



Everest Group PEAK Matrix® for Intelligent Document Processing (IDP) Technology Provider 2022

Focus on Laiye
May 2022



Background of the research

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Everest Group defines Intelligent Document Processing (IDP) as any software product or solution that uses AI technologies such as computer vision, OCR, Natural Language Processing (NLP), and machine/deep learning to capture, categorize, and extract data from documents (e.g., email, text, PDF, and scanned documents) for further processing. 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. The 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 and IDP technology providers are increasingly offering a low-code/no-code platform to enable citizen developers to configure the platform without the need for data scientists.

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

In the full report, we analyze the IDP technology landscape across various dimensions:

- Everest Group’s PEAK Matrix® evaluation, a comparative assessment of 36 leading IDP technology providers
- Overview of IDP software products
- Competitive landscape of the IDP technology provider market
- Remarks on key strengths and limitations for each IDP technology provider
- IDP product capability trends and predictions

Scope of this report



Geography
Global



Technology providers
36 leading IDP technology providers



Products
Intelligent Document Processing (IDP)

IDP products PEAK Matrix® characteristics

Leaders:

ABBYY, Automation Anywhere, Kofax, and WorkFusion

- Responding to the rising demand for a holistic intelligent automation platform, Leaders are focusing on delivering broader document-centric automation by forging partnerships with or developing in-house capabilities for complementary technologies such as RPA, BPM/process orchestration, process mining, and conversational AI
- They are also focusing on global deployments catering to varying use cases across different markets. They have expanded support for processing documents in a variety of languages including Asian and Middle Eastern regional languages such as Chinese, Korean, and Arabic

Major Contenders:

Alkymi, AntWorks, Appian, Celaton, Datamatics, EdgeVerve, Eigen Technologies, Ephesoft, Evolution AI, Fosfor by LTI, HCL Technologies, Hypatos, Hyperscience, IBM, Indico Data, Infrd, JIFFY.ai, KnowledgeLake, Laiye, Microsoft, Nividous, Parascript, Parashift, qBotica, Rossum, Singularity Systems, and UiPath

- A few Major Contenders are differentiating themselves by investing in R&D to enhance their AI capabilities for extraction as well as to reduce the time taken for implementation and training new AI models
- Major Contenders are expanding their support for various data types such as handwritten documents, complex tables, signatures (detection), images, and logos. Some Major Contenders are also focusing on offering capabilities to process complex unstructured documents including contracts, agreements, and emails
- They are also looking to reduce the total cost of ownership for enterprises by introducing a SaaS offering of their platforms

Aspirants:

codemantra, DocVu.AI, KoiReader Technologies, OpenBots, and Straive

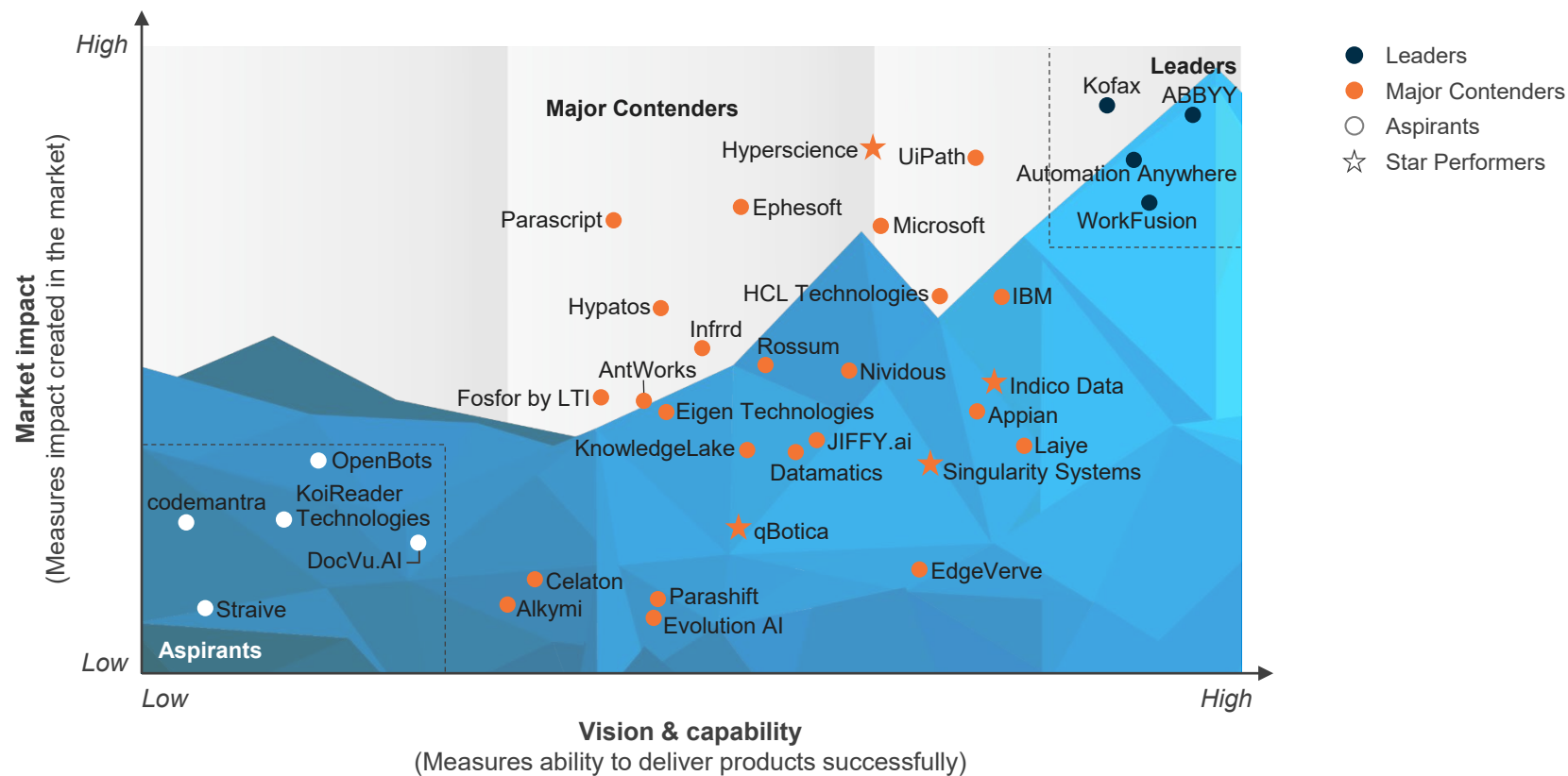
- The majority of Aspirants are focusing on particular industries and on providing vertical-specific solutions to cater to enterprise needs. They are developing more specialized point solutions to address specific use cases
- Aspirants are laying greater focus on processing unstructured documents and developing NLP capabilities to differentiate themselves from the leading and established providers in the market

Everest Group PEAK Matrix®

Intelligent Document Processing (IDP) Products PEAK Matrix® Assessment 2022 | Laiye positioned as Major Contender



Everest Group Intelligent Document Processing (IDP) Products PEAK Matrix® Assessment 2022



Source: Everest Group (2022)

Laiye | IDP product profile (page 1 of 6)

Overview

Company overview

Established in 2015, Laiye offers an intelligent automation platform, which aims to transform businesses and people through conversational AI, RPA, and IDP solutions. It helps businesses optimize human-machine collaboration with productivity-enhancing digital workforce solutions; and delivers automation solutions that allow them to become more efficient and agile.

Key leaders

- Guanchun Wang, Chairman & CEO
 - Wei Li, Co-CEO & President
 - Yichuan Hu, CTO
- Rui Chu, CPO
 - Ronen Lamdan, VP and CEO of Laiye International

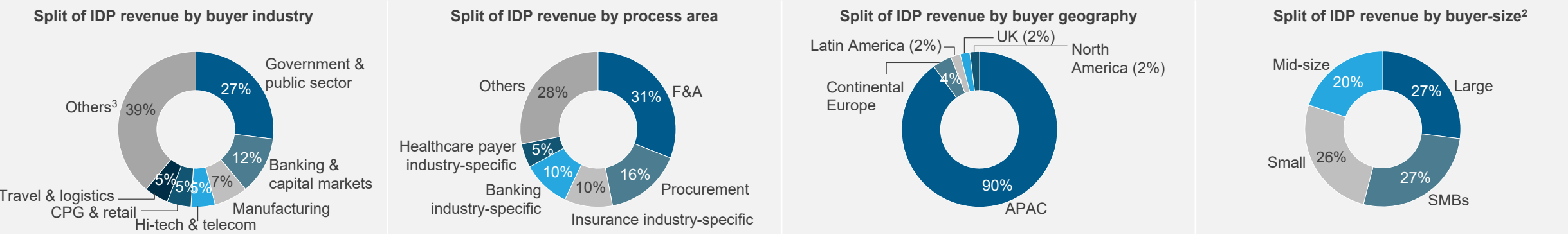
Headquarters: Beijing, China

Website: www.laiye.com

Key clients include:

Bank of China, China Southern Power Grid Company Limited, CNBG, Ping An Bank, State Administration of Foreign Exchange, and State Grid Corporation of China

Market adoption and capability overview		
Description	2021 (as of September 2021)	YoY growth
IDP clients ¹	75	275%
IDP FTEs	42	40%
IDP-specific partners/resellers	44	Not available
Key service partners/resellers	Deloitte and Digital China	
Key technology partners	INTSIG and Wintone	



1 The number of clients is as of December 2021.

2 Buyer size is defined as large (>US\$5 billion in revenue), mid-size (US\$1-5 billion in revenue), small (US\$50 million-US\$1 billion in revenue), and SMBs (<US\$50 million in revenue).

3 Others include energy & utility and real estate sectors

Note: Operational and product-offering-related information as of September 2021, collected as part of the study / based on Everest Group estimates.

Source: Everest Group (2022)

Laiye | IDP product profile (page 2 of 6)

Overview

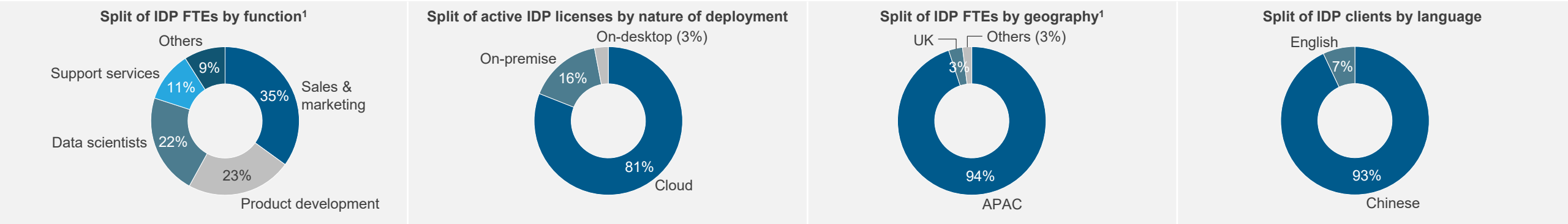
Product overview

- The Intelligent Document Processing (IDP) solution is based on OCR, NLP, and deep learning algorithms, which provide document recognition, interpretation, classification, information extraction, verification, comparison, error correction, and other functions to achieve the automation of enterprise-grade daily document processing
- The solution supports 20+ languages and comes with a pre-trained model for a large variety of cards and forms
- It is an open platform that allows any third-party providers to integrate their models and products

Version number: V1.19

Recent deals and announcements (not exhaustive)

- **November 2021:** partnered with HUAWEI CLOUD, a cloud service provider, to drive digital transformation in Brazil through cloud computing, Artificial Intelligence (AI), and big data
- **September 2021:** partnered with KPMG to accelerate intelligent automation adoption in the finance industry
- **June 2021:** expanded international team for global expansion



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.
Note: Operational and product/offering-related information as of September 2021, collected as part of the study / based on Everest Group estimates.
Source: Everest Group (2022)

Laiye | IDP product profile (page 3 of 6)

Capabilities

Available In the roadmap Available via partner Not available

Capability & offerings				
Software learning & pre-packaged solutions	Ability to train the OCR	Ability to train the software with past data	Ability to train the software with human-in-the-loop	Pre-learned models
	Out-of-the-Box (OOTB) packaged solutions	Leverages transfer learning mechanism	Online marketplace for pre-trained models	
Input data types	Handwritten text	Barcode	Logos	Stamps
	Signature	Borderless tables	Nested tables	
Input file types	Text files	CSV files	PDF files	JPG/JPEG files
	PNG files	XLS files	DOC files	
Extraction & classification	Ability to classify documents into different document types	Business user-facing GUI with simple drag-and-drop features to define/edit the process	Ability of business users to add, configure, and manage validation rules from the platform	Ability of business users to configure validation rules using external data
	Ability to create/modify workflows for approval	Native mobile application	Image/document pre-processing	Ability of software to highlight errors and exceptions (in review GUI)
	OCR engine	Ability for enterprise user to define, add, and modify fields to be extracted		
Unstructured document processing	NLP capabilities to understand context and intent of free-flowing text	NLG capabilities to summarize texts in documents	Ability to search through a repository documents based on entity/intent	Sentiment analysis of text
	Ability to compare differences in meaning between documents	Ability to normalize extracted unstructured information	Ability to identify relationship between extracted entities and values	

Laiye | IDP product profile (page 4 of 6)

Capabilities

AvailableIn the roadmapAvailable via partnerNot available

Capability & offerings	Complementary capabilities	RPA capabilities	Process Mining	Task Mining	BPM / Process orchestration
		Conversational AI			
Security	Ability to auto-redact sensitive information			Availability of audit logs	
	Role-based access to the system			Ability to segregate roles between development, test, and production environments	
Monitoring & analytics	Availability of OOTB analytics dashboards with GUI for end-users	Availability of AI governance/explainability metrics to understand ML model performance	Availability of benchmark metrics for comparison of performance	Pre-built integration / OOTB connectors with third-party BI platform providers	
	Tracking of multiple document processing projects	Tracking of manual worker performance	Tracking of process-level SLAs	Tracking of batch-level STP rates	
	Tracking of field-level accuracy	Ability to build custom reports	Highlight fields based on low confidence level	Highlight fields based on missing information	
	Highlight fields based on violation of business rules				
Hosting options and product architecture	Desktop/laptop	Server/on-premise	Private cloud	Public cloud	
	SaaS offering	Microservices architecture	Multi-tenant deployments		

Laiye | IDP product profile (page 5 of 6)

Capabilities

Available

In the roadmap

Available via partner

Not available

Capability & offerings				
Training and product support	Provided by vendor	Provided via partners	Online training courses	Online certifications
	Classroom training	Embedded help tool	24/7 product support to all clients	Active online user community and forum
	Free community version	Product manual/documentation		
Commercial model	Perpetual licensing	Subscription licensing	Fixed capacity-based	Usage-based (per document)
	Usage-based (per page)	Usage-based (per process)	Outcome-based	

Key areas of enhancements in the latest product releases (as of September 2021)

Software learning & pre-packaged solutions

- Added pre-trained large-scale language models for IDP tasks
- Developed Machine Reading Comprehension (MRC) models that can extract answers from a document passage based on the input query

Interoperability

- Added support for Java, Python, PHP, C#, and Go samples for each API functions










Training and product support

- Launched an online IDP training and certification system

Laiye | IDP product profile (page 6 of 6)

Everest Group assessment – Major Contender

Measure of capability:  Low  High

Market impact				Vision & capability					
Market adoption	Portfolio mix	Value delivered	Overall	Vision and strategy	Document processing capability	Monitoring and improvement	Implementation and support	Commercial model	Overall
									

Strengths

- Laiye provides an integrated platform that combines RPA, IDP, conversational AI, and BPM/process orchestration capabilities to automate business processes. It focuses on developing citizen developer communities through its training and certification programs
- Its IDP platform can process a wide variety of documents including TXT, CSV, PDF, JPG, XLS, TIFF/BMP, and DOC files and data types including free-flowing text, nested tables, bar codes, stamps, and handwritten text
- While Laiye offers its proprietary OCR for digitization, the platform can also integrate with various third-party OCR solutions from Microsoft, Google, INTSIG, and iqubic
- It is capable of processing structured, semi-structured, and unstructured documents. It also offers advanced unstructured document processing capabilities including named entity recognition, text comparison using semantics, text normalization, and text summarization
- Laiye’s reporting provides AI governance/explainability metrics such as accuracy rate, recall rate, and F1-score to help enterprises understand the performance of ML models
- It has a wide partner network catering to clients across geographies and offering implementation services
- Clients appreciate the cognitive features of the software and the pre-trained models offered. They are also highly satisfied with Laiye’s customer support services

Limitations

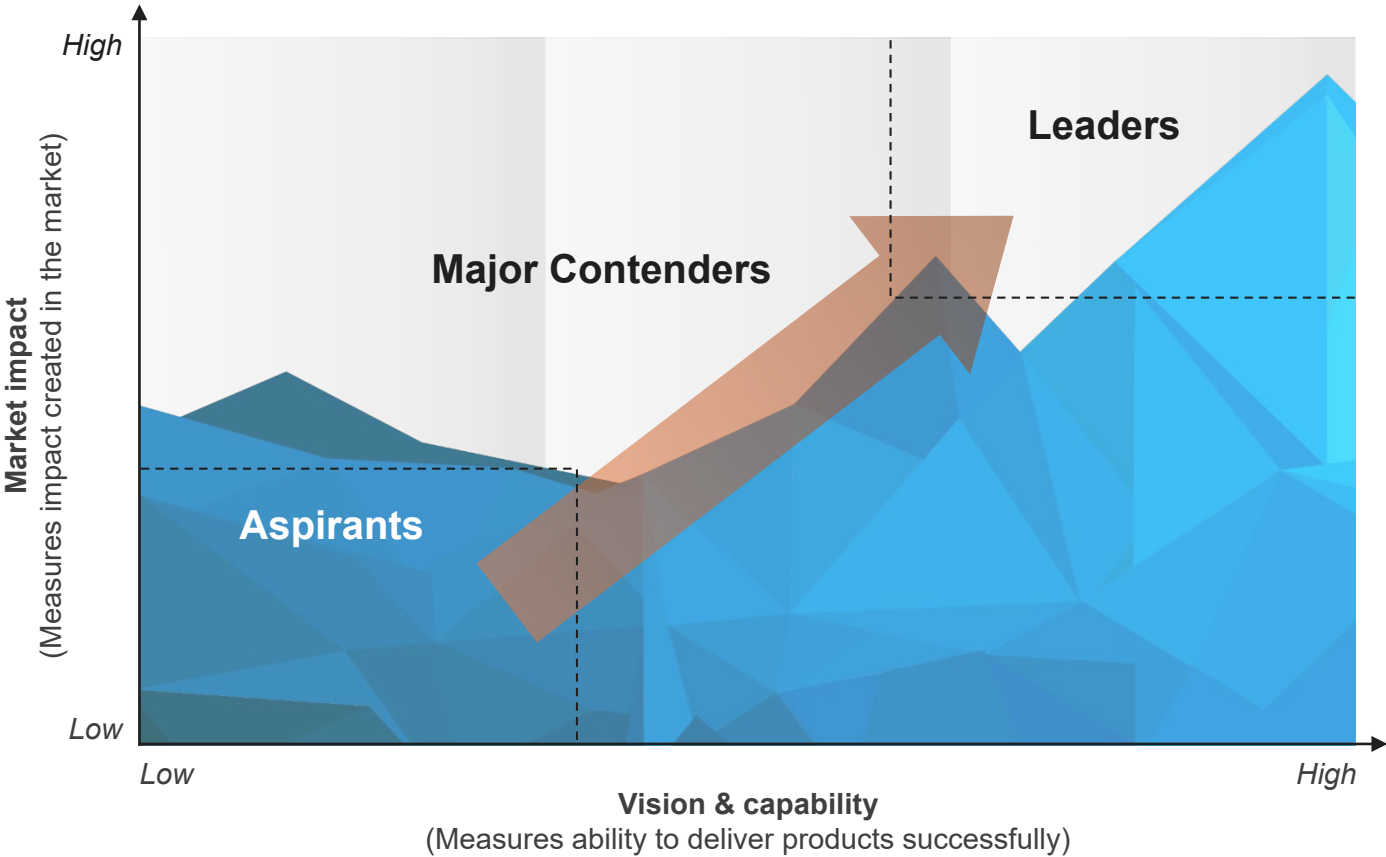
- A majority of Laiye’s clientele is based out of APAC. Hence, its penetration in other geographies such as North America, Continental Europe, the UK, LATAM, and MEA is currently very low
- It primarily caters to clients in the government and public sector, BFSI, and energy & utility verticals. Hence, its ability to serve clients in other verticals such as healthcare and pharma and media and entertainment is somewhat unproven
- Currently, the platform only supports extraction of documents in English and Chinese languages, support for German and Spanish is in the roadmap; extraction of borderless tables is also a part of the roadmap
- Enterprise users require an RPA license to access workflow capabilities such as defining and managing document queues and approvals and performing post-processing operations such as business rule validations
- While it has pre-built connectors for SAP and Microsoft applications, it lacks built-in integration with other common enterprise applications (Oracle and ServiceNow) and BI tools
- It has limited partnerships with other complementary technology providers including RPA and conversational AI which may be prohibitive for a best-of-breed approach toward intelligent automation
- Clients expressed the need to improve its human-in-the-loop capabilities to ensure higher accuracy

Appendix

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



Everest Group PEAK Matrix

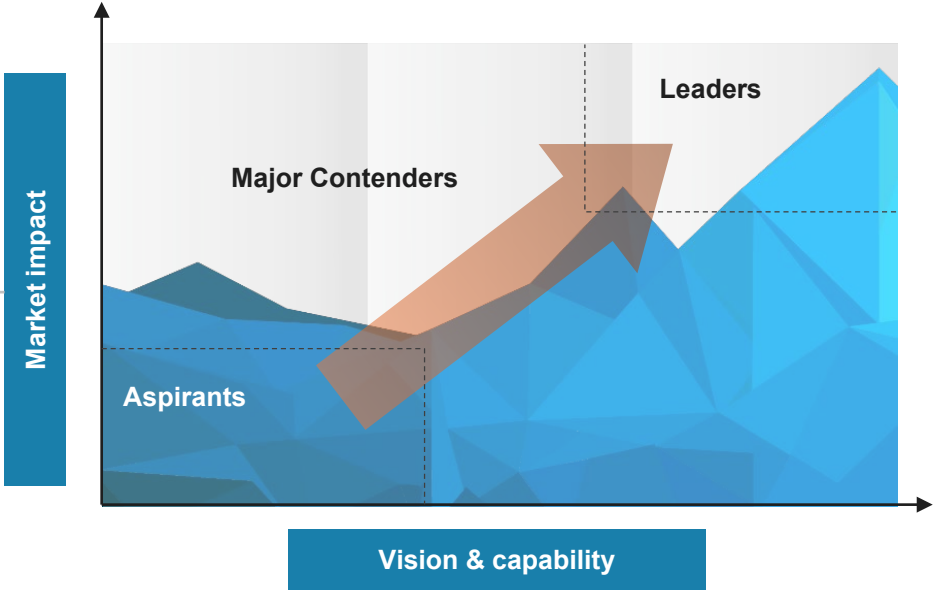


IDP Products PEAK Matrix® evaluation dimensions



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, business functions, and enterprise size class
Value delivered
Value delivered to the client based on customer feedback and other measures



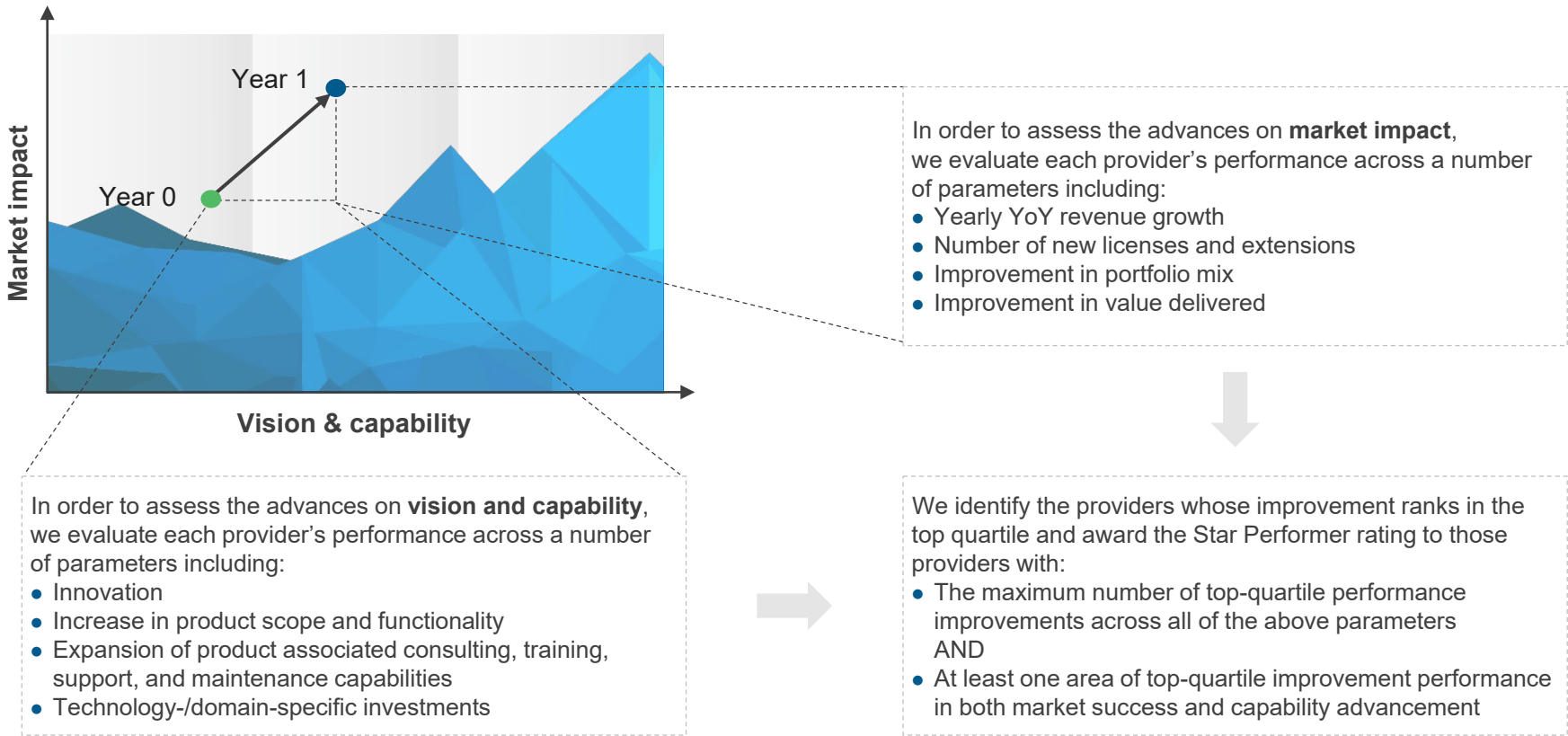
Measures the ability to deliver products successfully. This is captured through five subdimensions:

Vision and strategy	Document processing capability	Monitoring and improvement	Implementation and support	Commercial model
Vision for the client and itself; future roadmap and strategy	Software learning, extraction & classification, unstructured document processing, interoperability, and security and compliance	Performance tracking, operational analytics, reporting, and integration with third-party BI tools	Hosting options, training, maintenance, partnerships with resellers / system integrators, and complementary technology providers	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®



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

FAQs

Does the PEAK Matrix® assessment incorporate any subjective criteria?

Everest Group's PEAK Matrix assessment adopts an unbiased and fact-based approach (leveraging 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 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 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



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