



Everest Group PEAK Matrix[®] for Intelligent Document Processing (IDP) Technology Vendors 2020

Focus on Parascript
April 2020



Background of the research

Everest Group defines Intelligent Document Processing (IDP) as any software product or solution that captures data from documents (e.g., email, text, PDF, and scanned documents), categorizes, and extracts relevant data for further processing using AI technologies such as computer vision, OCR, Natural Language Processing (NLP), and machine/deep learning. These solutions are typically non-invasive and can be integrated with internal applications, systems, and other automation platforms.

IDP products find a wide variety of use cases from different business functions and verticals. Adoption of IDP solutions can not only help enterprises achieve cost savings, but also improve their workforce productivity and employee & customer experience. These products are also rapidly evolving in the sophistication of their capabilities, features, and functionalities.

In this study, we assess IDP software products in the market that leverage AI/cognitive capabilities and are available for independent licensing. They are offered as either platforms that allow enterprises to deploy as out-of-the-box solutions using pre-built modules, or custom solutions to the buyers with the intent of classifying and extracting data from documents.

In this study, we analyze the IDP technology landscape across various dimensions

- Everest Group's PEAK Matrix® evaluation, a comparative assessment of 18 leading IDP technology vendors
- Overview of IDP software products
- Competitive landscape of the IDP technology vendor market
- Everest Group's remarks on key strengths and areas of improvement for each IDP technology vendor
- IDP product capability trends and predictions

Scope of this research

- **Products:** Intelligent Document Processing (IDP)
- **Geography:** Global
- **Technology vendors:** 18 leading IDP technology vendors

Introduction and scope

Everest Group recently released its report titled “[Intelligent Document Processing \(IDP\) – Technology Vendor Landscape with Products PEAK Matrix® Assessment 2020](#)”. The report provides a detailed view of the IDP technology vendor landscape and a thorough assessment of the various IDP technology solutions across several key dimensions.

As a part of this report, Everest Group presented a comparative assessment of 18 leading IDP technology vendors and updated its classification of the vendors on the Everest Group IDP Products PEAK Matrix® into Leaders, Major Contenders, and Aspirants. The PEAK Matrix is a framework that provides an objective, data-driven, and comparative assessment of vendors based on their market impact and vision & capability.

Based on the analysis, **Parascrip**t emerged as a Major Contender. This document focuses on Parascrip IDP experience and capabilities and includes:

- Parascrip’s position on the Everest Group IDP Products PEAK Matrix 2020
- Detailed profile of Parascrip

Buyers can use the PEAK Matrix to identify and evaluate different IDP 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.

IDP Products PEAK Matrix® characteristics

Leaders:

ABBYY, AntWorks, Automation Anywhere, Kofax, OpenText, and WorkFusion

- Leaders have been pioneers in educating the market on the utility and benefits of IDP solutions. They are further investing in R&D to expand their capabilities such as processing handwritten documents, documents in regional languages, and applications to process images on mobile
- The majority of Leaders are expanding their offerings in the IDP landscape by launching new products and platforms, acquiring firms or solutions, and further developing the product for cloud deployments. Their focus is on providing an end-to-end intelligent automation solution to customers

Major Contenders:

BIS, Datamatics, EdgeVerve, Ephesoft, HCL Technologies, Hyperscience, Infrd, Parascript, and Rossum

- The majority of Major Contenders are investing in expanding their partner ecosystem by forging partnerships with vendors of complementary technologies such as RPA and BPM, opening new offices to increase their delivery footprint. Some of them have already raised a few rounds of funding from investors
- They are focusing on developing competencies for faster acquisition of customers through an aggressive GTM strategy and offering more out-of-the-box solutions for common industry use cases with higher accuracy

Aspirants:

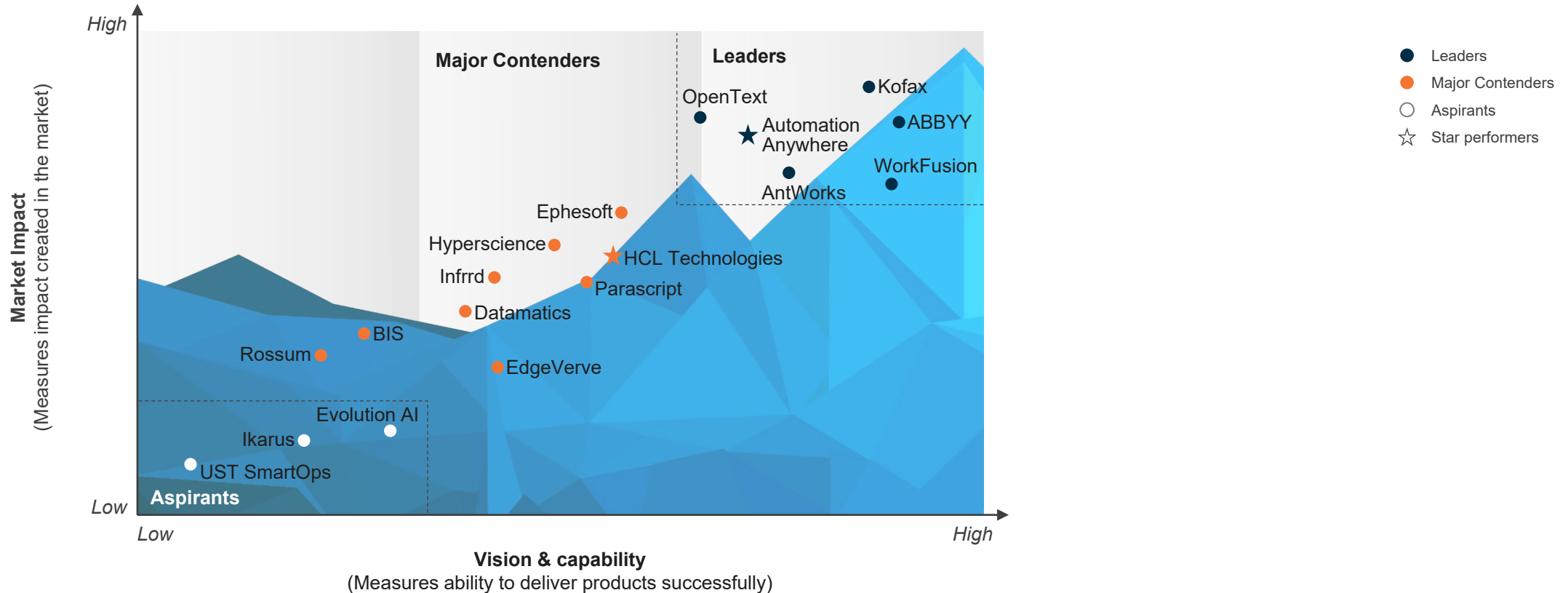
Evolution AI, Ikarus, and UST SmartOps

- Most of the Aspirants have clients concentrated in a specific region or industry. They are investing in R&D to develop features to enhance their IDP algorithms for better accuracy and simplifying the training of the model
- They are working on developing connectors and forging partnerships with leading RPA and BPM vendors for smoother integration with complementary technologies. At the same time, they are also expanding their headcount in product development, support services, and sales and marketing teams

Everest Group PEAK Matrix®

Intelligent Document Processing (IDP) Products PEAK Matrix® Assessment 2020 | Parascript positioned as Major Contender

Everest Group Intelligent Document Processing (IDP) Products PEAK Matrix® Assessment 2020



Parascript | IDP product profile (page 1 of 6)

Overview

Company overview

Established in 1996, Parascript is a Machine Learning (ML) software firm that automates extraction of contextual data from image and document-based information to support transactions, information governance, fraud prevention, and business processes. Parascript software analyzes ~100 billion documents for financial services, government organizations, and the healthcare and life sciences industry.

Key leaders:

- Dr. Alexander Filatov, Chief Executive Officer and President
- Dr. Iliia Lossev, Chief Scientist and Vice President, Advanced R&D

Headquarters: Longmont, Colorado, the United States

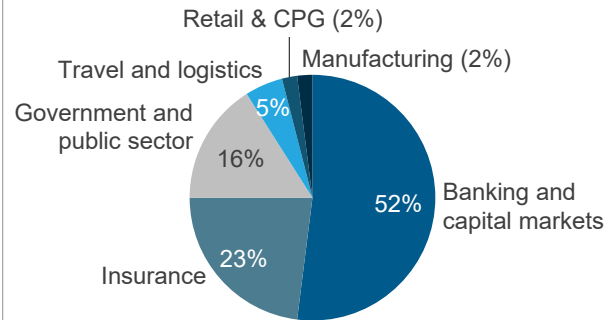
Key clients: IBM, ATOS, Jack Henry, and Softline

Website: www.parascript.com

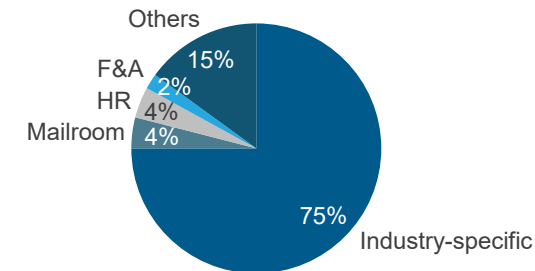
Market adoption and capability overview

| Description | 2019 (as on September 30, 2019) | YOY growth |
|---------------------------------|-----------------------------------|---------------|
| IDP clients | 964 | 2% |
| IDP FTEs | 37 | 6% |
| IDP-specific partners/resellers | 120 | Not Disclosed |
| Key partners/resellers | Fiserv, Orbograph, and Jack Henry | |
| Key technology partners | Microsoft | |

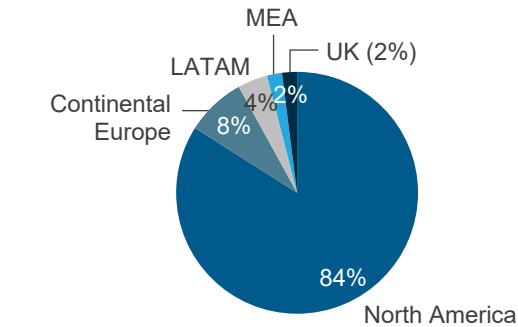
Split of IDP revenue by buyer industry



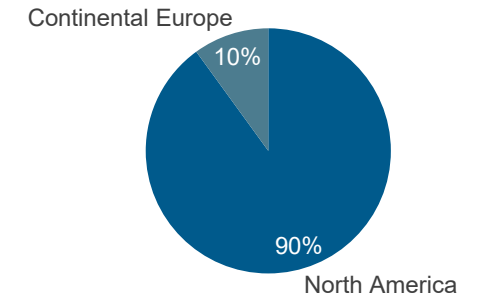
Split of IDP revenue by process area



Split of IDP revenue by buyer geography



Split of IDP FTEs by geography



Note: Operational and product-offering-related information as on September 2019, collected as part of the study / based on Everest Group estimates

Source: Everest Group (2020)

Capabilities

Product overview

FormXtra.AI Capture

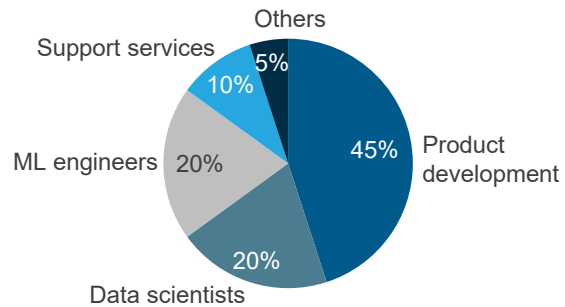
- A document classification, data location, extraction, and validation solution that uses ML to reduce upfront and ongoing configuration time to minutes
- FormXtra.AI aims to reduce the complexity, time, and costs associated with document classification and data extraction by automatically configuring image perfection, classification, and data extraction rules
- A self-learning capture system that automatically configures rules and learns by itself to improve performance
- Delivers a streamlined, user-friendly, thin client interface and built-in testing, enabling users to manage complex workflows, performance monitoring, and automation

Version number: 7.5

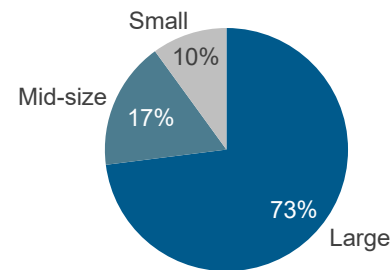
Non-exhaustive list of recent investments and announcements

- **2020:** Partnered with Redshift to automate insurance document processing in Portugal by leveraging its FormXtra.AI solution
- **2020:** Launched the latest version of FormXtra.AI 7.6, which reduces manual drudgery by automating tasks and increasing client efficiency in document classification, data location, extraction, and verification of information. It also includes handwriting transcription of multi-line comment fields
- **2019:** Added 16 new partners including BRYJ, Imagine Solutions, CBE, Next Phase Solutions, Anacomp, Precodata, and Deloitte Australia
- **2019:** Partnered with Automation Anywhere, an RPA firm, and BRYJ, a consultancy and solutions provider, to help provide clients access to advanced intelligent automation with Parascript's smart learning capture

Split of IDP FTEs by function¹



Split of IDP client mix by buyer-size²



Split of IDP client mix by language

Not disclosed

Split of IDP clients by engagement channels

Not disclosed

¹ Includes FTEs in product development, support services (product support, implementation, etc.), and sales & marketing; excludes FTEs in corporate functions such as HR and IT

² Buyer size is defined as large (>US\$5 billion in revenue), mid-size (US\$1-US\$5 billion in revenue), and small (<US\$1 billion in revenue)

Note: Operational and product-/offering-related information as on September 2019, collected as part of the study / based on Everest Group estimates

Source: Everest Group (2020)

Parascript | IDP product profile (page 3 of 6)

Capabilities

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

| Capability & offerings | | | | |
|----------------------------|---|---|---|--|
| Input formats supported | E-mails | SMS text | XLS files | Images |
| | Scanned documents (free-flowing text) | PDF documents (free-flowing text) | Handwritten documents | Bar code |
| | Identity documents | Signatures | HTML files | |
| Software learning | Ability to train the OCR | Ability to train the software using past data | Ability to train the software using human-in-the-loop | Pre-trained basic models |
| | Availability of packaged out-of-the-box solutions | Automatic identification of the best training model | Queue management | Automatic generation of training data batch for manual review |
| Functionality | Proprietary/in-house OCR | Ability to classify documents into different document types | Auto-completion feature while entering information manually | Ability to classify sections/pages within document before extraction |
| | Define/edit processes using drag-and-drop features in the GUI | Highlight errors and exceptions (in review GUI) | Ability to add business validation rules | Display confidence level for classification |
| | Display confidence level for extraction | Configure confidence level or accuracy threshold for data extraction by enterprise user | Ability to process documents and images from mobile devices | Image/document pre-processing |
| | Sentiment analysis from text | | | |
| Complementary capabilities | Availability of native RPA capability | Availability of BPM/workflow capability | NLP capabilities | Availability of APIs |
| Monitoring and improvement | Availability of analytics and reporting tools | Tracking of batch-level STP rates | Tracking of field-level accuracy | Human workforce performance analytics |
| | Process-level SLA monitoring | Ability of tool to continuously monitor its own performance | Ability to build custom reports | |

Capabilities











Available
 In the roadmap
 Available via partner
 Not available

| Capability & offerings | | | | | |
|--|---|------------------------|-------------------------|----------------------------|---|
| Hosting options | Server/on-premise | Private cloud | Public cloud | Desktop/laptop | Hosting services via partners/resellers |
| Product training and support | By vendor | By partners/resellers | Online training courses | Classroom training | Maintenance provided by vendor |
| Documentation | PDF manual | Embedded help tool | User community | | |
| Commercial model | Perpetual licensing | Subscription licensing | Fixed capacity-based | Usage-based (per document) | Usage-based (per page) Usage-based (per process) |
| Key areas of enhancements in the latest product releases (as on September 2019) | <ul style="list-style-type: none"> • Ability to process handwritten text: Smart Learning allows the software to adapt to different locations and values for handwritten fields on structured and semi-structured documents • Fully-automated learning that allows client to promote learning sessions to production: This capability supports fully autonomous performance monitoring and improvement as a “set and forget” process based upon specific performance requirements of a client • Train document classifiers in a single step: Two new deep learning classifiers were introduced that are trained simultaneously on sample data • International support for SSN and address recognition: This features adds to pre-trained data type support, allowing organizations to easily deploy solutions that include this data. Other data that is pre-trained includes date, amount, age, credit card number, measurements, and address • Multi-line handwriting recognition: This capability expands upon Parascript’s native hand-print and handwriting recognition by extending it to multiple lines of information common within comment fields of forms • Introduction of new “maker-checker” feature: When activated, this feature separates the process of configuration management from configuration approval, which is critical for organizations within regulated industries | | | | |

Parascript | IDP product profile (page 5 of 6)

Everest Group assessment – Major Contender

Measure of capability:  High  Low

| Market impact | | | | Vision & capability | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Market adoption | Portfolio mix | Value delivered | Overall | Vision and strategy | Product capability | Monitoring and improvement | Implementation and support | Commercial model | Overall |
|  |  |  |  |  |  |  |  |  |  |

Strengths

- Parascript’s FormXtra.AI uses cognitive technologies to automate classification and extraction of data. The software leverages machine learning algorithms to produce portable models through its Smart Learning module
- FormXtra.AI has robust software learning features such as the ability to classify documents through clustering, train the software for extraction by ingesting a sample set of labeled documents with historic data, and user-based training through continuous feedback loop. Further, these features are exposed to enterprises via Form Definition Studio, which can be managed without specialized machine learning or coding expertise
- The software is capable of processing documents in a wide variety of scenarios including handwritten documents, bar codes, and signatures
- The Form Definition Studio is simple and easy to use for enterprises, with features such as the ability to set the confidence thresholds for classification and field-level extraction. The control panel for user review also highlights the fields with errors or below confidence thresholds. It also offers abilities to self-monitor and adjust in order to maintain established throughput and accuracy requirements
- Validation rules for extracted data can be assigned at the field level in the GUI including validation with external data sources. Parascript also provides a runtime scripting engine that supports more complex validations either directly within the application or via one or more third-party data sources











Areas of improvement

- Parascript provides solutions for banking and capital markets, insurance, and the government sector; however, it does not have much experience serving clients in CPG and retail, healthcare and pharma, and telecom sectors
- As the majority of its clientele is based out of the Americas, the UK, and Continental Europe, its presence in APAC, the Middle East, and Africa is limited
- Its client portfolio is highly skewed toward large enterprises (revenue > US\$5 billion) with majority clients belonging to the large enterprise segment. Its ability to serve small enterprise clients is relatively unproven
- Currently pre-packaged solutions for claims, checks, and invoices processing solutions are available. Providing more out-of-the-box solutions for common use cases such as order management and KYC processing will enhance its offering for clients looking for readily deployable IDP solutions in these spaces
- Ingestion of documents in SMS and XLS formats is currently not supported in the tool for processing
- It lacks NLP capabilities such as sentiment analysis, entity recognition, intent analysis, auto-tagging, categorization, and entity search for processing unstructured documents such as contracts

Parascript | IDP product profile (page 6 of 6)

Everest Group assessment – Major Contender

Measure of capability:  High  Low

| Market impact | | | | Vision & capability | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Market adoption | Portfolio mix | Value delivered | Overall | Vision and strategy | Product capability | Monitoring and improvement | Implementation and support | Commercial model | Overall |
|  |  |  |  |  |  |  |  |  |  |

Strengths

- The control panel for enterprise administrator has security features such as the ability to create multiple operator roles with full views or access to a partial set of fields for verification. It also provides a feature to send the extracted data rejected by the operators for final queue to ensure that the rejected data is valid
- It also offers services such as data collection, quality assurance, and training for customer-specific needs for clients lacking expertise with gathering sample sets used for training. It also has the ability to use synthetic data when there are issues with data accessibility
- The vendor offers classroom as well as online training courses for customers to enable seamless integration of the software within enterprises
- The solution is flexible in terms of hosting options as it can be hosted both on-premise as well as on cloud
- The clients appreciate its ability to understand customer requirements and incorporate them in their solutions. They also appreciate its solution-focused approach to help customers meet their business objectives
- Clients are highly satisfied with the ease of use and implementation of the software as well as their customer support services

Areas of improvement

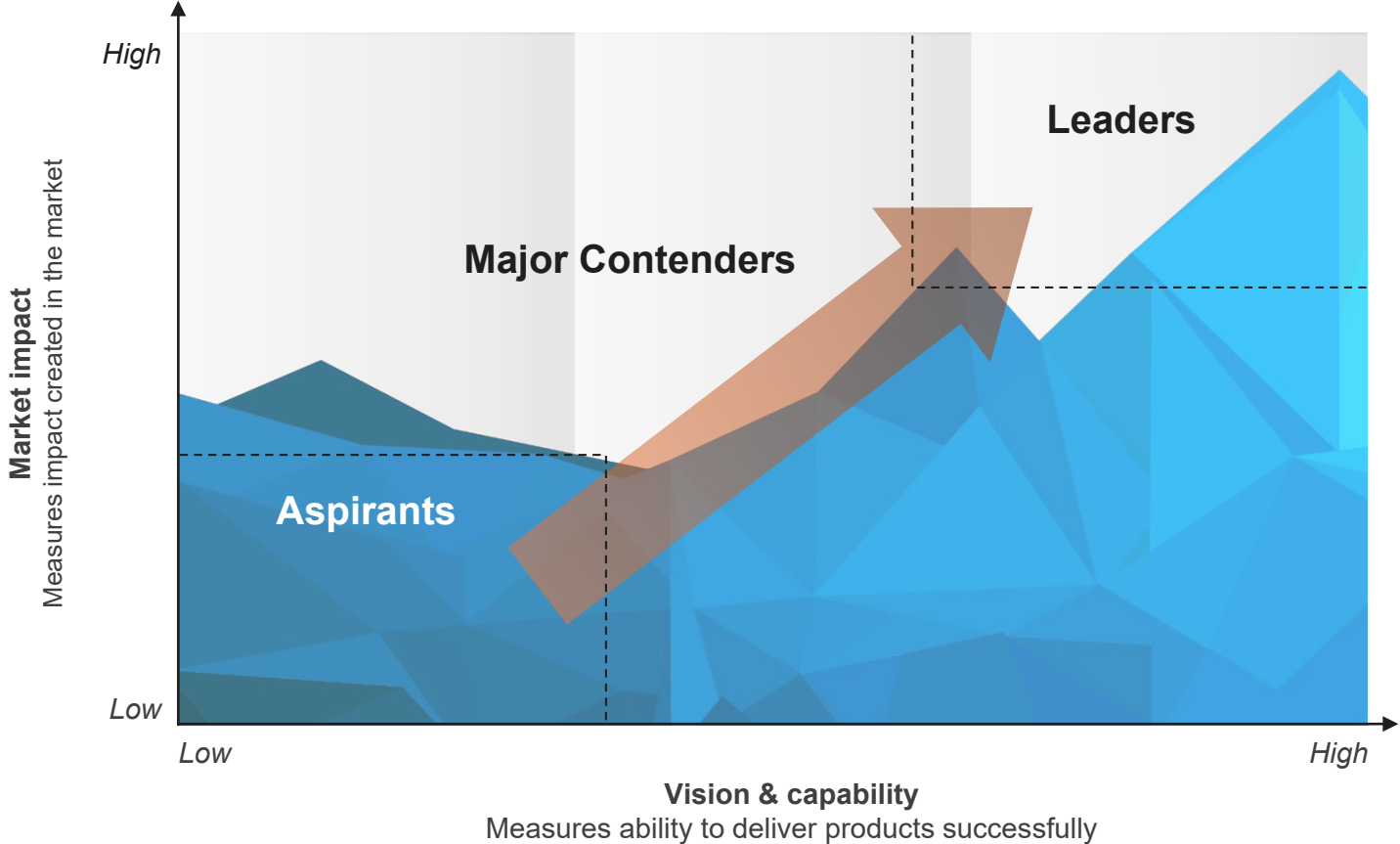
- While it provides APIs for integration with RPA tools, providing out-of-the-box integration for BPM tools can enhance its value proposition for clients looking for a product that can be easily deployed within the existing infrastructure
- The product currently provides a reporting tool, but there is scope for improvement in its analytics and dashboards by improving the look and feel, adding more intuitive graphs, and providing unified view of automated and manual processing performance by batch, document, and field level
- While it supports Latin script-based languages, it does not support processing of documents in Asian or Middle Eastern languages. Also, the UI currently supports only English language, which might deter broader adoption
- There is scope for Parascript to expand its partnership with complementary technology vendors such as RPA vendors to provide integrated solutions to clients
- Clients have expressed the need for greater visibility to roadmap as well as improvement in the cognitive features of the solution such as ML and NLP
- Clients have also highlighted that the trainings and manuals need to be more customized toward non-technical business users

Appendix

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



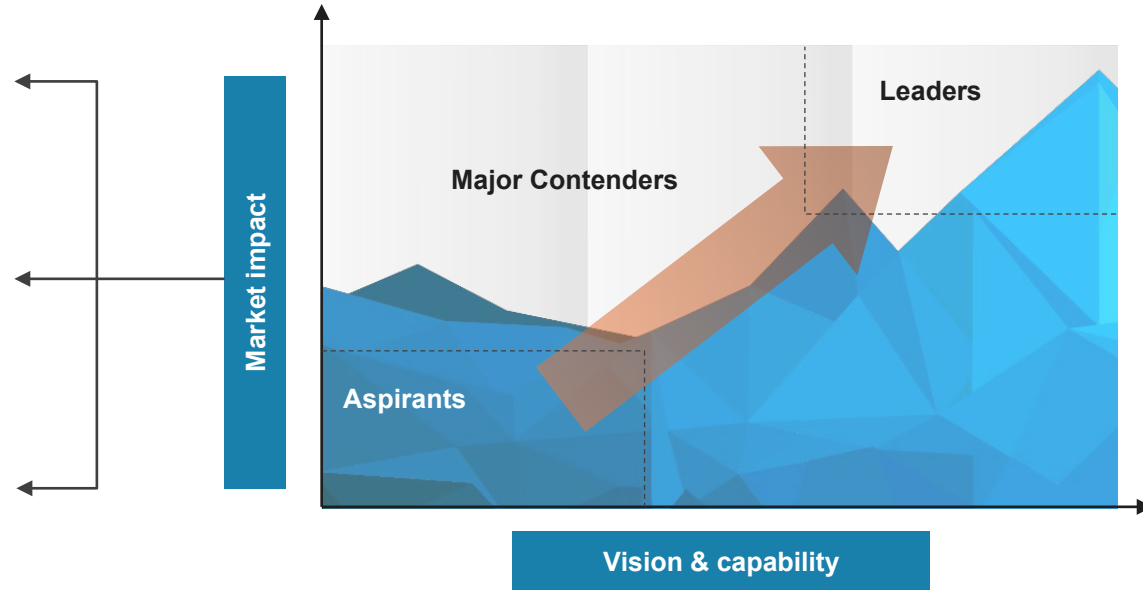
Everest Group PEAK Matrix



Products PEAK Matrix® evaluation dimensions

Measures impact created in the market – captured through three subdimensions

| Market adoption |
|--|
| Number of clients, revenue base, and YOY growth |
| Portfolio mix |
| Diversity of client base across industries, geographies, environments, and enterprise size class |
| Value delivered |
| Value delivered to the client based on customer feedback and other measures |



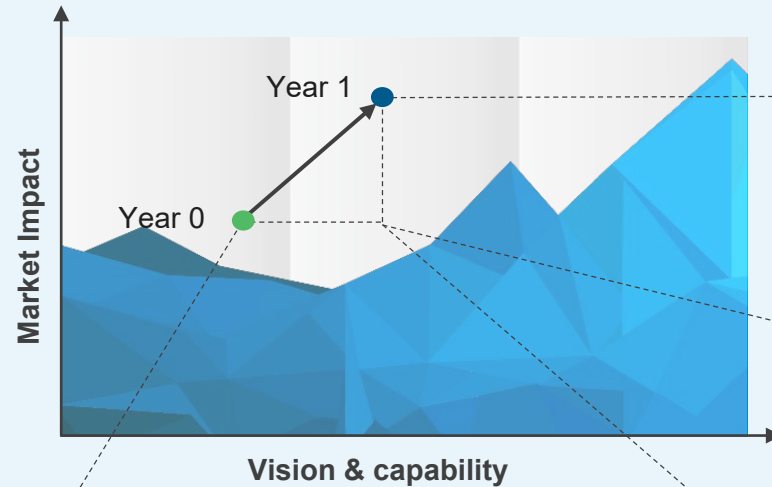
Measures ability to deliver products successfully. This is captured through five subdimensions

| Vision and strategy | Product capability | Monitoring and improvement | Implementation and support | Commercial model |
|---|--|---|--|--|
| Vision for the client and itself; future roadmap and strategy | Software learning, product functionalities, flexibility, interoperability, and security and compliance | Performance tracking, operational analytics, and reporting tool | Hosting options, image quality requirements, training, maintenance, partnerships with resellers / system integrators, and partnerships with complementary technology vendors | Progressiveness, flexibility, and client adoption of available commercial models |

Everest Group confers the Star Performers title on providers that demonstrate the most improvement over time on the PEAK Matrix®

Methodology

Everest Group selects Star Performers based on the relative YOY improvement on the PEAK Matrix



In order to assess advances on **market impact**, we evaluate each vendor's performance across a number of parameters including:

- Yearly YOY revenue growth
- # of new clients
- Improvement in portfolio mix
- Improvement in value delivered

In order to assess advances on **vision and capability**, we evaluate each vendor's performance across a number of parameters including:

- Innovation
- Increase in product scope and functionality
- Expansion of product associated consulting, training, support, and maintenance capabilities
- Technology-/domain-specific investments

We identify the vendors whose improvement ranks in the top quartile and award the Star Performer rating to those vendors with:

- The maximum number of top-quartile performance improvements across all of the above parameters AND
- At least one area of top-quartile improvement in performance in both market success and capability advancement

The Star Performers title relates to YOY performance for a given vendor and does not reflect the overall market leadership position, which is identified as Leader, Major Contender, or Aspirant.

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.

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