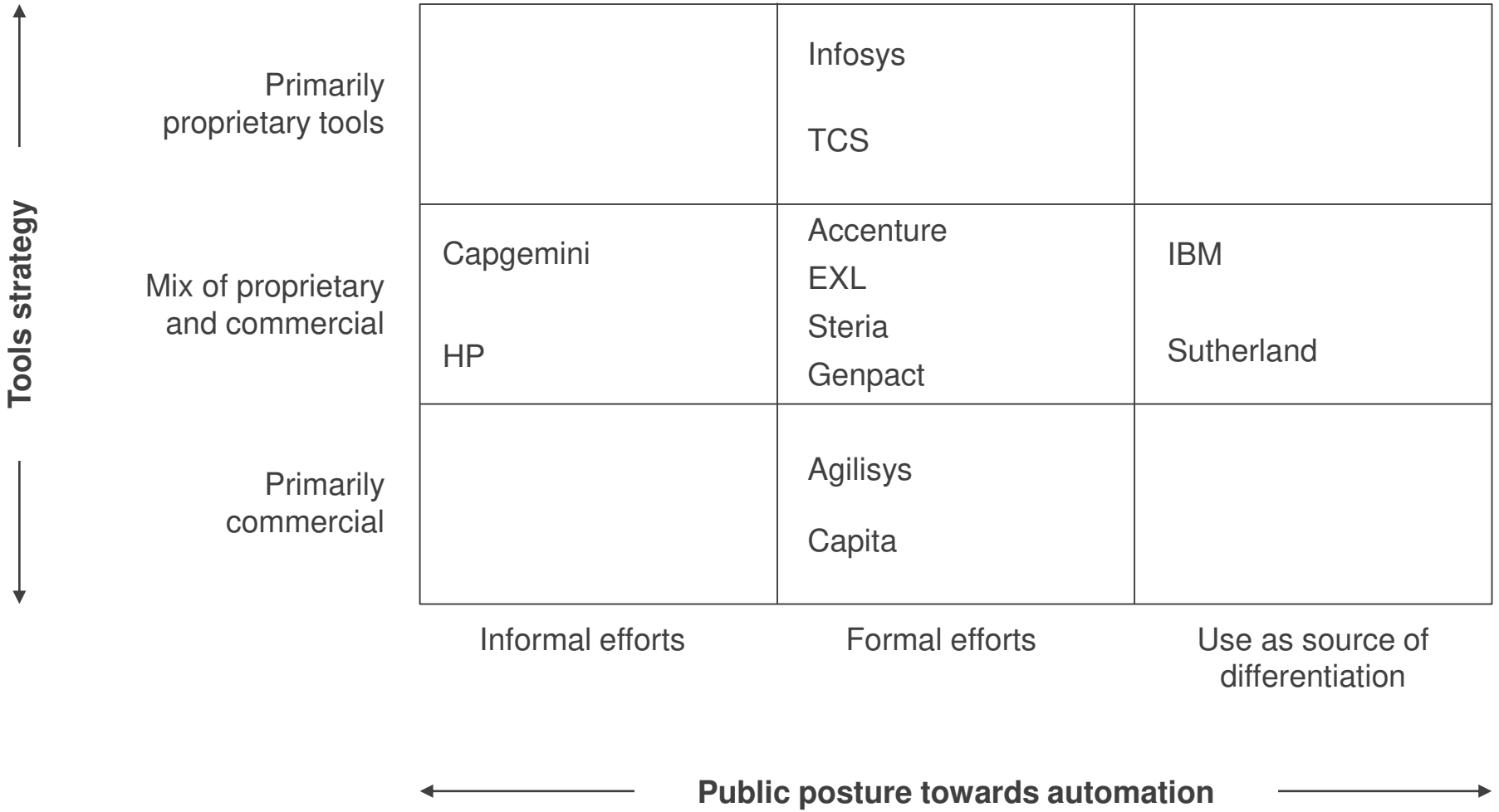
Genfour epitomizes a new generation of BPSDA pure-play providers that target end-to-end process automation services (page 1 of 2)

	The company	Tools & partnerships	Strategy
Celaton	• Celaton is primarily an artificial intelligence automation technology provider • Celaton can also provide the end-to-end document in-bound process from its data center	• The technology is provided to client hosted and run by Celaton on its own servers • Agilisys is a formal partner and reseller	• Celaton targets companies that have high-volume, repetitive document-based processes
Genfour	• Genfour epitomizes a new generation of SDA providers which offer end-to-end SDA consultancy, deployment, and run services	• Genfour partners with many leading automation technology providers including Blue Prism and Ui Path	• Genfour aims to sign clients for a three year term to buy Genfour Robotics-as-a-Service or “RaaS” (i.e., an arrangement in which it manages the clients’ robots on a day-to-day basis on their behalf)

Genfour epitomizes a new generation of BPSDA pure-play providers that target end-to-end process automation services (page 2 of 2)

	The company	Tools & partnerships	Strategy
IPsoft	• Better known for its IT infrastructure management, IPsoft is moving into SDA in business processes	• IPsoft's new cognitive engine, Amelia, is currently being tested by a number of clients	• IPsoft will use it to build new services including business process services • Initially, IPsoft is expected to target existing clients with Amelia to automate current manual processes in IT services, e.g., service desk voice interactions
Virtual Operations	• Virtual operations is an automation specialist offering training in RPA and AI (through its Academy), consultancy, implementation, support and run services	• Virtual Operations works with many automation technology providers including Blue Prism • It also offers Robot Minute© to provide RPA as-a-service as part of which it will develop and run the robots on its secure Cloud RPA© platform	• Virtual Operations is moving into RPA as-a-service with its Robot Minute. As part of this, it will develop and run robots on its secure Cloud RPA© platform for either enterprises or service providers.

Service providers are starting to formalize their strategies for leveraging BPSDA technologies



Disruptive SDA technologies challenge service provider norms in three key areas

Pricing

- SDA challenges the FTE-based pricing model
- This is driving a move towards more varieties of hybrid pricing models being developed, tried, and tested
- Existing large investments in offshore delivery centers that might have to be changed, if SDA is adopted on a large scale

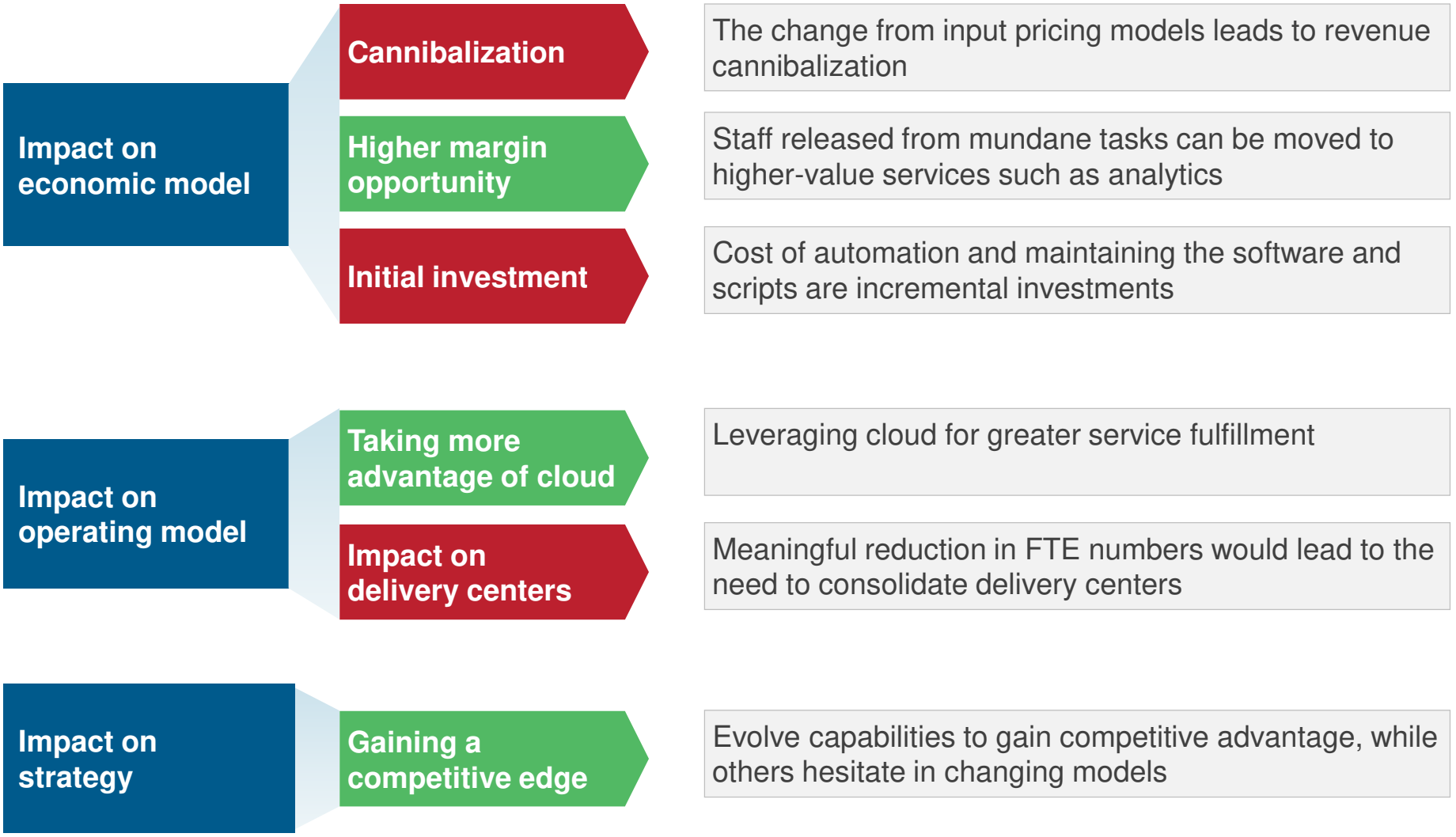
Third-party risk factors

- Deciding to build or buy automation capabilities
  - Many service providers would prefer to have their own IP
  - Smaller technology providers bring risks of lack of scalability in large contracts

Managing IP conflicts

- In some cases, there could be potential ownership/IP issues around who owns the automations that have been created for specific tasks, and who can reuse them
- Some vendors / service providers have libraries of automations for sharing, others treat automations as extensions of their IP

SDA is both a threat to and an opportunity for service providers – although, most see it initially as a disruptive threat to their business models, which must be managed



Pricing is in a state of flux with transaction or consumption pricing models for BPSDA emerging

Pure-play BPSDA providers

- The new wave of pure-play BPSDA providers have embraced the utility style of service provisioning – it does not disrupt their models and instead can be a competitive benefit
- Prices in this segment are largely based on expected levels of consumption:
  - Genfour, for example, offers "Robotics on demand" with a "use-based" licensing. It offers transactional or resource-based pricing
  - Celaton offers its inSTREAM technology on a hosted basis, which can have BPO added as well
    - Subscription rates are based on volumes, complexity of the processes in question, and the levels of benefits that it is expected to generate
    - Celaton pricing starts from $2,400 per month and can go up to $80-$95k per month

Traditional BPO service providers

- These providers typically view BPSDA as an extension of their on-going performance improvements
- As such, many have embedded BPSDA within their processes to help them reduce the costs of their services, and to pass on the benefits to the client through year-on-year efficiency savings – particularly for transaction-based pricing
- Pricing models used by this segment include:
  - Banded pricing using virtual FTEs
  - Blended pricing where people and robots are mixed
  - Transaction-based pricing
- The preferred pricing models are not yet clear, particularly when the starting point is an FTE-based model

Contents

- Introduction and overview
- Summary of key messages
- Market overview and buyer adoption trends
- Value proposition and solution characteristics
- Service provider landscape
- **Outlook for 2015**
- Appendix

A period of change is ahead

The impact of disruption

- The buzz created by disruptive technology vendors is making established service providers sit up and take note of automation. *All the service providers that we interviewed plan more automation*
- Market disruptions aside, the combination of factors, such as pricing pressures, the availability of cloud, as well as advances in automation technology, make a compelling case for automation
- Although it is still early in the hype cycle, some buying decisions could well be on pending SDA evaluations

A period of change ahead

- As more use cases emerge, we expect new pricing models be tried and tested
- The emergence of more success stories will increase demand for SDA
- We expect this to lead to 32% growth in the market for automation technology
- More cognitive capabilities are likely to be built into major applications, or released by major software vendors to go with their existing software
- This could potentially enable organizations to by-pass third-party automations

New entrants to the market

- With an evolving market, we expect to see more new market entrants that will position themselves as an "End-to-end Automated Business Process Provider" (EABPP)
- We also expect to see more reseller partnerships between technology vendors and service providers
- M&A activity is likely not just to enhance capabilities, but to eliminate competitors

Five things to watch

1. Which sections of the service provider community will proactively adopt automation?

Although some service providers can articulate a confident plan, many are still sorting through their strategies and are still in pilot mode, with few large deployments. How long will this last and will most become proactive about advocating automation, or provide it when required by the client, or to compete successfully?

2. Will buyers switch providers based upon automation capabilities?

With already increasing rates of non-renewals, will the emergence of differing levels of automation capabilities hasten the churn? Might buyers also be cautious to watch the market play out? Will automation savings provide enough ROI to fund transitions from one provider to another?

3. Will buyers prefer proprietary or commercial tool sets?

Providers are using a wide array of approaches to offering tools. At a time when buyers are still learning about automation, this proliferation of approaches will be tested. Will a common preference play out or will providers need to offer an array of technology options?

4. Can Blue Prism sustain the momentum?

Blue Prism has a strong mindshare and market presence (especially in the United Kingdom). As the market matures, they will be copied and service providers will continue to develop their own tools. Is Blue Prism creating a defensible lead ("Intel Inside" model?) or will they fall back to the pack, or even falter, as service providers flex their muscles?

5. Who will own the process IP?

As more and more processes are automated, much of the intellectual property for running business process operations moves from the heads of people into the process rules and flows. Will the best practices and process optimization of service providers continue as their IP, or be owned by their clients?

Contents

- Introduction and overview
- Summary of key messages
- Market overview and buyer adoption trends
- Value proposition and solution characteristics
- Service provider landscape
- Outlook for 2015
- **Appendix**
  - **List of SDA software vendors and consultancy providers**

Generic automation software vendors

	IT automation	Business process automation	Headquarters	Products	URL
Arago	X		Germany	autopilot, cloudpilot, docume, buildme, and mars-omatic	https://www.arago.de/
Automation Anywhere	X	X	United States	Automation Anywhere Enterprise	https://www.automationanywhere.com/products/enterprise
Automic	X	X	Austria	ONE Automation	http://www.automic.com/
Blue prism		X	United Kingdom	Blue Prism robotic process automation software	http://www.blueprism.com
Deskover		X	Romania	UiPath	http://www.deskover.com/
Celaton		X	United Kingdom	inSTREAM	http://www.celaton.com/
Interactive Media		X	Italy	IM automation and virtual agents	http://www.imnet.com/en/services/natural-language-solutions.html
IPsoft	X	X	United States	IPcenter, and Amelia	http://www.ipsoft.com/
Kapow		X	United States	Kapow Katalyst	http://kapowsoftware.com/products/kapow-katalyst/index.php
LeoForce		X	India	Arya	http://www.leoforce.com/
NewGen		X	United States	Various products	http://www.newgensoft.com/contact/
Slovexia		X	Australia	Slovexia	http://www.solvexia.com/

BPSDA specialist consultancies

	Headquarters	URL
Genfour	United Kingdom	http://genfour.net/
Source	United Kingdom	http://www.source.co.uk/
Virtual Operations	Europe and United States	http://virtualoperations-us.com/

Additional Research References

The following documents are recommended for additional insight into the topic covered in this report. The recommended documents either provide additional details on the topic or complementary content that may be of interest

1. **Finance and Accounting Outsourcing (FAO) Annual Report 2014 – Transformational Agenda to Combat Reducing Stickiness** (EGR-2014-1-R-1108); 2014. This report assists key stakeholders (buyers, service providers, and technology vendors) understand the changing dynamics of the FAO market and help them identify the trends and Outlook for 2014

2. **Multi-Process Human Resources Outsourcing (MPHRO) – Annual Report 2014: The Times Are Changing** (EGR-2014-3-R-1107); 2014. Provides a comprehensive coverage of the 2013 global MPHRO market and analyzes it across various dimensions such as market overview and key regional trends, buyer adoption and solution trends, and service provider landscape

3. **Analytics Business Process Services (BPS) – Deciphering the Analytics Code** (EGR-2013-10-R-1002); 2013. This report provides a comprehensive understanding of an analytics solution with a focus on the business process services aspect. It analyzes the analytics business process services market across various dimensions such as market size, current and expected market growth, value proposition and key business drivers, challenges in adoption, buyer adoption trends, solution characteristics, and service provider landscape

For more information on this and other research published by Everest Group, please contact us:

Sarah Burnett, Vice president: sarah.burnett@everestgrp.com
Eric Simonson, Managing partner: eric.simonson@everestgrp.com

Website: www.everestgrp.com | Phone: +1-214-451-3000 | Email: info@everestgrp.com

Everest Group

From **insight** to ***action***.

At a glance

- With a fact-based approach driving outcomes, Everest Group counsels organizations with complex challenges related to the use and delivery of the next generation of global services
- Through its practical consulting, original research, and industry resource services, Everest Group helps clients maximize value from delivery strategies, talent and sourcing models, technologies, and management approaches
- Established in 1991, Everest Group serves users of global services, providers of services, country organizations, and private equity firms in six continents across all industry categories

Dallas (Headquarters)
info@everestgrp.com
+1-214-451-3000

New York
info@everestgrp.com
+1-646-805-4000

Toronto
canada@everestgrp.com
+1-647-557-3475

London
unitedkingdom@everestgrp.com
+44-207-129-1318

Delhi
india@everestgrp.com
+91-124-284-1000

Stay connected

Websites

www.everestgrp.com
research.everestgrp.com

Twitter

@EverestGroup
@Everest_Cloud

Blog

SHERPAS IN BLUE SHIRTS

www.sherpasinblueshirts.com