ABBYY is a Leader in SPARK Matrix: Intelligent Document Processing, 2022

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2022
SPARK MATRIX
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Intelligent Document
Processing

**An Excerpt from Quadrant Knowledge Solutions
"SPARK Matrix: Intelligent Document Processing, 2022"**

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Intelligent document processing (IDP) is a technique for automatically extracting useful information from documents received by the organization in a variety of formats, including structured, semi-structured, and unstructured documents. IDP uses different technologies such as Artificial Intelligence (AI), Machine Learning (ML), Optical Character Recognition (OCR), Computer Vision, Robotic Process Automation (RPA), Natural Language Technology (NLT), and Intelligent Character Recognition (ICR) to extract, interpret, and classify the relevant data from word files, emails, PDFs, scanned documents, and other formats for performing analysis and streamlining workflow automation.

IDP uses a template-free approach to extract data from documents, especially unstructured documents, with its no-code platform, enabling and strengthening the human-in-the-loop (HITL) capability to extract and unearth hidden information, and rectify the same as per requirement on a real-time basis. The platform is also capable of identifying sensitive data fields such as the ones with personally identifiable information (PII), further making use of data masking to redact or anonymize them. It also supports multiple use cases such as invoices automation, lease & contract processing, customer onboarding, account opening & closing, financial reporting, and providing relevant insights and analysis. IDP is thus a crucial component in the digital journeys of organizations, having a transformative and significant impact on them.

The incoming documents in the organization are usually delivered in a variety of formats due to business logic variations, making it difficult to process all of them with the same accuracy, explaining the substantial prevalence of manual document processes still being followed across the majority of sectors. The incoming document structure could be complicated due to the prevalence of items like tables, graphics, data across several columns, and a mix of semi-structured and unstructured language. Additionally, imprecise object recognition, poorly scanned images, scanning-related problems such as noise and compression, and others further add to the document processing challenges. All these complications further render manual document processing quite cumbersome, thus making the process of data extraction and processing and applying the same to business logic very inconsistent.

The complications and possibility of errors involved with manual extraction processes have led the way to introduce OCR which converts handwritten, typed, scanned text, or text inside images to machine-readable text. However, due to multiple limitations of OCR like recognizing only specific types of documents, it was infused with artificial intelligence and machine learning giving rise to intelligent document processing (IDP). IDP grew out of OCR and is now serving as the foundation for the next generation of AI-driven process automation to deal with an influx of data more intelligently, by extracting the important information incoming from multiple data points, managing it, and storing it more efficiently.

IDP can speed up the document extraction process while also increasing operational efficiency, which can have several significant advantages for businesses and their employees. Additionally, it lessens the possibility of human error and makes the company more compliant. IDP has helped users meet their end-to-end automation goals through key differentiators, including the provision of a unified low code platform, RPA-infused platform capabilities, zero-shot technology, shadow learning, net promoter system, effective de-duplication capability, digital workers assistance to support industry-specific use cases, building knowledge graphs, and others.

An increase in the adoption of newer technologies is fuelling the growth of document automation, which enables organizations to save time by reducing manual work, operating, and investing more efficiently, improving customer experience, and mitigating risks caused by human error. Some of the top automation trends for IDP include document parsing, email parsing, handwriting recognition, hyper-automation, deep integration with AI/ML, touchless/low-touch document processing, and so on. Currently, the smaller vendors within the IDP market have also ingested the majority of the newer technology advancements signaling tough competition across industry players and across verticals. Thus, the current IDP providers are supporting a variety of use cases such as processing invoices, monitoring insurance claims, digitizing medical records, managing accounts payable, and others. The platform providers are investing heavily towards making the platform template-free, providing flexibility to process multiple document types across industries. Additionally, automation of extraction tasks in regard to enhanced compatibility for dealing with a variety of handwritten documents and documents in multiple languages, are some of the other significant use cases attracting end-users.

The business needs driving the demand for IDP are ever-changing. While organizations can anticipate consistent challenges in regard to the processing of unstructured data, challenges related to unknown document formats could also present themselves. A fundamental approach in this direction includes improving the accuracy of document processing and speeding up time-to-delivery, which involves leveraging off-the-shelf solutions. Furthermore, IDP solutions also enable APIfication, which refers to the strategic approach and technologies that allow an organization to share information and functions between systems through APIs. This would ensure that the IDP solution could be integrated smoothly with automation technologies like RPA, BPM, and business applications like CRM, ERP, HRMS, ECM, and others, based on end-user requirements. Furthermore, large enterprise customers wish to leverage their in-house development efforts enabling a 'Bring Your Own Model (BYOM)' by making use of in-house data science and scripting capabilities in combination with third-party platforms. This ensures the creation of a competitive advantage from their proprietary business knowledge, minus the need to invest in huge resources for building relevant platforms.

Other critical enablers include the flexibility of pay-as-you-go Enterprise SaaS offerings which provides a distinct advantage to organizations by eliminating the pricy infrastructure challenges, resulting in significant cost savings. Also, the provision of an ensemble of models with machine learning capabilities and assisted operations used for - making accurate predictions, data extraction, and document segregation are crucial for enhancing the organizational digital journeys. Additionally, the vendors are also planning to further enhance their proprietary IDP platform by gathering relevant training data sets, offering automated and continuous AI learning models, identifying and labeling features, and conducting exhaustive dry runs for testing and bettering the algorithm.

Ultimately, vendors are now moving towards providing knowledge graph technologies to understand documents, the same way a human subject matter expert would. This would enable users to make effective use of the data model to integrate interlinked entities, including objects, events, processes, or abstract concepts as well. The document process owners could further achieve a touchless document processing experience, agnostic of the inbound document type. Lastly, the human-in-the-loop capability would greatly enable the IDP platform to learn and improve on the relevant data extraction rules continuously based on human inputs, and then undertake automatic corrections over time. Intelligent document processing solutions are deployed more across verticals, such as BFSI, government, healthcare, and life sciences due to the prevalent criticality and need across them.

Most of these sectors are increasingly deploying intelligent document processing solutions to enhance productivity, improve cost savings, save valuable customer time, and enhance the overall customer experience. The effective deployment of IDP solutions in these sectors also ensures increased process efficiency, enabling users to focus on high-value projects. Furthermore, there is a significant scope for IDP vendors to offer curated solutions to end-users operating in sectors including retail and e-commerce, manufacturing, and education – especially due to an urgent need and huge potential for sustained traction in them.

Due to the continuous technological developments, the IDP market is rapidly moving forward, While the leading platforms offer almost seamless and precise data extraction, the cutting-edge technologies that continuously improve the AI's capability are also vital in the progress of Intelligent Document Processing. Moving forward, the IDP platform vendors could further focus on ingesting multimodal fusion, provision of SaaS models, integration of machine teaching, built-in NLP, advanced image processing, bots for specific use cases, enhanced zero-shot technology, and so on. These technology enhancements would further help the platform to speed up the document extraction process, ensuring greater and penetrated reach of the IDP platform, and making it available and accessible to a larger and diverse user base.

Quadrant Knowledge Solutions' [SPARK Matrix: Intelligent Document Processing, 2022](#) research includes a detailed analysis of the global market regarding short-term and long-term growth opportunities, emerging technology trends, market trends, and future market outlook. This research provides strategic information for technology vendors to better understand the existing market, support their growth strategies, and for users to evaluate different vendors' capabilities, competitive differentiation, and market position.

The research includes detailed competition analysis and vendor evaluation with the proprietary SPARK Matrix analysis. SPARK Matrix includes ranking and positioning of leading Intelligent Document Processing vendors with a global impact. This study includes an analysis of key vendors, including ABBYY, Alkymi, AntWorks, Appian, Automation Anywhere, Celaton, codemantra, Datamatics, EdgeVerve, Eigen Technologies, Grooper, HCL Technologies, IBM, Indico Data, Infrrd, JIFFY.ai, KnowledgeLake, Kofax, Laiye, Microsoft, OpenBots, Parascript, Parashift, qBotica, Rossum, Stravie, UiPath, UST, and WorkFusion.

SPARK Matrix Analysis of the Intelligent Document Processing Market

[Quadrant Knowledge Solutions](#) conducted an in-depth analysis of the major Intelligent Document Processing vendors by evaluating their product portfolio, market presence, and customer value proposition. Intelligent Document Processing market outlook provides competitive analysis and a ranking of the leading vendors in the form of a proprietary SPARK Matrix™. SPARK Matrix analysis offers a snapshot of key market participants and a visual representation of market participants. It offers strategic insights on how each vendor ranks related to their competitors based on their respective technology excellence and customer impact parameters. The evaluation is based on primary research, including expert interviews, analysis of use cases, and Quadrant's internal analysis of the overall Intelligent Document Processing market.

Technology Excellence	Weightage
Sophistication of Technology	20%
Competitive Differentiation Strategy	20%
Application Diversity	15%
Scalability	15%
Integration & Interoperability	15%
Vision & Roadmap	15%

Customer Impact	Weightage
Product Strategy & Performance	20%
Market Presence	20%
Proven Record	15%
Ease of Deployment & Use	15%
Customer Service Excellence	15%
Unique Value Proposition	15%

According to the SPARK Matrix analysis of the global Intelligent Document Processing market, "ABBYY, with its unique enterprise-grade Intelligent Document Processing, has secured strong ratings across the performance parameters of technology excellence and customer impact and has been positioned amongst the technology leaders in the 2022 SPARK Matrix of the Intelligent Document Processing market."

Figure: 2022 SPARK Matrix™
(Strategic Performance Assessment and Ranking)
Intelligent Document Processing Market

SPARK Matrix™: Intelligent Document Processing (IDP), Q4 2022
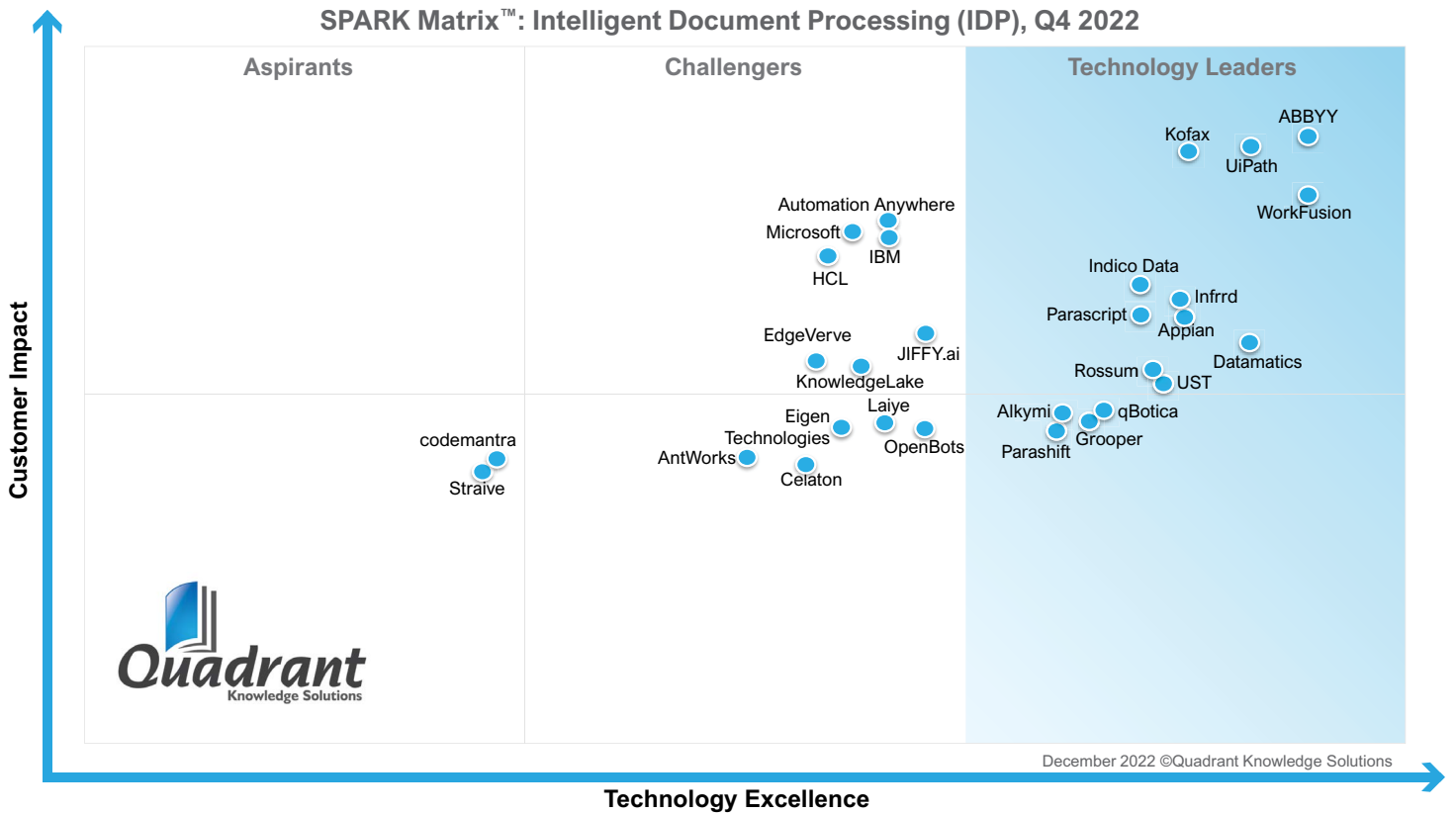
ABBYY

Founded in 1989 and headquartered in Milpitas, CA, USA, [ABBYY](#) is an intelligent automation company that aims to drive digital transformation within organizations by enabling them to understand and control business processes and the data that drives them. ABBYY offers Vantage and FlexiCapture platforms for document extraction enabling organizations to reduce the complexity in extraction and maintenance costs involved in document classification and extraction. ABBYY's intelligent document processing (IDP) portfolio consists of a set of technologies, products, and solutions to assist businesses in understanding and processing data. It includes several comprehensive products like Vantage, FlexiCapture, FineReader Server, and mobile capture products. The Vantage platform delivers cognitive AI services and trained abilities for understanding business documents and extracting meaning and insights in a human-like manner by utilizing artificial intelligence (AI).

Analyst Perspective

Following is the analysis of ABBYY's capabilities in the intelligent document processing (IDP) market:

- ABBYY Vantage is a low-code/no-code cognitive services platform that leverages AI to read documents. To support dynamic IT operations, the platform is built on microservices and packaged into containers under Kubernetes management. This enables users to detect unstructured data by combining pre-trained neural networks with online ML, helping to respond instantaneously to the changing input, thus producing an accurate, dependable result.

- ABBYY Vantage collects relevant information from documents, forms, and textual correspondence with the goal of enhancing business outcomes. The platform integrates artificial intelligence (AI) and machine learning (ML) to link with enterprise automation systems and is built to handle a variety of organized, semi-structured, and unstructured documents. Using web services and microservices application programming interfaces (APIs), it enables users to handle high-volume document processing for invoicing, shipping documents, loan files, tax, and census, as well as customer onboarding and claims for insurance and financial services.

- ABBYY's FlexiCapture platform for document extraction combines natural language processing (NLP), machine learning (ML), and advanced recognition technologies into a single, enterprise-scale document capture platform to handle any document type. The platform offers end-to-end compliance with organizations' processes and security models to gain custody of reporting and management, which helps in fine-tuning the results. ABBYY FlexiCapture can seamlessly integrate with RPA, CRM, ERP, BPM, ECM, and accounting systems. The solution leverages AI-based classifiers for multi-level document classification, separation, and validation. As a result, ABBYY's FlexiCapture enables users to make labeled connections, splitting and unbundling even the most complex documents, and a workflow base that allows users to review each step of the automation process and tailor it to their needs with a low-code foundation.

- ABBYY FineReader Server's AI-powered OCR engine allows users to extract information from documents. It can operate with the most diverse image formats, including TIFF, JPEG, and PDF. For document processing, it supports 200+ distinct languages. It can reduce PDF files while maintaining image quality. It also allows the extraction of digital signatures and watermarks. FineReader PDF enables users to seamlessly digitize, retrieve, modify, protect, share, and collaborate on various types of documents within the same workflow.

- The key differentiators for ABBYY's platform for IDP include a low code/no-code functionality that can demonstrate the business value right from the design time setup. Additionally, out-of-the-box ML-based pre-trained document models for gaining operational efficiency and insights into actionable data, and the availability of various connectors at ABBYY Marketplace to achieve the business outcomes established between IT and business are some of the other significant differentiators for the platform. The platform also promotes an integrated set of IDP technology services by incorporating OCR, ML, and NLP, thus allowing training for field and entity extraction and classification of documents, further cementing its unique value proposition.

- In terms of geographical spread, ABBYY has a commanding presence in North America, especially in the USA, followed by Europe and

Asia Pacific. The company also has a significant presence in the Middle East, and Africa, followed by Latin America. ABBYY holds a strong customer base, including some of the leading brands across industry verticals such as banking & financial services, government & public sector, transportation and logistics, life sciences & healthcare, manufacturing, IT & telecom, and others.

- Some of the top use cases of ABBYY's IDP application include processing and data extraction from bank statements, mortgage applications, loan origination, KYC, AP invoices, sales orders, purchase orders, government forms, certificates of origin, bills of lading, proof of delivery, insurance claims, underwriting documents, claims-related documents, and tax forms.

- As per Quadrant's estimation, ABBYY faces significant competition from emerging vendors offering innovative and competitive solutions. Being an established provider of business automation solutions, the company may also face competition from vendors offering standalone IDP solutions. However, the company gives tough competition to most of the players with its robust OCR and RPA capabilities, high scalability performance, strong partnership ecosystem, and a broad range of industry coverage. With its sophisticated technology platform and comprehensive functional capabilities, ABBYY is well-positioned to expand its share in the global IDP market in the near future.

- In terms of future roadmap, ABBYY will focus on strengthening its cloud-first Vantage platform that can deliver IDP capabilities as a unified set of services from OCR to NLP integrated with AI and ML. The company will also focus on delivering consistent 'consumerized' UX/UI standard services – a novel way of configuring, training, and consuming IDP services across automation platforms, including within RPA, BPM, and other automation tools. Additionally, ABBYY is actively investing in features like data capture and extraction from mobile web browser tools wherein users won't be required to install a mobile application for use cases, including but not limited to customer onboarding.