Everest Group PEAK Matrix™ for Robotic Process Automation (RPA) Technology Vendors – 2018

Focus on NICE

June 2018

Contents

- **Introduction, overview, and methodology**

- NICE's assessment and evaluation

- RPA technology trends and predictions

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Introduction and scope

Everest Group recently released its report titled "Robotic Process Automation (RPA) – Technology Vendor Landscape with Products PEAK Matrix™ Assessment 2018." The report provides a detailed view of the RPA technology vendor landscape and a thorough assessment of the various RPA technology solutions across several key dimensions.

As a part of this report, Everest Group presented a comparative assessment of 18 leading RPA technology vendors across their market impact and vision & capability using Everest Group's proprietary framework, the Products PEAK Matrix™. The vendors have been classified into the PEAK Matrix categories of Leaders, Major Contenders, and Aspirants.

Based on the analysis, **NICE emerged as a Leader and Star Performer**. This document focuses on NICE's RPA capabilities. It includes:

- Everest Group RPA Products PEAK Matrix 2018
- Everest Group assessment of NICE's RPA capabilities across PEAK Matrix™ dimensions and commentary on key strengths and improvement areas
- Detailed RPA profile of NICE
- Key RPA technology trends and predictions

Buyers can use the PEAK Matrix to identify and evaluate different RPA technology vendors. It helps them understand technology vendors' relative strengths and improvement areas. However, it is also important to note that while the PEAK Matrix is a useful starting point, the results from the assessment may not be directly prescriptive for each buyer. Buyers will have to consider their unique situation and requirements, and match them against technology vendor capability for an ideal fit.

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Everest Group Products PEAK Matrix™ is a proprietary framework for assessment of market impact and vision & capability

Everest Group Products PEAK Matrix™
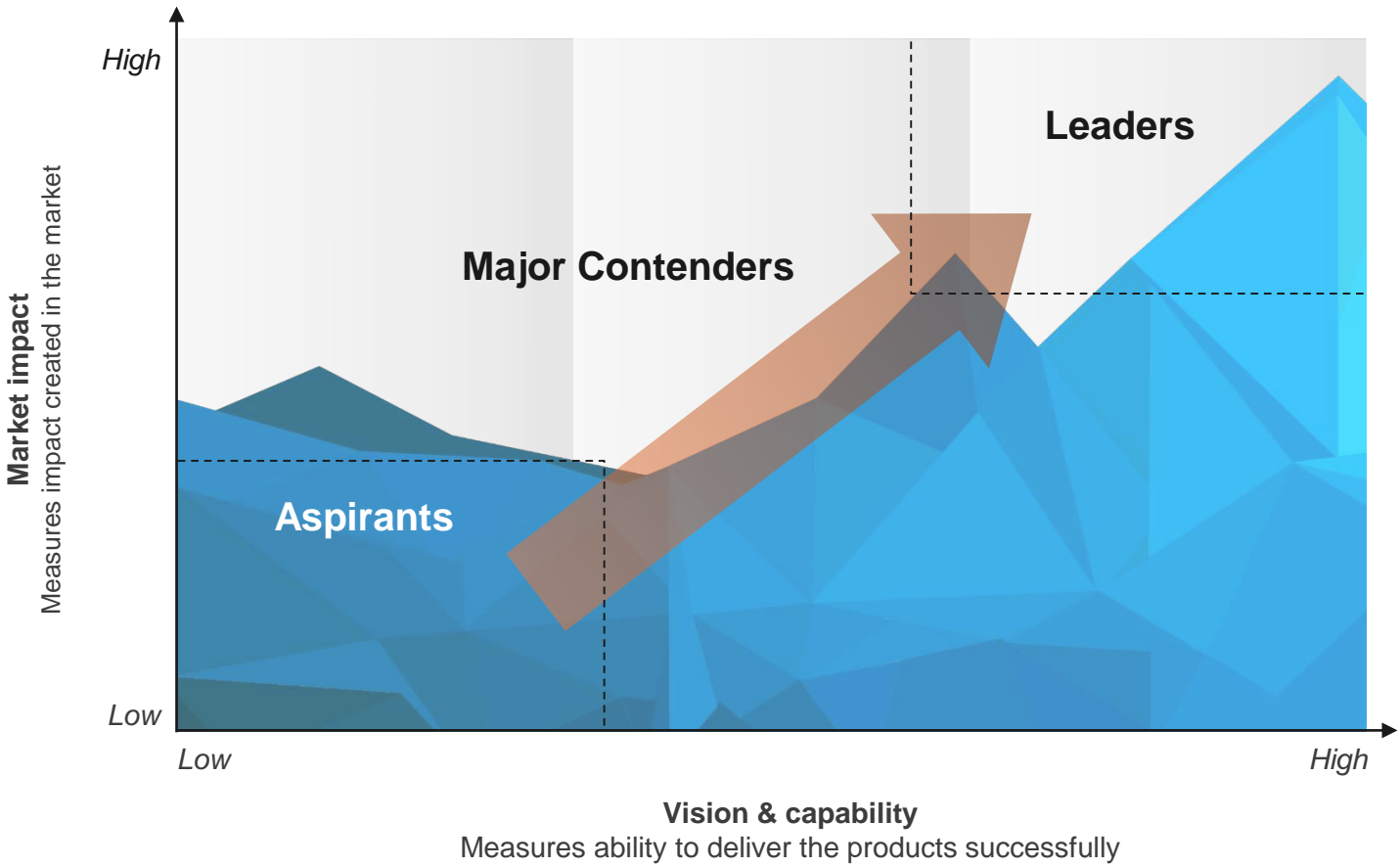
RPA Products PEAK Matrix™ evaluation dimensions

Measures the impact created in the market – captured through three subdimensions

Market success
Number of clients, revenue base, and year-over-year growth

Portfolio mix
Breadth of coverage of industries, geographies, processes / use cases, and enterprise size class

Value delivered
Value delivered to the client and their satisfaction with the product as well as the support, based on client feedback

Market impact

Major Contenders

Leaders

Aspirants

Vision & capability
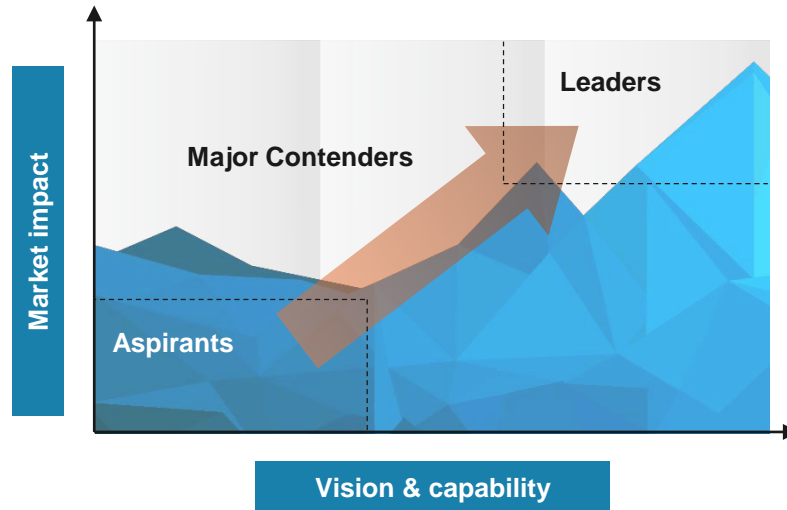
Measures ability to deliver the products successfully. This is captured through five subdimensions

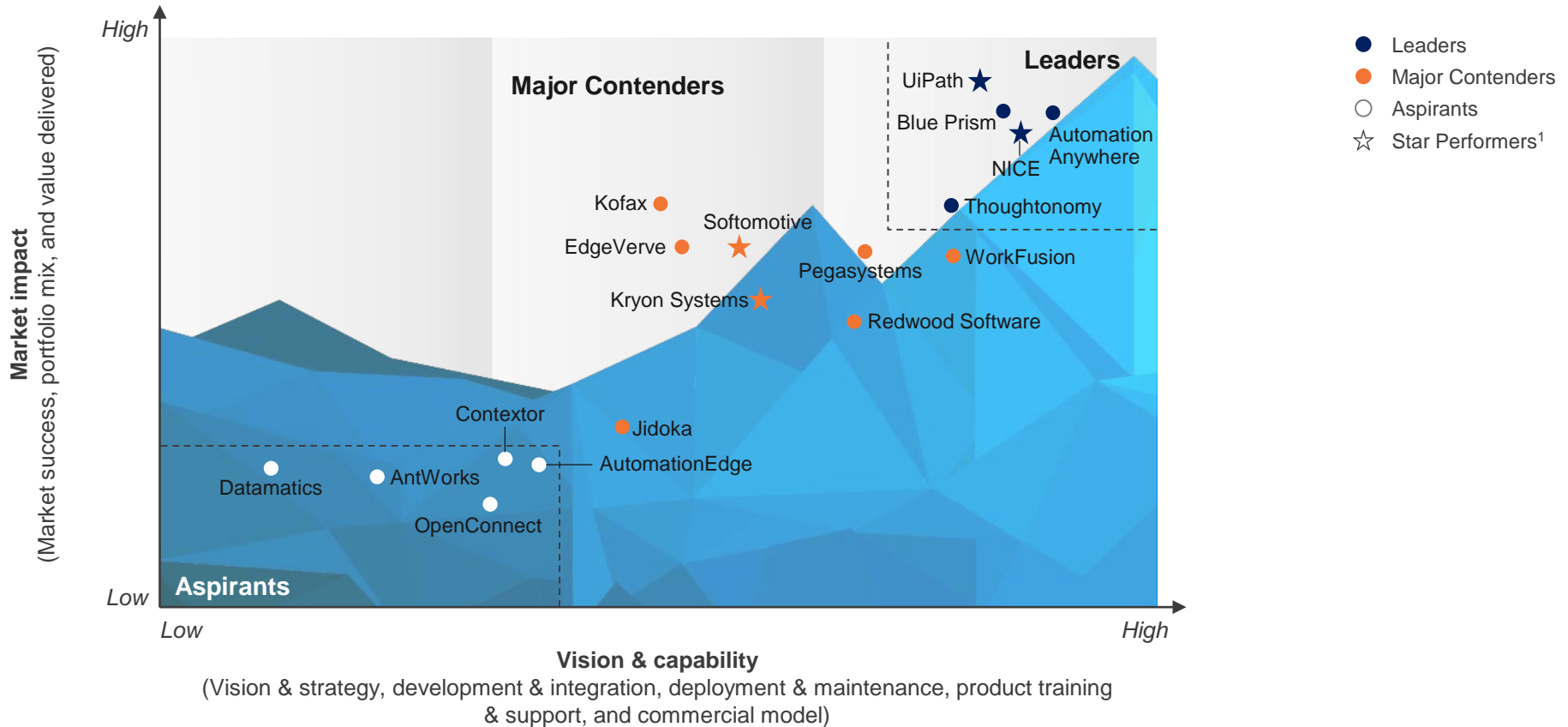| Vision & strategy	Development & integration	Deployment & maintenance	Product training & support	Commercial model
Vision for the client and itself; future roadmap and strategy	Product features and capabilities for flexibility & ease of robot development and integration	Flexibility and ease of deployment, control & monitoring, solution maintenance & resilience, governance, and security	Training, product maintenance & support, consulting, and other support services	Progressiveness, effectiveness, flexibility, and client adoption of available commercial models

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Everest Group PEAK Matrix™

Robotic Process Automation (RPA) – Technology Vendor Landscape with Products PEAK Matrix™ Assessment 2018 | NICE positioned as a Leader and Star Performer

Everest Group Robotic Process Automation (RPA) Products PEAK Matrix™ Assessment 2018

Legend:
- ● Leaders
- ● Major Contenders
- ○ Aspirants
- ☆ Star Performers[1]

Chart labels:
- **Market impact** (Market success, portfolio mix, and value delivered) — vertical axis, Low to High
- **Vision & capability** (Vision & strategy, development & integration, deployment & maintenance, product training & support, and commercial model) — horizontal axis, Low to High

Quadrants: Major Contenders, Leaders, Aspirants

Vendors plotted: UiPath, Blue Prism, Automation Anywhere, NICE, Thoughtonomy, Kofax, Softomotive, EdgeVerve, Pegasystems, WorkFusion, Kryon Systems, Redwood Software, Contextor, Jidoka, AutomationEdge, Datamatics, AntWorks, OpenConnect

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1 "Star Performers" are selected based on relative comparison of vendors' total scores along both "Market impact" and "Vision & capability" dimensions between our previous and current assessment. Only those vendors who were part of our previous RPA products assessment were considered for the Star Performer analysis. The ones with the biggest year-over-year improvements were selected as "Star Performers"

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Measure of capability: ● High ◔ Low

Vision & capability						Market impact			
Vision & strategy	Development & integration	Deployment & maintenance	Partnership & support	Commercial model	Overall	Market success	Portfolio mix	Value delivered	Overall
◔	●	◔	●	◔	◔	◔	◔	●	◔

Strengths

- RPA is part of NICE's larger portfolio of software products that is offered on a single platform for attended, unattended, or human-in-the-loop automations, with process mining and analytics that come with reporting from IBM Cognos. The automation platform is integrated with NICE's other customer contact management offerings, such as PCI compliant voice recording, and case management tools, such as Actimize eRCM

- Automation and AI are part of NICE's strategic growth plans. It is integrating AI in RPA and has an open cognitive framework, with an ecosystem of partners for cognitive solutions such as chatbots, machine learning, etc. It also has in-house cognitive solutions for text analytics and NLP. As part of this solution set, NICE took the first steps toward intelligent robot monitoring in early 2017 when it introduced a connectivity watcher that monitors the connection between its robots and the business system. In Q3 2017, it added computer vision capabilities to enhance its RPA. More investments in this field are expected in 2018

- NICE RPA is integrated with conversational solutions from Amazon Alexa, IBM Watson, and Microsoft Azure. It has integrated RPA with chatbots / intelligent virtual agents for a major insurance client

Areas of improvement

- NICE continues to use image capture techniques to handle automation in Citrix environments; because it does not see huge demand from clients for this type of environment, this is not a high investment priority for NICE. We expect the investment in computer vision to enhance this aspect of its automation as well

- There is opportunity to enhance scalability with automated scalability of robots to match fluctuations in transaction volumes

- A more internationally-focused support and training structure would enhance support for clients in additional geographies and in different languages

- There is opportunity to add in-house cognitive capabilities, such as intelligent document processing and chatbots, to increase its value proposition for one-stop automation solutions

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Measure of capability: ⬤ High ◔ Low

Vision & capability						Market impact			
Vision & strategy	Development & integration	Deployment & maintenance	Partnership & support	Commercial model	Overall	Market success	Portfolio mix	Value delivered	Overall
◔	⬤	◔	⬤	◔	◔	◔	◔	⬤	◔

Strengths

- Within its RPA, NICE uses object-based connectivity as the default but it can do screen scraping, surface automation, and OCR as well as connectivity via APIs, database calls and web services. It offers 300 out-of-the-box connectors. It also supports VDI environments and works with dropdown lists that are not visible on screen

- NICE has voice recognition and activation, as well, with speech analytics, which is an integration with NICE's broader product portfolio

- NICE RPA offers robust security features such as a built-in secure credentials vault, CyberArk integration, robot activity logging, role-based access, centralized logging of all transactions, active directory integration, and automation behind locked screen. Its security has been tested for deployment in government departments and large banks

- It has high market share in the RPA space and has built a strong presence for RPA in the government, BFSI, and utilities sectors

- Clients rate NICE highly, in particular for product versatility, from the start to going on to enterprise scale

Areas of improvement

- Although NICE has a number of partnerships, such as with Accenture, Capgemini, and Deloitte, more reseller and SI partnerships could help it expand faster around the globe and support clients in new markets

- There is opportunity to get a first mover advantage by introducing industry-specific extensions to NICE RPA. To achieve this, NICE would have to partner with firms offering business process know-how, such as business process services providers

- Clients have indicated that they would welcome longer training courses to enable them to take better advantage of the broad set of product features

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Everest Group assessment I Leader

AI-based next-best-action and on-screen agent guidance are among the key RDA differentiators in the market

Measure of RDA capability[1]: ● Best-in-class　◗ Not mature

Tech vendor	Capability[2]	Market presence[3]	Remarks
NICE®	●	●	NICE has a very high focus on providing RDA to enterprises and has the largest market share among all technology vendors in the RDA space, primarily driven by its large-scale RDA deployments. It offers differentiated RDA capabilities such as AI-based next-best-action to the agents, which helps enterprises to improve their agents' productivity, reduce average handling time, and improve customer satisfaction. It also provides computer vision capabilities to support Citrix automation, desktop analytics for analysis of worker productivity, efficiency, and compliance as well as process mining

1 Assessment based on the RFIs and briefings of RPA technology vendors that reported revenue from RDA offerings as of December 2017
2 RDA product capability and support
3 RDA license revenue and share of RDA in overall RPA portfolio
Source:　Everest Group (2018)

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Overview

Company overview

Founded in 1986, NICE Ltd (NASDAQ: NICE) is a vendor of RPA, advanced analytics, and Workforce Optimization (WFO) software solutions for both cloud and on-premise. NICE helps organizations deliver customer experience, reduce operational costs, and ensure compliance. It has more than 6,000 employees (150 focusing on RPA) and operates in more than 150 countries with more than 25,000 customers.

Key technology leaders: Barak Eilam, President and Chief Executive Officer
Oded Karev, General Manager Advanced Process Automation
Headquarters: Hoboken, New Jersey
Key clients include: IKEA, Telefonica, Shell, Aetna, Charter, BT, Nationwide, and tier-1 U.S.-based banks
Partnerships: Accenture, Capgemini, Deloitte, BCG, IBM, PwC, and Symphony ventures
Company website: http://www.nice.com/rpa

Non-exhaustive list of recent deals and announcements

- **December 2017:** NICE grew its RPA new logos in FY17, and increased its partner network and the size of its process automation R&D group
- **November 2017:** NICE announced a new enhancement in its RPA platform with the incorporation of advanced OCR solution from ABBYY
- **November 2017**: NICE Actimize debuted in autonomous financial crime management to reduce costs of compliance and increase detection accuracy
- **October 2017:** NICE introduced its partnership with Celaton, an AI vendor with ML and NLP capabilities, for processing unstructured data
- **September 2017:** NICE unveiled Its open framework ecosystem for cognitive robotic automation
- **September 2017:** European public sector agency announced improvement in its service operations with NICE RPA

Split of RPA revenue by buyer industry

- Banking & capital markets
- Government & public sector: 20%
- Others: 30%
- Insurance: 14%
- Hi-tech & telecom: 13%
- Healthcare & pharma: 11%
- CPG & retail: 6%
- 6%
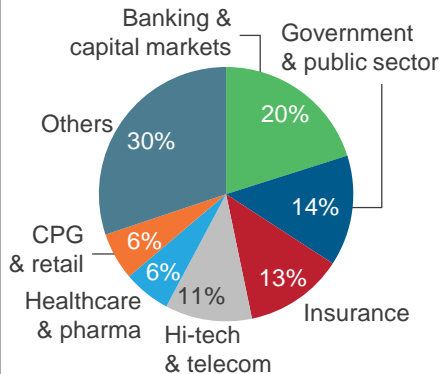
Split of RPA revenue by process area

- Industry-specific: 37%
- Others: 15%
- HR: 5%
- Procurement: 5%
- IT services: 10%
- Contact center: 13%
- F&A: 15%
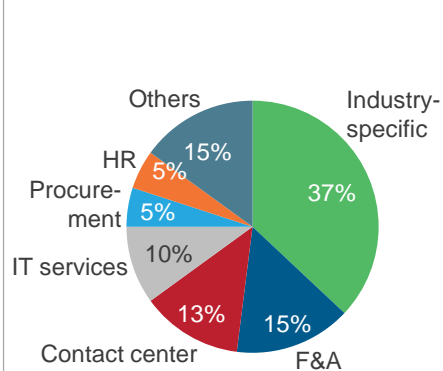
Split of RPA revenue by buyer geography

- Latin America (1%)
- Middle East & Africa (1%)
- Asia Pacific: 6%
- United Kingdom: 18%
- North America: 42%
- Continental Europe: 32%
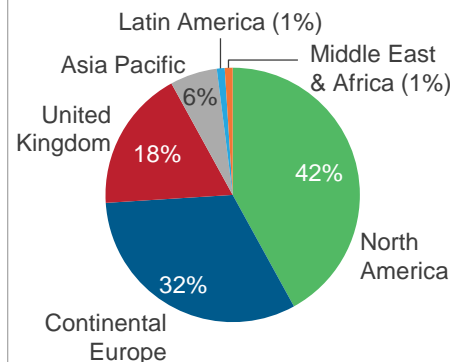
Split of RPA revenue by offerings
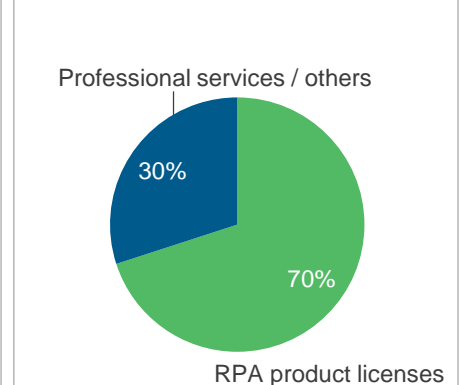
- Professional services / others: 30%
- RPA product licenses: 70%

Note: Everest Group estimates based on information shared as part of the RPA vendor assessment RFI and briefings up to December 2017

Capabilities

Product overview

NICE robotic automation, on-premise and cloud, uses software robots to automate routine processes across organizational units. The security features include robots running behind locked screens. NICE supports a cluster server environment for load balancing. On-premise clients can install multiple servers to handle the required scale. It has recently added automation by recording user actions. The robots can be deployed in completely unattended or human-in-the-loop mode. Its platform includes a control room environment to measure robot performance, schedule robotic processing times, and control robotic flows. It has recently launched an open cognitive framework with an ecosystem of partners for cognitive solutions such as chatbot and ML, as well as in-house capabilities for text analytics, NLP, and OCR. It offers RDA that provides agent guidance and also automates processes on the user's desktop. There is also desktop analytics for measuring process efficiency and finding automation opportunities.

Market adoption and capability overview

Number of RPA clients: Not available
Number of FTEs in RPA solution team[3]: 140-160
Number of service provider partners / resellers: 40+
Number of people who have taken RPA developer training course / certification program: 4,200-5,000
Key service provider partners / resellers (non-exhaustive): Capgemini, Accenture, IBM, Deloitte, and BCG
Key third-party technology partners (non-exhaustive): ABBYY, Celaton, CyberArk, Microsoft, IBM, and Amazon

RPA client mix by buyer size[1]

- Small 9%
- Large 48%
- Mid-size 43%

Split of revenue between attended and unattended RPA licenses

- Unattended RPA 25%
- Attended RPA / RDA 75%
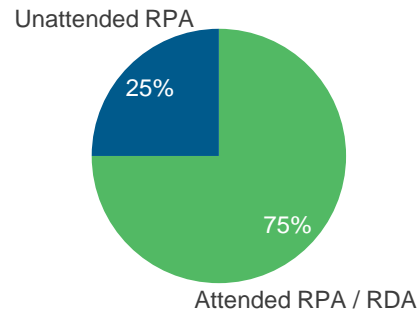
Split of RPA FTEs by function

- Others 15%
- Product development 55%
- Support services 30%
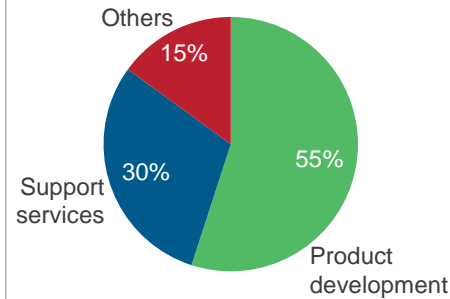
Split of RPA FTEs by geography

- United Kingdom 5%
- India 5%
- Latin America 7%
- Asia Pacific[2] 8%
- North America 25%
- Continental Europe 50%
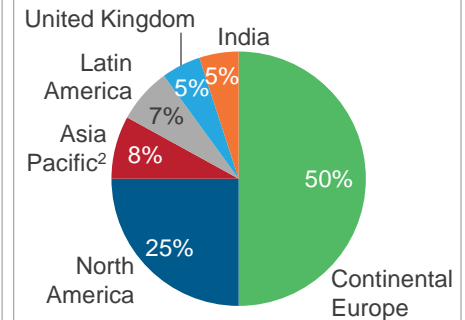
1   Buyer size is defined as large (>US$5 billion in revenue), mid-size (US$1-5 billion in revenue), and small (<US$1 billion in revenue)
2   Excluding India
3   FTEs in product development and support services (training, product support, etc.)
Note: Everest Group estimates based on information shared as part of the RPA vendor assessment RFI and briefings up to December 2017
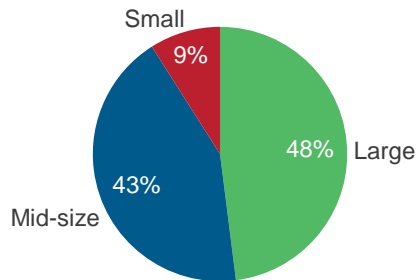
Capabilities

	Available		In the roadmap		Available via partner		Not available

Capability & offerings

Hosting options	Desktop/laptop	Server / on-premise	Private cloud	Public cloud	Supports multi-tenant deployment

Development and integration	Visual drag and drop	Built-in process recorder	Edit/enhance the recorded steps	Object capture based on element-id recognition	Object capture based on image recognition
	Built-in process workflow tool	Develop/configure in a layered manner	Develop Robotic Desktop Automation (RDA)	Debugging tools	Remote configuration
	Library of pre-built automations	Create and share reusable components	Support for open standards	REST/SOAP web services / APIs	Pre-built connectors with leading applications
	On-line portal for pre-built objects	Human-in-the-loop process development			

Deployment and maintenance	Central control and monitoring	Remote maintenance and support	Scheduling and queuing	Web-based interface for control room
	Dynamic load balancing based on priorities	Auto-scaling of bots	Service Level Agreement (SLA)-based automation	Advanced workflow / BPM[1]
	Robot performance analytics	SLA monitoring/reporting	Process mining	Process-level business intelligence
	Execute automations in the background	Execute multiple automations in parallel on a virtual machine	Withstand single site failure	

1   Actimize is offered as a generic case management tool. Open platform framework to integrate with any BPM tool

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Capabilities

| | Available | | In the roadmap | | Available via partner | | Not available |

Capability & offerings				
Change management and governance	Version control for bots	Compare versions of bots / scripts across environments[1]	Roll-back to previous versions	
	Implement change control from development via test to production	Compare automated processes across environments		

Security and compliance	Secure credential vault	Robot activity logging	Role-based access	Centralized logging of all transactions	Active directory integration
	Segregate roles between development, test, release	Automate behind a locked screen	CyberArk integration/certification		

Cognitive/AI capabilities	Machine Learning	Natural Language Processing	Intelligent Document Processing[2]	Virtual Agents / Chatbots

Product training and support	Training by vendor	Training by partners/resellers	Online training courses	Classroom training
	Accreditation for individuals and/or organisations	Hosting services		

Commercial model	Perpetual licensing	Subscription licensing	Fixed capacity / Per bot-based	Usage-based	Per process-based

1   Released as part of version 6.6 for RDA and support for unassisted RPA is expected in 2018 as part of versions 6.7 & 7.0
2   Advanced OCR (OEM from ABBYY) is fully integrated into their product

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Leaders have moved away from perpetual licensing to subscription-based licensing models; while some vendors have started offering output-oriented pricing models, adoption of such models is low

Measure of pricing model adoption among clients

◯ Very low   ● Very high

Technology vendor	Perpetual licensing	Subscription-based licensing	Periodic subscription		
			Fixed capacity based or per robot-based[1]	Flexible usage-based	Transactional / per process-based
Leaders	(low)	(high)	(very high)	(low)	(very low)
Major Contenders	(medium)	(medium)	(high)	(very low)	(low)
Aspirants	(medium)	(medium)	(very high)	(very low)	(very low)

- Leaders, in general, have moved away from the traditional perpetual licensing model to a periodic subscription-based model, while perpetual licensing is still quite prevalent among many of the Major Contenders and Aspirants

- Advances in RPA technologies and increasing client maturity are fueling the rise of more progressive output-oriented pricing models such as flexible usage-based and per-process or transaction-based models. This has also started to become a key value proposition for some vendors such as WorkFusion and Thoughtonomy

- While several vendors have started to offer or plan to offer their clients more options – such as output-oriented pricing – overall adoption of these options in the market is still quite low

1: Based on upfront number of robots licensed
Source: Everest Group (2018)

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RPA solutions continue to evolve with a host of capabilities to help enterprises achieve strategic business outcomes

Text analytics/NLP
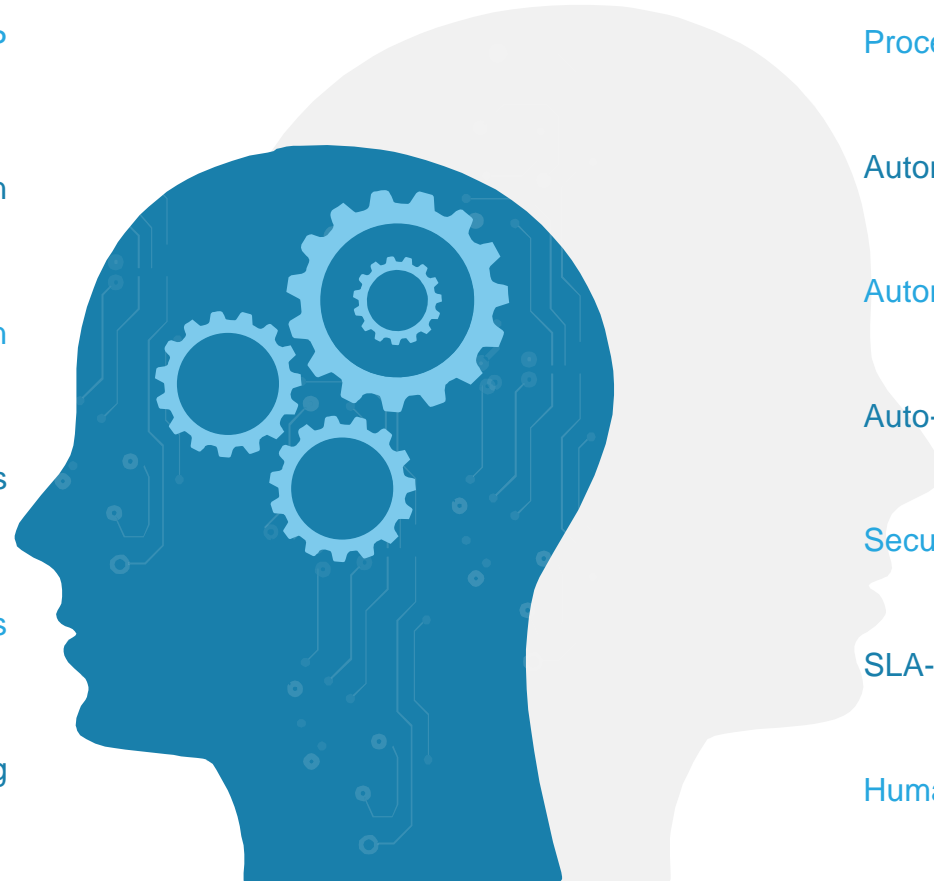
Computer Vision

End-to-end workflow orchestration

Library of pre-built automations

Self-healing systems

Intelligent workload balancing

Pre-built connectors

Process-level business intelligence

Automation recommender

Automating the automation

Auto-scalability

Security

SLA-based automation

Human-in-the-loop

Multi-tenancy

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RPA solution trends and predictions (page 1 of 3)

End-to-end workflow orchestration

End-to-end workflow orchestration capability helps to orchestrate all tasks including manual, systems, and robot tasks from a centralized interface. It also enables human-in-the-loop exception handling, where exceptions are routed to available agents to be handled in near real-time and then resume the workflow afterwards.

Auto-scaling of bots

Auto-scaling of bots refers to the RPA platform's capability to scale the number of robots up or down to meet the variable processing demand, almost instantly. It can be done for both server- or cloud-based deployments. In server deployments, the scalability is limited by the server capacity, whereas, in cloud deployments, more scalability can be achieved.

Self-healing systems

An advanced exception handling feature, self-healing systems learn from the exceptions that agents handle manually and develop the capability to fix those exceptions automatically over time, helping enterprises to minimize the extent of manual intervention that is needed over time.

Intelligent workload balancing

When the system foresees a resource crunch based on the priorities assigned by the administrator, the platform assigns the most critical tasks to available robots and minimizes the impact of resource scarcity. RPA platform with intelligent workload balancing also uses machine learning to identify work distribution patterns and learns to distribute the workload autonomously over time.

SLA-based automation

SLA-based automation monitors the processes based on pre-defined SLAs and prioritizes queues depending on the workload to meet critical SLAs. It could forecast any gaps in meeting critical SLAs with the available robots due to increased workload, as well as indicate the number of additional robots needed to meet all critical SLAs.

Computer vision

Computer vision uses AI to enable automatic extraction, analysis, and understanding of useful information from digital images. Its application in the RPA domain includes intelligently identifying objects from their images in environments such as Citrix, where object-IDs are not available and in use cases that involve processing unstructured documents such as scanned invoices.

Business Intelligence (BI) and analytics

Automation of business processes generates high volumes of rich process-level data. Useful business insights can be derived from this data by feeding it into advanced analytics engine, which can support enterprises in making important strategic decisions as well as optimization of their business processes.

Text analytics / NLP

Text analytics provides the ability to comprehend natural language by understanding the intent and sentiment in the text. It helps enterprises in extracting and classifying text from semi-structured or unstructured data sources such as emails and letters. Machine learning improves the accuracy of NLP / text analytics over time. This enables better integration of RPA robots with chatbot services.

Process mining and automation recommender

The automation recommender leverages desktop analytics or process mining to identify and prioritize opportunities for automating manual tasks in business processes which can assist enterprises in selecting the processes suitable for automation and quickly scaling up RPA deployments and increase automation rates in processes.

Smart automation

Automating the automation is a highly advanced feature, where the RPA platform uses AI to not only identify automation opportunities in processes, but also to learn from human agents' actions when handling manual tasks. When a specified level of confidence is reached, this feature enables automatic creation and addition of automated workflows in the process studio for the manual tasks identified for automation.

Library of pre-built automations

Pre-built automations are reusable components that are generally offered as out-of-the-box or charged separately; enterprises can use them across a variety of processes for faster implementation. Several RPA technology vendors are investing in such libraries by themselves and/or through their partners to offer enhanced value proposition for enterprises.

Multi-tenancy

In multi-tenancy, single instance of the software and all the supporting infrastructure serves multiple customers or multiple deployments across geographies or process locations. With multi-tenant architecture, the provider has to make updates once, whereas, with single-tenancy, the provider has to touch multiple instances of the software to make updates. Multi-tenancy can be more economical because infrastructure as well as software development and maintenance costs are shared.

Security

The built-in credential store enhances RPA deployments' security of by enabling enterprises to store passwords in an encrypted format. We have seen an increasing number of vendors partnering and providing easy integration with specialist password storage system providers, such as CyberArk, for enhanced security.

Human-in-the-loop

Human-in-the-loop provides a user interface to enable an unattended robot to communicate with a human agent to exchange information or manage exceptions in near real-time while it waits for the action to be performed by the human agent.

What do the latest developments in RPA technology mean for enterprises?

Currently

- Scheduled or event-driven robots
- Rules-based automations
- Human exception handling
- UI interface based on objects on screen
- Command line interface with robots
- Failed robots stop working
- Standardized function-specific or vertical processes have to be coded from scratch
- Mostly standalone RPA products
- Mostly server-based deployments

In the near future

- Scheduled, complex events and exceptions driven, intelligent workload balancing with process priority recognition managed by controller or orchestration engines
- Rules-, AI/ML-, and analytics-based automations
- AI and human exception handling
- UI interface aided by computer vision
- Text, voice, vision/virtual reality or gesture commands
- Failed robots will run self-diagnostics and self heal
- Function- or vertical-specific libraries of pre-built automations and robot parts
- Higher adoption of RPA platforms integrated with complimentary solutions such as BPM and AI
- Higher proportion of deployments on the cloud

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The majority of most vendors' use cases are in industry-specific processes

Everest Group's view of the spread of respective vendor use cases across processes

Category	Leaders	Major Contenders	Aspirants
Others[1]	15%	18%	10%
Web-based, e-commerce, and digital self-service	4%	4%	9%
Human Resources (HR)	7%	4%	—
Contact center	8%	15%	43%
Procurement	8%	9%	1%
Finance and Accounting (F&A)	22%	20%	14%
Industry-specific processes	36%	31%	23%
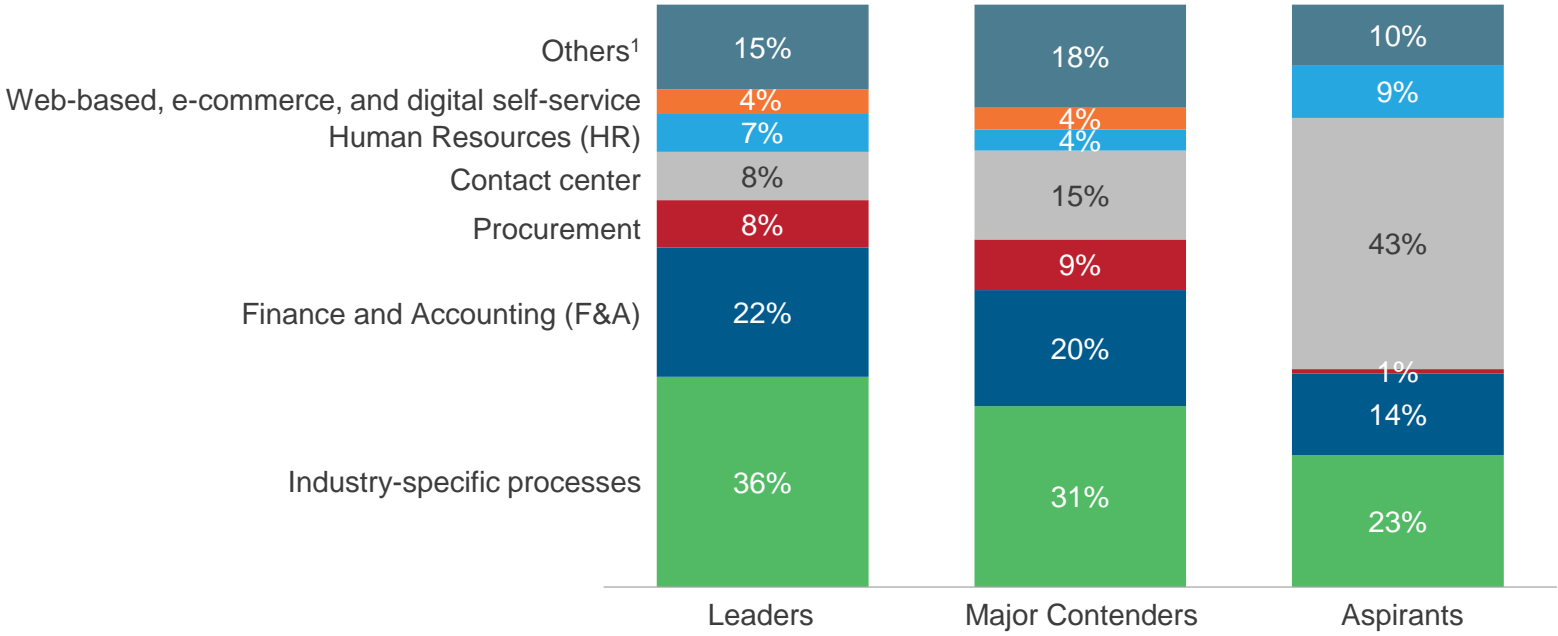
1   Others include document management and IT services
Note: OpenConnect has an exclusive focus on healthcare payer industry-specific processes and has been removed from this analysis
Source: Everest Group (2018)

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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 client information across marketing and supply chain systems); however, because it is part of the normal feature-functionality of a system, it is generally not considered automation, but 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 is 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, system limitations are generally much more difficult to overcome, and they stretch 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 an ROI that can motivate central IT groups to invest their 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 them with newer User Interface (UI) / robotic process tools. Cognitive computing, although in its infancy, represents the next horizon, as automation not only replicates human behavioral characteristics while executing judgment-intensive IT and business processes, but also creates the potential to spawn new businesses for IP-owners and enterprises.

Everest Group's Service Delivery Automation (SDA) spectrum
SDA includes a spectrum of automation solutions for delivering global services

High ◄──────► Low

		Ability to handle input data type	Processing approach	Ability to learn	Context awareness	Approach
Maturity ↓	**Robotic Desktop Automation (RDA)**	Structured only	Deterministic	No	Minimal	Human triggers
	Robotic Process Automation (RPA)	Structured and semi-structured	Deterministic	No	Minimal	Orchestrated process automation
	Autonomics	Structured and semi-structured	Deterministic	No	Yes, but limited to its computing environment	Distributed computing
	Narrow Artificial Intelligence	All types of data including unstructured	Probabilistic	Yes, but limited to a particular area	Yes, but limited to a particular domain	Cognitive computing (machine learning, deep learning, and NLP)
Future tech	**General Artificial Intelligence**	All types of data including unstructured	Probabilistic	Yes, across multiple areas	Yes, across multiple domains and similar to human brain	Not available

Human involvement ◄ *Intelligence* ►

Note: In this report, we have referred to rules-based/deterministic SDA solutions (i.e., RDA, RPA, and autonomics) collectively as RPA

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Glossary of key terms used in this report
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Term	Definition
Artificial intelligence (AI)	Ability of machines to use cognitive computing to mimic human intelligence, such as visual perception, speech recognition, decision-making, and language translation
Autonomic computing	Self-managing characteristics of distributed computing resources, adapting to unpredictable changes while hiding intrinsic complexity to operators and users
BI	Technologies, applications, and practices for the collection, integration, analysis, and presentation of business information
BPM tools	Process optimization solutions with capabilities of process design, execution (through workflows and orchestration of different BPS technology systems), and monitoring (through analytics)
Buyer	The company/entity that purchases outsourcing services from a provider of such services
Cognitive computing	Self-learning systems that use data mining, pattern recognition, and natural language processing to mimic the way the human brain works
Cognitive/smart automation	The ability of a system to learn how to interpret unstructured content, such as natural language, and use analytical capability to derive and present inferences in a pre-defined/structured fashion, for example, a system classifying the mood of a person into one of the pre-defined groups based on his/her tone and language
Computer vision	A type of AI technology that aims to achieve automatic visual understanding through an image or a sequence of images
Deep learning	A subfield of machine learning concerned with algorithms and inspired by the structure and function of the brain called artificial neural networks
FTE	A way to measure a worker's productivity and/or involvement in a project an FTE of 1.0 is equivalent to a full-time worker
General AI	A machine that can perform multiple intellectual tasks across a variety of domains; essentially, it mimics all activities performed by a human

Source: Everest Group (2018)

Glossary of key terms used in this report
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Term	Definition
Horizontal business processes	Those processes that are common across the various departments in an organization and are often not directly related to the key revenue-earning business, such as procurement, finance & accounting, and human resource management
KPI	Key performance indicators for processes, services, products, or solutions
Machine learning	A type of artificial intelligence that provides the computers with learning capabilities without explicit programming
Narrow AI	A machine that performs one narrow task; an expert system
NLP	A machine's ability to interpret human languages
Optical character recognition (OCR)	A technology within computer vision that involves the recognition of printed characters using computer software
PoC	A realization of a certain method or idea in order to demonstrate its feasibility, or a demonstration in principle with the aim of verifying that some concept or theory has practical potential
RDA	A type of automation that interacts with a computer-centric process through the User Interface (UI) / user objects of the software application supporting that process; works on agents' desktops, requires human triggers, and is implemented with the goal of increasing agent productivity by integrating and automating processes on the desktop
ROI	Returns attained from an investment
RPA	A type of automation that interacts with a computer-centric process through the User Interface (UI) / user objects of the software application supporting that process; typically deployed on virtual machines and can enable end-to-end process automation without the need for human triggers
RPA deployments	In-production or scaled-up deployments of RPA solutions

Source: Everest Group (2018)

Glossary of key terms used in this report
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Term	Definition
Semi-structured data	Semi-structured content is one which does not conform to the pre-defined structure of content, but nonetheless, contains tags / other markers to separate semantic elements and enforce hierarchies. In short, it has a self-describing structure. The placeholders of the content can be in varied sequences
Software-as-a-Service (SaaS)	SaaS is a software licensing and delivery model in which common platforms are built and standard functionality is developed while being integrated into an enterprise's systems. It is expected to bring about more integration between the IT environment and the business needs, thus making the IT infrastructure more agile and aligned to business changes
Structured data	Structured content is one which conforms to the pre-defined structure of content in terms of tags to separate semantic elements and enforce hierarchies of records and fields. Moreover, the placeholders for the content have a pre-defined sequence
Transaction-based pricing	Output-based pricing structure; priced per unit transaction with significant price differences between onshore and offshore
Unstructured data	Unstructured content refers to information that either does not have a pre-defined data model or is not organized in a pre-defined manner. Unstructured information is typically text-heavy, but may contain data such as dates, numbers, and facts as well
VDI	Virtual Desktop Infrastructure (VDI) is virtualization technology that hosts a desktop operating system on a centralized server in a data center
Vertical-specific business processes	Vertical-specific business processes refer to those processes which are specific to a department within an organization, and are often directly related to the key revenue-earning business. Examples include lending process in case of the banking industry and claims processing in case of the insurance industry
Virtual agent	It is a computer-generated virtual character which can have a conversation with human customers and take decisions. Alternative term for chatbots or virtual assistants
VM	A Virtual Machine (VM) is an emulation of a computer system. They are software computers based on computer architectures, runs an operating system, and provide functionality of a physical computer

Source: Everest Group (2018)

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FAQs

Does the PEAK Matrix™ assessment incorporate any subjective criteria?
Everest Group's PEAK Matrix assessment adopts an unbiased and fact-based approach (leveraging service provider / technology vendor RFIs and Everest Group's proprietary databases containing providers' deals and operational capability information). In addition, these results are validated / fine-tuned based on our market experience, buyer interaction, and provider/vendor briefings

Is being a "Major Contender" or "Aspirant" on the PEAK Matrix, an unfavorable outcome?
No. The PEAK Matrix highlights and positions only the best-in-class service providers / technology vendors in a particular space. There are a number of providers from the broader universe that are assessed and do not make it to the PEAK Matrix at all. Therefore, being represented on the PEAK Matrix is itself a favorable recognition

What other aspects of PEAK Matrix assessment are relevant to buyers and providers besides the "PEAK Matrix position"?
A PEAK Matrix position is only one aspect of Everest Group's overall assessment. In addition to assigning a "Leader", "Major Contender," or "Aspirant" title, Everest Group highlights the distinctive capabilities and unique attributes of all the PEAK Matrix providers assessed in its report. The detailed metric-level assessment and associated commentary is helpful for buyers in selecting particular providers/vendors for their specific requirements. It also helps providers/vendors showcase their strengths in specific areas

What are the incentives for buyers and providers to participate/provide input to PEAK Matrix research?
● Participation incentives for buyers include a summary of key findings from the PEAK Matrix assessment
● Participation incentives for providers/vendors include adequate representation and recognition of their capabilities/success in the market place, and a copy of their own "profile" that is published by Everest Group as part of the "compendium of PEAK Matrix providers" profiles

What is the process for a service provider / technology vendor to leverage their PEAK Matrix positioning and/or "Star Performer" status ?
● Providers/vendors can use their PEAK Matrix positioning or "Star Performer" rating in multiple ways including:
  – Issue a press release declaring their positioning. See citation policies
  – Customized PEAK Matrix profile for circulation (with clients, prospects, etc.)
  – Quotes from Everest Group analysts could be disseminated to the media
  – Leverage PEAK Matrix branding across communications (e-mail signatures, marketing brochures, credential packs, client presentations, etc.)
● The provider must obtain the requisite licensing and distribution rights for the above activities through an agreement with the designated POC at Everest Group.

Does the PEAK Matrix evaluation criteria change over a period of time?
PEAK Matrix assessments are designed to serve present and future needs of the enterprises. Given the dynamic nature of the global services market and rampant disruption, the assessment criteria are realigned as and when needed to reflect the current market reality as well as serve the future expectations of enterprises

About Everest Group

Everest Group is a consulting and research firm focused on strategic IT, business services, and sourcing. We are trusted advisors to senior executives of leading enterprises, providers, and investors. Our firm helps clients improve operational and financial performance through a hands-on process that supports them in making well-informed decisions that deliver high-impact results and achieve sustained value. Our insight and guidance empower clients to improve organizational efficiency, effectiveness, agility, and responsiveness. What sets Everest Group apart is the integration of deep sourcing knowledge, problem-solving skills and original research. Details and in-depth content are available at www.everestgrp.com.

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

Bangalore
india@everestgrp.com
+91 806-781-9999

Delhi
india@everestgrp.com
+91-124-496-1000

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

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

Toronto
canada@everestgrp.com
+1-416-388-6765

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