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An Overview on IDP and Its Significance in Business

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Abstract: ***The practice of intelligently acquiring specific information and expediting document processing processes is known as intelligent data processing. The surge of SaaS industry has led to a great demand for automation especially for Intelligent Document processing (IDP) solution, IDP industry is expected to raise to a greater extent amid increased use of AI and OCR technologies and software. This article discusses about Global Automation Industrial Market with a special focus on IDP, the further chapters of the papers focus on IDP solutions and the significance of IDP. The middle part of the article discusses the global market of the IDP and its future scope in India. The author could able to find some relevant findings and recommended some plan of actions. The complete report provides a detailed overview of the SaaS – IDP industry and also about integration in India business.***

Keywords: IDP-Intelligent Document Processing; AI -Artificial Intelligence; SaaS; Global Intelligent Document Processing Market; Data processing; Indian Business

I. INTRODUCTION

It is expected the global market for industrial automation to reach USD 395.09 billion by 2029, growing at a CAGR of 9.8% from USD 205.86 billion in 2022. The COVID-19 has made an unforeseen and alarming global impact, and demand for industrial automation has been very lower than anticipated in all countries compared to the pre-pandemic levels. According to our study, the global market witnessed a 6.5% drop from 2019 - 2020. The Indian industrial automation market is estimated at $10.72 billion in 2021, and it is expected to grow at a CAGR of 14.26% over the predicted period to USD 23.09 billion by 2027. (2022 - 2027). The market for automation software has expanded due to this progress in the industry, and the SaaS industry has reached its pinnacle.

Software as a service (SaaS) is a software delivery and licensing system in which software purchased in a subscription basis. On-demand software and web-based/web-hosted software are other names for SaaS. Users often utilize a thin client, such as a web browser, to access SaaS software. Nearly all enterprise software companies now include SaaS in their business plans. The acronym first appears in the list of products and services in a trademark application submitted to the USPTO on September 23, 1985. For a while, Microsoft referred to SaaS as "software plus services." IDP is one of the SaaS that is seeing substantial market growth due to the massive amounts of data that businesses and large corporation's handle.

Unstructured data is processed using intelligent document processing (IDP). Unstructured and semi-structured data form can be transformed into structured form, useable information, providing document-centric business processes end-to-end automation. To enable end-to-end, business process automation, IDP automatically extracts information from any business document. Only after integration with the organization's ERP is IDP viable.

II. WHAT IS IDP

The next phase of automation, known as intelligent document processing, can capture, extract, and process data from various document formats. It classifies, categories, and extracts pertinent information using AI technologies including natural language processing (NLP), computer vision, deep learning, and machine learning (ML), and then validates the data that has been extracted.

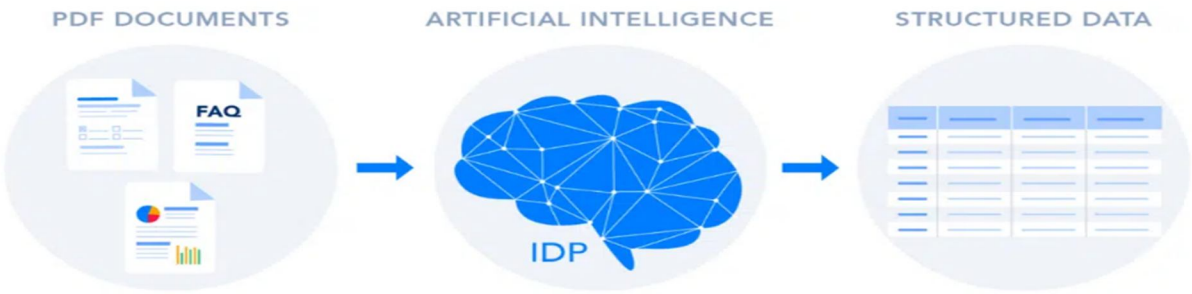


Fig 1 IDP flow

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Intelligent document processing (IDP) solutions turn semi- and unstructured data into usable information. The core of digital transformation is business data, but 80% of it is contained in unstructured formats including business documents, emails, photos, and PDF files.

III. THE SIGNIFICANCE OF IDP

1) Increased productivity
2) Faster document retrieval
3) Increased accuracy
4) Reduced manual effort
5) Improved processes efficiency
6) Automated document classification
7) Enhanced compliance
8) Process large volumes of documents
9) Improved customer satisfaction
10) Enhanced security
11) Increased flexibility

IV. GLOBAL MARKET

Intelligent Document Processing Market has valued at US$ 815.2 Mn. in 2021. The Global, Intelligent Document Processing Market size is estimated to grow at a CAGR of 20.4 % over the forecast period.

Intelligent Document Processing Market Overview:

Solutions for intelligent document processing (IDP) transform semi- and unstructured data into useable information. The foundation of digital transformation is business data, but 80% of it is contained in unstructured formats including business documents, emails, photos, and PDF files.

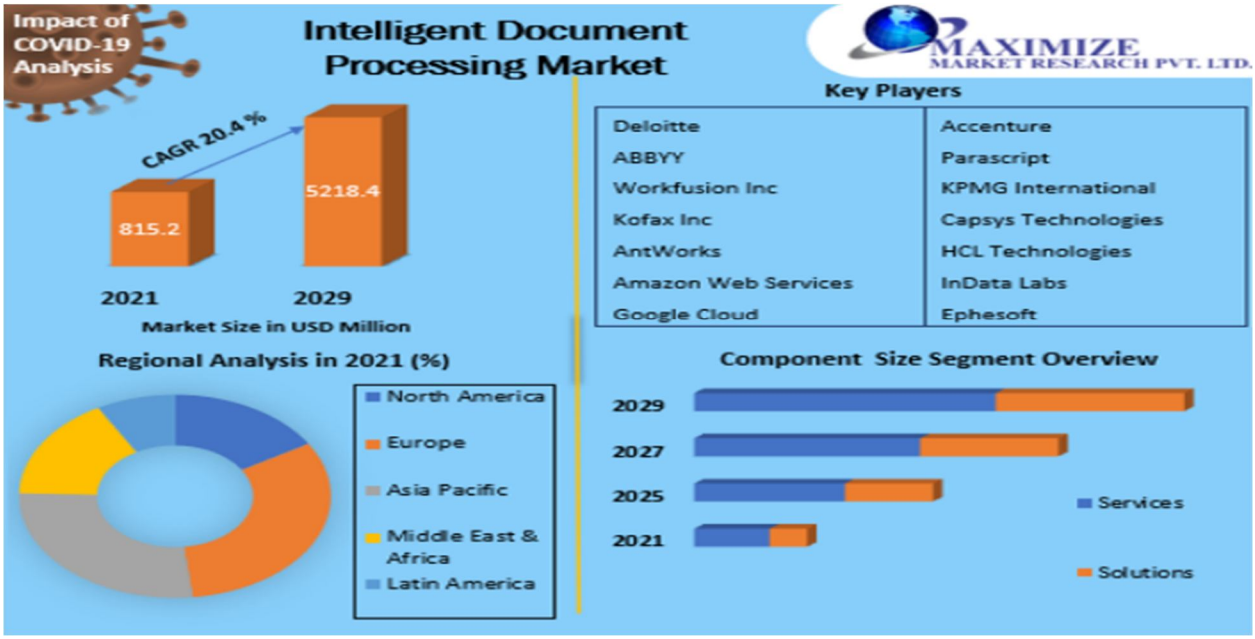


Fig 2 IDP Global Market

The Intelligent Document Processing Market research contains in-depth details on variables influencing demand, growth, opportunities, challenges, and restrictions. It provides in-depth information on the structure and outlook for both global and regional industries. The report also includes data on R&D, the introduction of new products, and product reactions from the local and global markets by leading players. The structured analysis offers both a graphical and diagrammatic breakdown of the Intelligent Document Processing Market by region.

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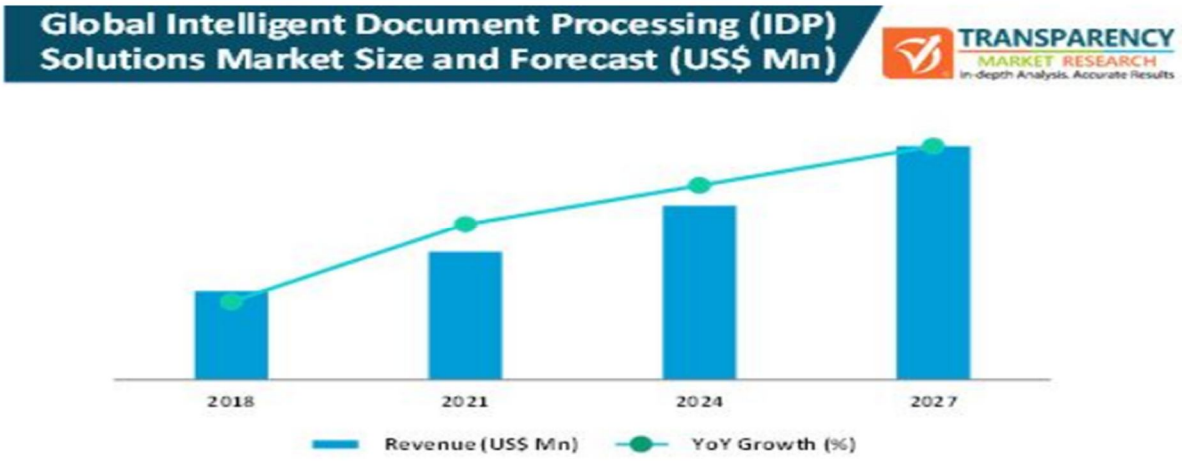


Fig 3 IDP Global Market Forecast

For the purpose of forecasting the market from 2022 to 2029, 2022 is used as the base year. Based on actual data and outputs from global key players and significant players, the market size for 2022 has been calculated. When predicting the market through 2029, the last five years' trends are taken into account. 2020 will be a year of analysis and exceptions, especially in light of the effects of regional lockdown.

During 2022-2029, the services segment is expected to increase rapidly. The demand for intelligent document processing solutions is increasing as a result of the expanding technical advancements. Professional services and managed services are included in the services offered by the providers of intelligent document processing solutions. Because consumers expect seamless integration of the solution, training, and support for the given solution with the enterprise's system, these IDP services are crucial for each solution provider.

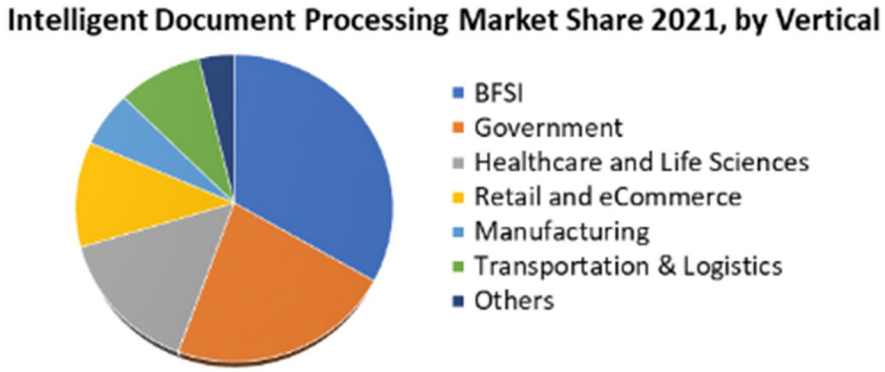


Fig 4 IDP Global Market Verticals

During the forecast period, the Middle East and Africa Intelligent Document Processing Market is expected to increase by 32.6% CAGR (2021-2027). The leading market players are being encouraged to participate and thrive in this regional market by the growing investments made by the companies in these regions in a variety of sophisticated or upgraded technologies like ML or AI. Therefore, all of these reasons are among the main causes of the intelligent document processing market's expansion in this area.

Brazil's market held the top spot in the MEA Manufacturing Intelligent Document Processing Market by Country 2020, growing to a $7.2 million market by 2027. During that time, the Argentine market would register a CAGR of 34.5% (2021 - 2027). Additionally, a CAGR of 33.3% is anticipated for the UAE market over the next five years (2021 - 2027).

During the projected period (2021-2027), the Asia Pacific Intelligent Document Processing Market would expand at a CAGR of 31.2% .

1) India – 34% CAGR
2) Japan – 32.6% CAGR

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V. FUTURE OF IDP IN INDIA

The market growth in India can be attributed to reshaping of customer requirements and including faster than usual changes in RPA product features such as cognitive capabilities. Other factors that are responsible for high market growth include rapid economic development, globalization, digitalization and the increased adoption of cloud-based technologies.

Due to an increase in online transactions in these regions, which will fuel market expansion, the BFSI sector is seeing a boom in emerging Asian countries like China and India. Further fueling the demand for intelligent document processing solutions is the growing awareness among businesses regarding the implementation of cutting-edge technologies like automation, machine learning, and AI.

Additionally, businesses in this region are investing more and more in latest technology, which gives them a competitive advantage in the market and supports the expansion of the intelligent document processing market in this region. The regional market would benefit from the region's emerging nations' increasing digitalisation.

iDoRANTM by HCL is a Document Automation solution that applies Advanced Computer Vision IP and Artificial Intelligence to turn static documents into business operation resources. The AI in iDoRANTM implements Machine learning (ML), Neural Networks (NN), and Natural Language Processing (NLP). It can be integrated using standard APIs (Application Programming Interface) provided, Business Intelligence, RPA, or customized interfaces.

HCL has processed more than 2 Billion document images in 2020 using iDoRANTM with best accuracy in industry standards. Custom integration, context aware document reconstruction, and the ability to handle low quality images set iDoRANTM apart. For business-critical information, an additional manual verification and data extraction are applied to handle lower quality and variant document structures. With several key differentiators, iDoRANTM enables exceptional productivity improvement and business benefits to the customer.

iDoRANTM provides the following ready-to-use solutions:

1) *Invoice Digitizer:* Format independent, all image formats, 20+ languages support.
2) *Legal Contract Extraction:* MSA, SOW, Extension, Parent Child mapping, Simple addition of new fields.
3) *Engineering Document Digitization:* Bubble Drawing, Bill of material, CAD compare.
4) *Document Alteration Detection:* Detect documents that have been altered for potential fraud - Both editable and image documents.
5) *Insurance Claim Extraction:* Extract key data from Insurance claims - Policy Details, Treatment / Accident details, Due dates, Amount etc.

VI. FINDINGS

In a developing nation like India, smart machines, robots, and other forms of automation might either be a poison or a cure for the economy. This development will have an impact on how firms around the world outsource work. According to a study by Deloitte that was commissioned by the Autodesk Foundation, India ranks ninth in terms of level of preparedness and fifth in terms of the impact of automation.

Due of its higher employment ratios in manufacturing, construction, and agriculture, India is more likely to be affected by automation.

One more important reason is that Lack of standardisation in India is one of the important reasons for lack of automation, only when the business process is completely standardized and proven to be efficient it can be automated. So concentration on Standardization is much required.

VII. RECOMMENDATIONS

The transition toward Complete Standardization, digital transformation, rising adoption of cloud-based IDP solutions, and the increasing demand for businesses to process large volumes of structured, unstructured/ semi structured documents with greater accuracy & speed are the main factors for the growth of the IDP market.

The adoption of intelligent document processing systems is being driven by the growing need to streamline corporate processes, adapt intelligent workflows, and constantly improve workflows to increase responsiveness' dynamic requirements.

Intelligent document processing solutions that are cloud-based enable SMEs and large businesses to concentrate on their core capabilities rather than IT procedures. The use of predictive capabilities throughout the entire enterprise has been made simple for users due to the cloud-based deployment of IDP. Large-scale cloud-based offerings of intelligent document processing technologies will boost their adoption among SMEs and increase consumer reliance on such solutions.

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Other significant drivers increasing the growth of the IDP market in this area include fast economic development, globalization, digitization, and rising use of cloud-based technologies. Additionally, the APAC banking sector is always investing in recent cutting-edge technology to improve the banking experience for customers. This will encourage APAC to adopt solutions and services for intelligent document processing.

VIII. CONCLUSION

It is obvious that there are many advantages to using Intelligent Document Processing systems, and this list may not even be comprehensive. If you use these solutions in your company, you might also discover other, less typical, and possibly even unexpected advantages of Intelligent Document Processing.

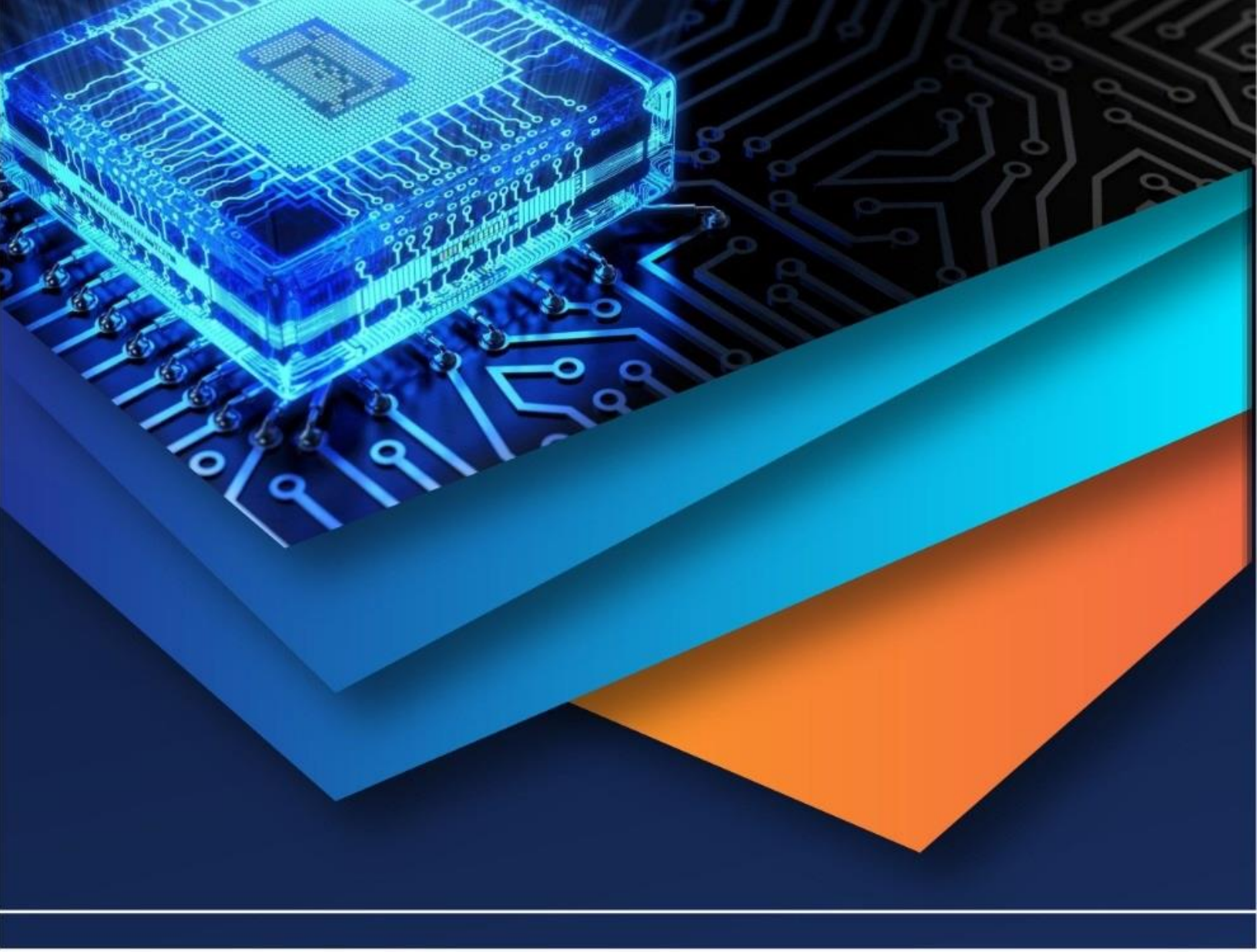
Implementation of IDP in business is taking business to many folds higher. Even though India haven't implemented IDP so far in larger extent we hope down the line in 2-3 years business processes automation (IDP) will happen in India and create greater Impact in Business.

Needless, to say, the number of documents is going to increase many folds with the transformation of business digitally. It is indeed a big problem to process the document manually with high accuracy. Hence IDP is the best solution to streamline the business operations, to reduce cost and to increase productivity.

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