

CURRENT AND FUTURE STATE OF THE CAPTURE & IDP MARKET



THE ROLE OF AI



AGENDA

- Role AI has played in the Capture & IDP market to date
- Current status and maturity of the Capture & IDP market
- Latest developments in AI and how do they relate to IDP
- Future state of Capture & IDP and impact of AI
- Recommendations for vendor success

ROLE AI HAS PLAYED IN CAPTURE MARKET TO DATE

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AI IS NOT NEW TO CAPTURE

ISVs Have Been Incorporating Machine Learning for Classification & Extraction for More at Least Two Decades.



January 18, 2002

THIS JUST IN!

AIIM SELLS SHOW

AIIM has cashed in its cash cow. The document imaging industry's foremost trade association has sold its annual trade show and conference to **Advanstar**, a \$400 million media and marketing conglomerate. Advanstar operates some 85 trade shows worldwide, including approximately 20 in its Advanstar Technologies Communities Group—where the AIIM show will fall. "It's always a challenge for a trade association to run a single large event," John Mancini, president of AIIM, told *DIR*. "The logistics are incredible and you just don't have the resources to handle them."

Although the 2001 figures have not been reported yet, in 2000 AIIM generated \$6.76 million from "meetings, expositions, and seminars." The bulk of that came from the annual trade show. However, this summer Mancini indicated that margins on the trade show had been declining over recent years. And with the trade show market still in recovery following the events of Sept. 11 and subsequent travel concerns, there is no reason to believe those margins wouldn't have eroded further this year.

Now with a guaranteed income from Advanstar, AIIM will increase its focus on regional events and membership services. AIIM will also continue to manage the conference held in conjunction with the exposition. Advanstar has hired six key AIIM employees involved with the show and set up a satellite office at AIIM's headquarters. AIIM 2002 will run March 5-8 at the **Moscone Convention Center** in San Francisco.

SER Pushing *brainware* Platform

German software vendor counting on sales of neural networking software in North America to key its recovery.

SER is ramping up efforts to find partners to resell its *brainware* platform in North America. *brainware* is the neural networking-based analytical software that SER made a big splash with at **AIIM 2001** (see *DIR* 6/1/01).

According to Mike Ball, VP of marketing for SER Solutions (the U.S. arm of the company), *brainware* accounted for less than 10% of SER's North American sales in 2001. "However, we are expecting that to be substantially higher next year," Ball told *DIR*. "Right now we are in the process of forming the partnerships that will generate our sales in 2002."



Mike Ball, VP of marketing, SER Solutions.

Indeed, SER recently announced a number of partnerships with systems integrators and ISVs. Recently signed partners include **IKON Image Systems Solutions**, which installs automated data capture and imaging solutions at large banks. **The Berkshire Company**, which will use *brainware* in mailroom applications; and **TechLaw**, a document imaging specialist for law firms and regulatory agencies. All these partners will use *brainware* for automatic document classification and indexing applications, but Ball pointed out the platform can be used in many other areas as well.

"Our ultimate goal is for *brainware* to be incorporated into any and every software application on the market," said Ball. "It can add a level of intelligence to any program. Almost like the way many PC manufacturers advertise that they incorporate Intel CPUs with the Intel Inside trademark, we want to create a slogan for software that is encompassed by *brainware*."

In 2001, SER introduced Brainware, neural networking-based technology that:

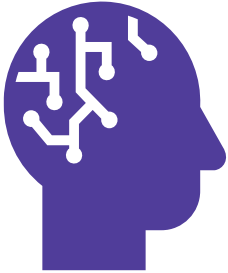
- can be used to read incoming e-mail and do things like issue automatic responses, or launch messages into a workflow
- in a workflow platform, Brainware can be utilized to automate decision making.

In the mid-2000s, we started to see the rise of Advanced or Intelligent Capture applications

- Offered Auto-classification and extraction based on a learn-by-example approach applying machine learning
- Supervised learning preferred approach to prevent drift

THE RISE OF IDP 2017-2023

AI-First Approach Revolutionized the Market Landscape



In 2016, first started seeing start-ups with founders with AI backgrounds entering the Capture Market

Founders of Taiger and Hyperscience were two of the first I talked to

Original messaging was the Capture was the headpin for a wider breadth of AI applications



Then the funding started coming

Thought it was a big deal when Ephesoft received \$15M in 2017

Since then, we have seen hundreds of millions invested in IDP start-ups

- Triple digit investments in Hyperscience, Ocrolus, Instabase
- Number of vendors in market has increased more than 5x
- Not to mention what the Hyperscalers (Amazon, MS, and Google have invested)
- RPA vendors have also jumped into the mix

THE PROMISE OF IDP

Reducing Barrier to Entry and Increasing Breadth of Market.



IDP Promises No-Code/Low-Code Implementation

Increasingly seeing pre-trained libraries made available
Coding often required to reach desired levels of accuracy in enterprise accounts involving complex documents



Addresses Unstructured Documents

Traditional Capture was limited to structured and semi-structured docs (primarily invoices)

IDP offers ability to address more complex, unstructured documents,

- i.e., contracts, financial services
- In many cases, can be used to reduce, not eliminate, manpower – human in the loop



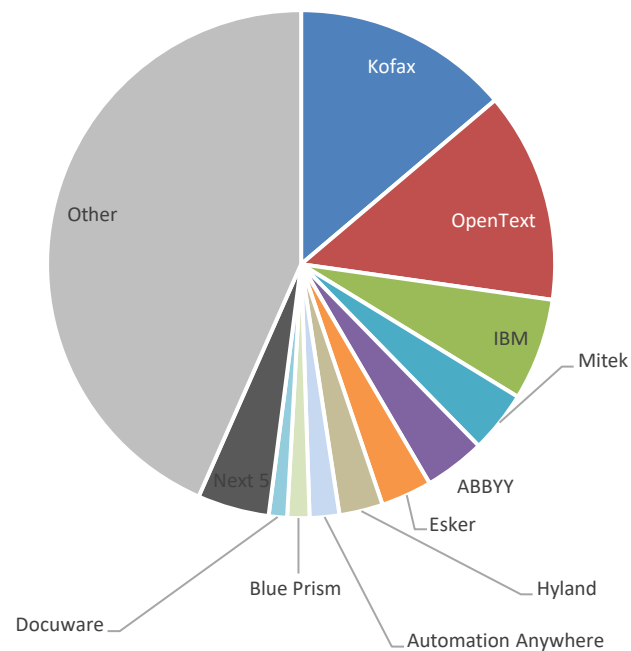
Hyperscalers make IDP services available through cloud

Putting pressure on traditional SDK vendors
Lower prices, greater accessibility

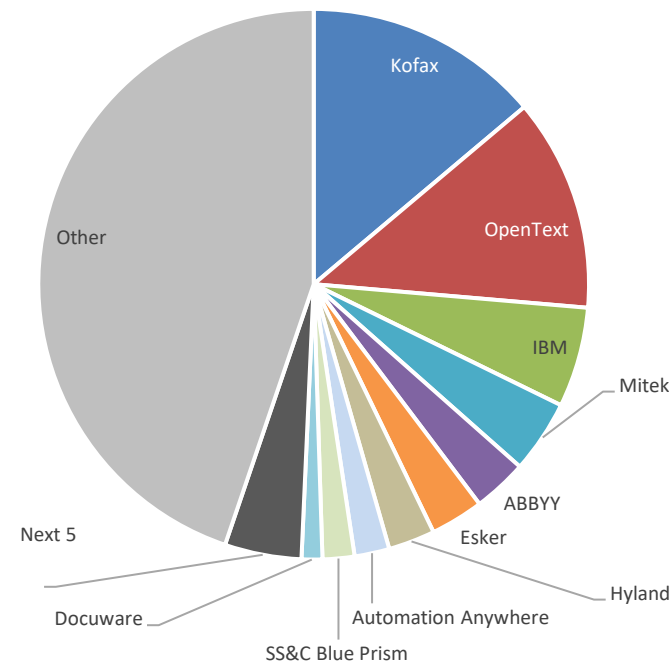
CAPTURE & IDP MARKET LEADERS

Not Much Has Changed on the Surface, but Things are Rapidly Evolving just Below.

2021 Capture & IDP Capture Market Share



2022 Capture & IDP Capture Market Share

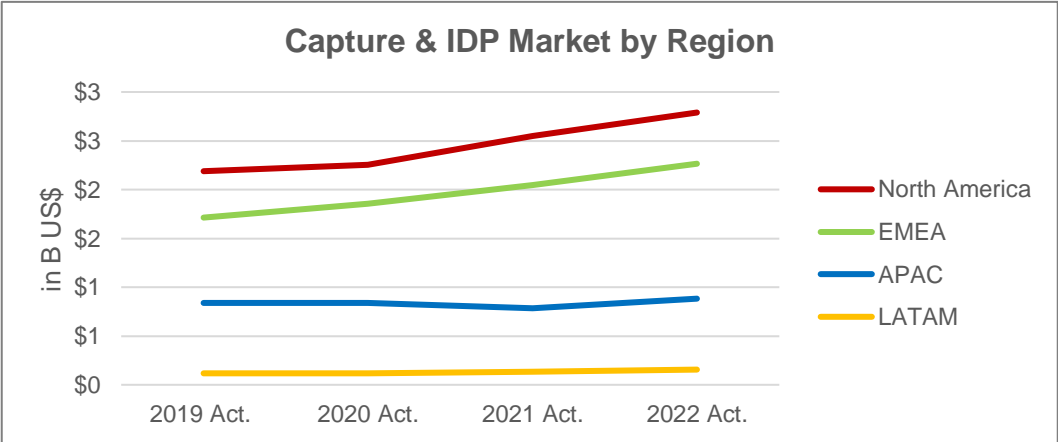
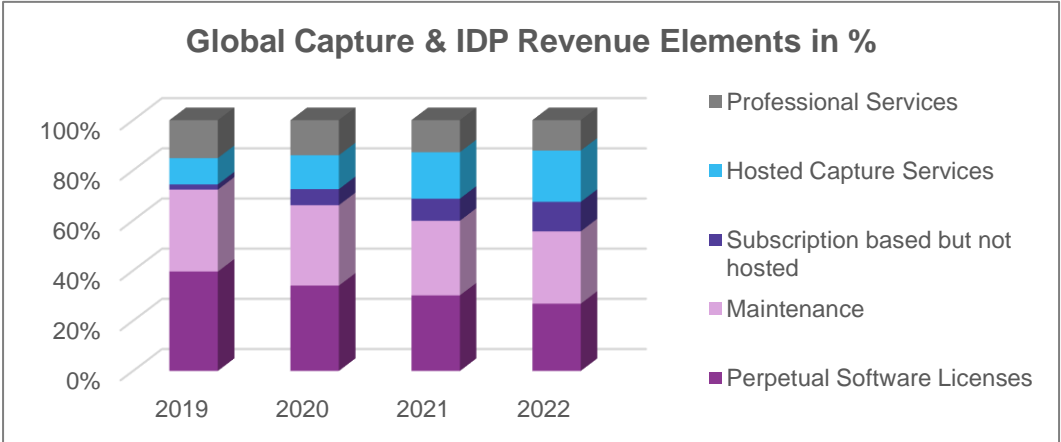
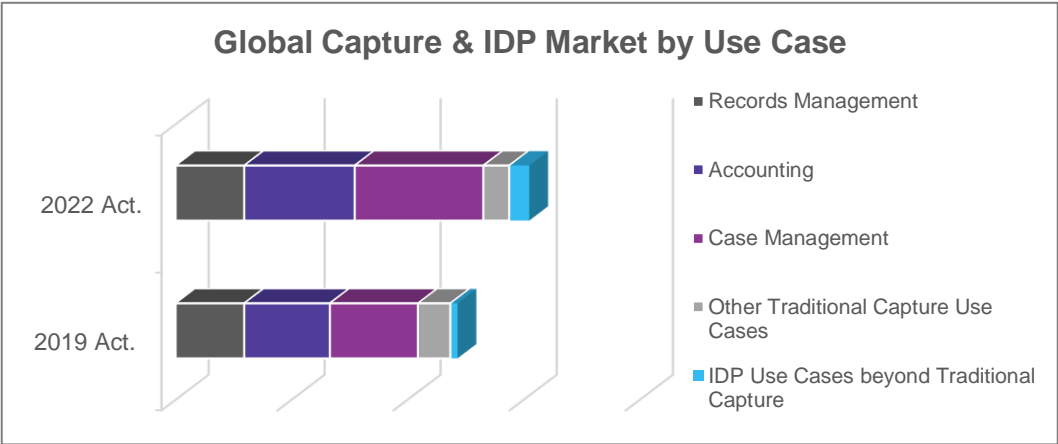
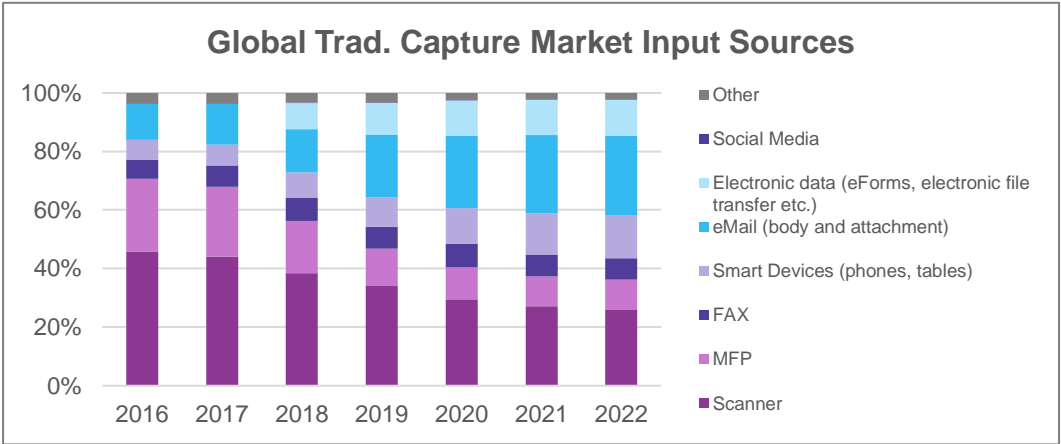


CURRENT STATUS AND MATURITY OF THE CAPTURE MARKET

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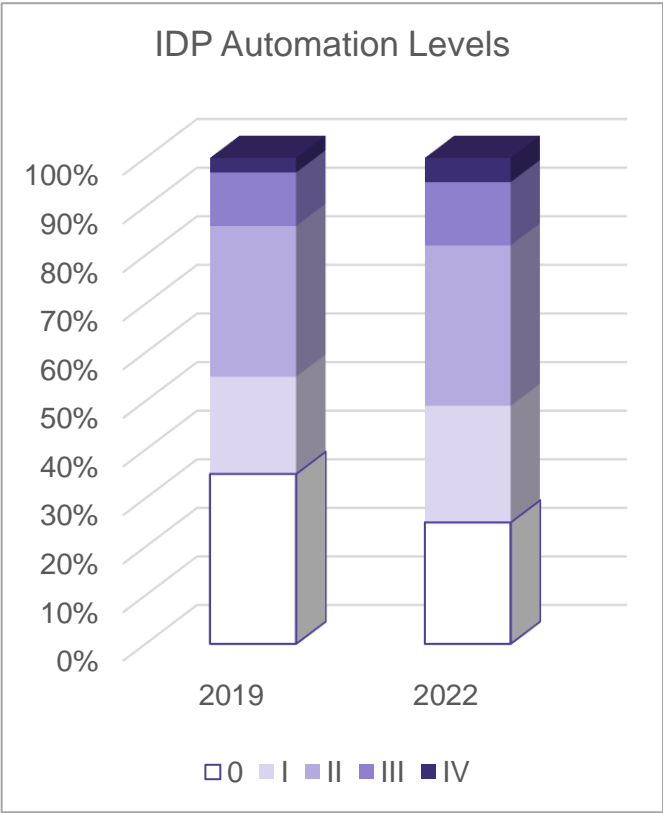
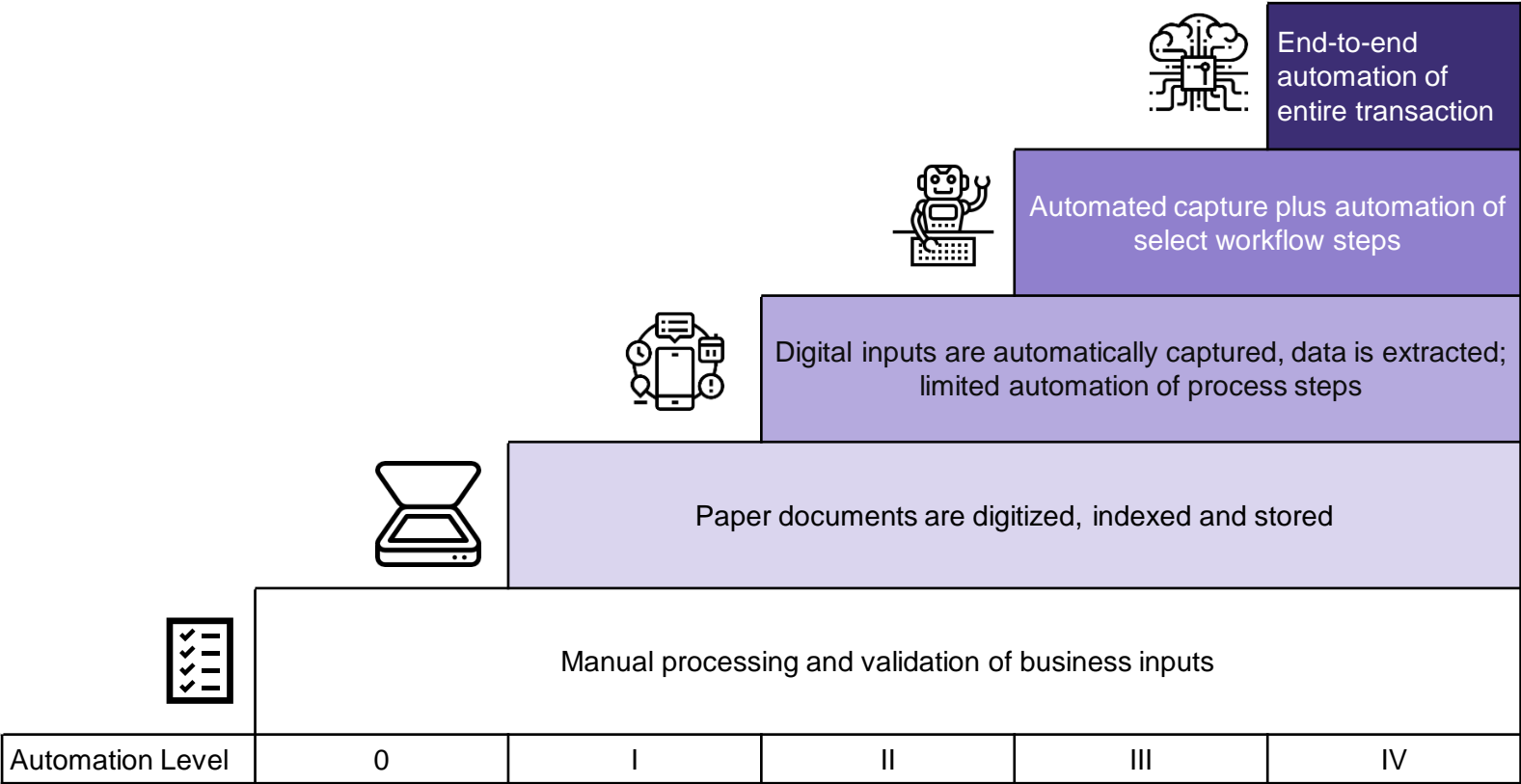
CAPTURE & IDP MARKET IN 2022

Nearing Pre-pandemic Growth; Different Solution Mix and Requirements



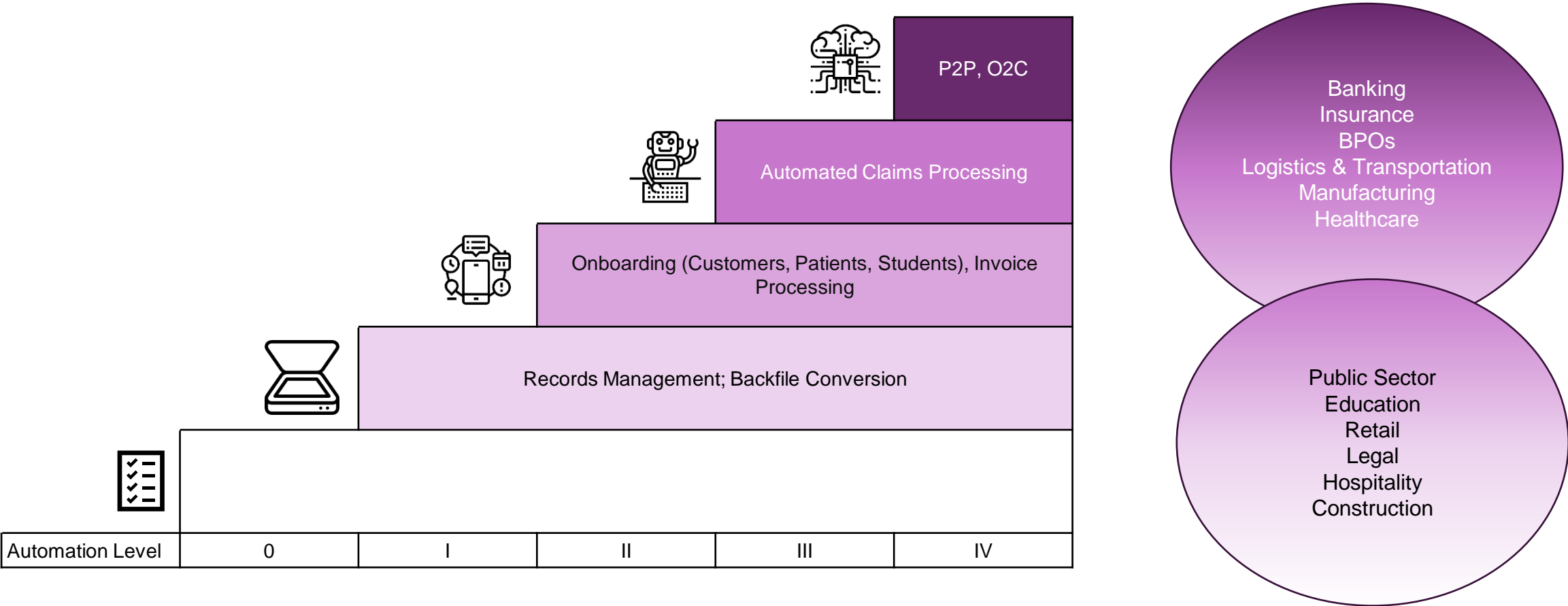
MARKET MATURITY

Major Progress in Digitalization During the Pandemic, but True End-to-End Automation is Far Out.



MARKET MATURITY – USE CASES AND VERTICALS

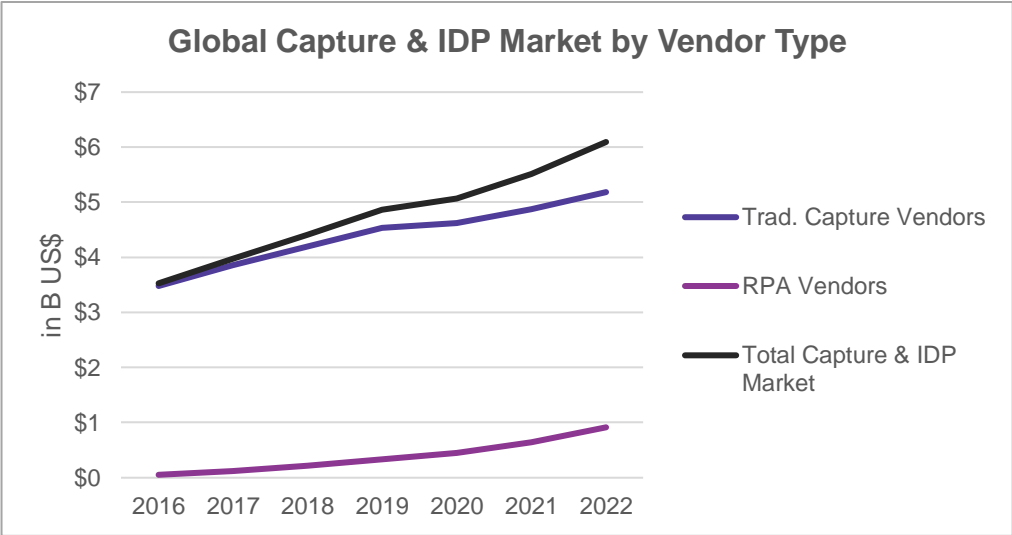
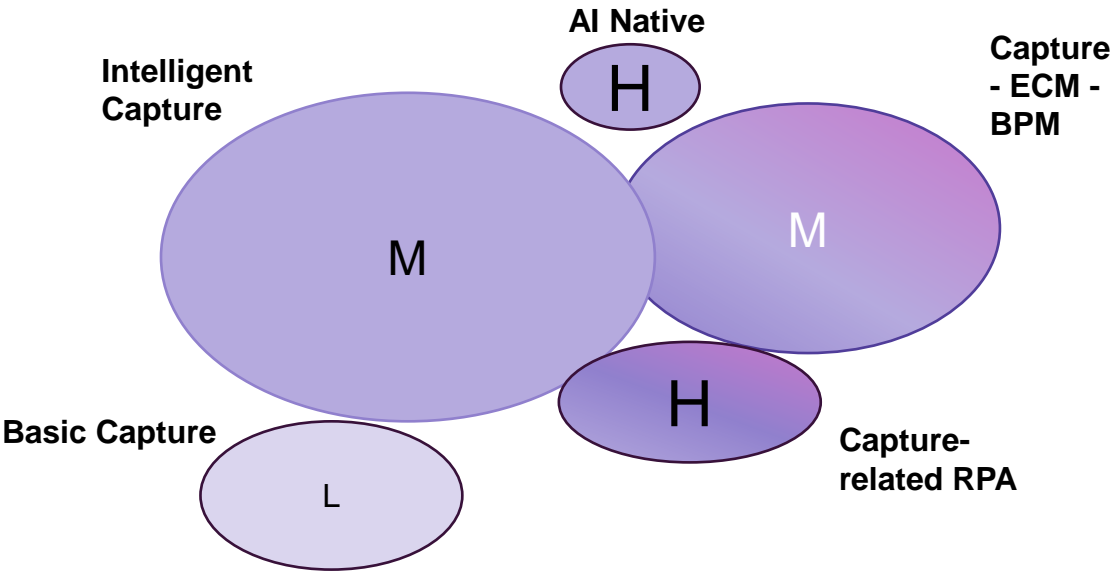
Most advanced Capture & IDP Use Cases are Procure-to-Pay and Order-to-Cash.



CORRELATION OF VENDOR SUCCESS AND USE OF AI AND AUTOMATION TECHNOLOGY

Highest Growth Rate in Capture-Related RPA and in the (Small) AI-Native Segment.

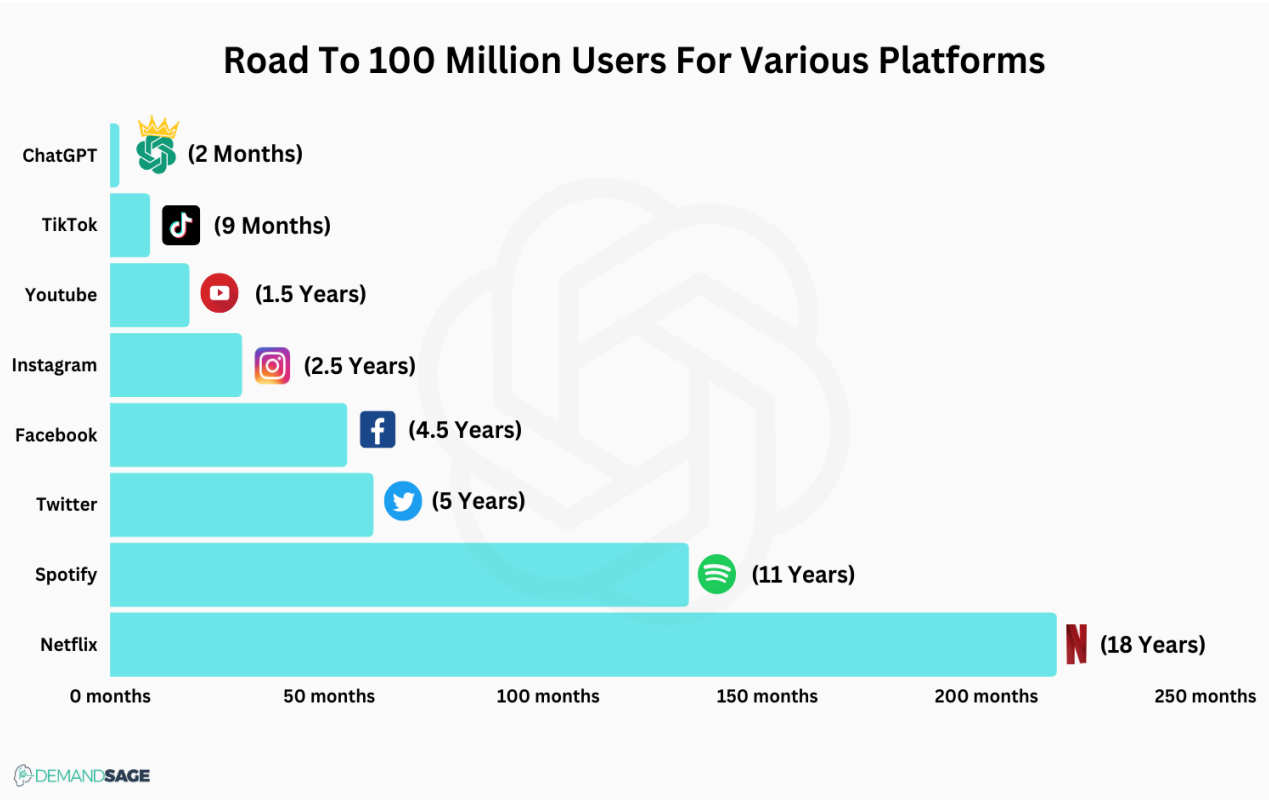
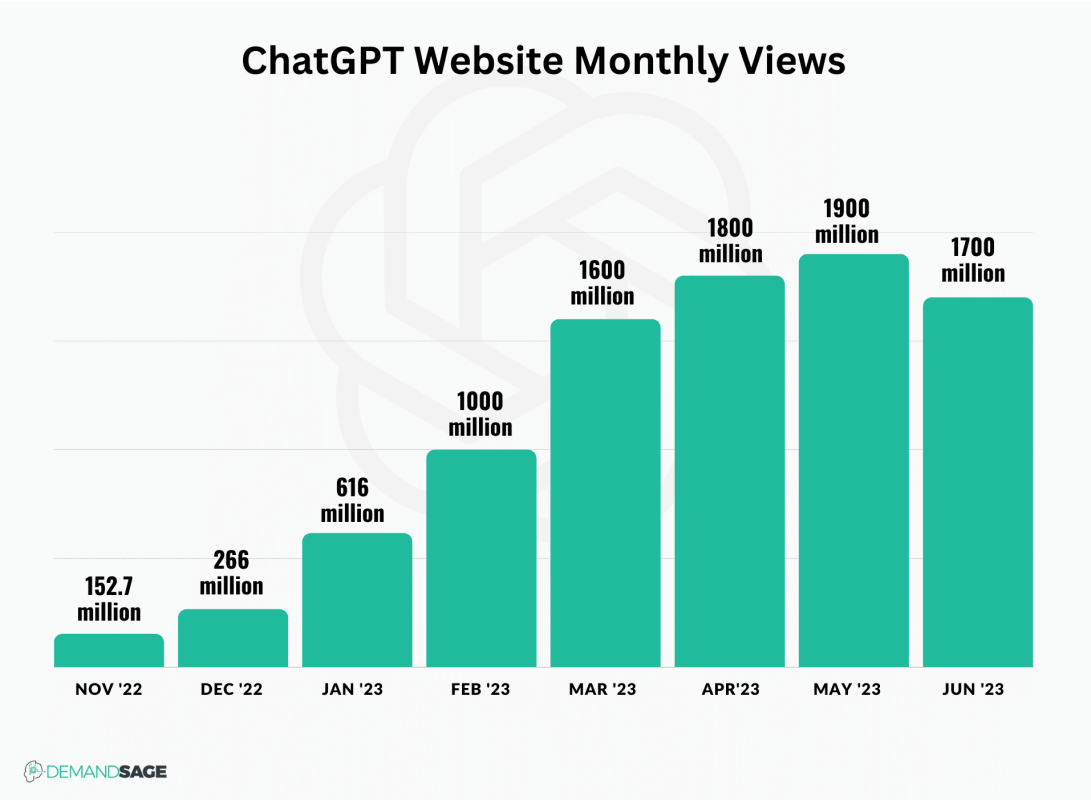
Capture & IDP Vendor Ecosystem and 2019 – 2022 Growth Rates (H, M, L)



WHAT ARE THE LATEST DEVELOPMENTS IN AI AND HOW DO THEY RELATE TO IDP?

GENERATIVE AI HAS CHANGED THE CONVERSATION

Introduction of Generative AI Applications Late Last Year has Super-Charged the Market for AI.



GENERATIVE AI'S CROSSOVER WITH CAPTURE

Technologies Have Common Building Blocks.

Characteristic	Capture	Generative AI
Multi-Channel Input	IDP mostly focused on document-input, but Infosource has promoted Capture and understanding of audio, video, still picture image, and other types of text input as well	Can include text, images, sounds, animation, 3D models, and more
Built on Foundation Models	IDP models are trained on smaller sets of more specific data points	Utilize LLMs trained on billions of data points
Machine Learning	Both utilize pattern recognition and can be run in supervised or unsupervised modes	
NLP	NLP has been utilized in Capture applications for features such as semantic understanding	Gen AI uses NLP to create output that sounds like it was created by a person

IMPACT OF GENERATIVE AI ON IDP

Generative AI Represents a Tool for Capture.



- Opportunity to Leverage a generalized tool for IDP
 - Reduce costs
 - Lower barrier to entry
- Entity extractions and summarization are initial primary use cases
 - Can do matching pairs
 - Interface for document interrogation
- Challenges
 - Lack of confidence ratings
 - Ability to train using own data
 - Cost to support, maintain and improve
- Where it's going
 - Seeing more enterprise models being introduced
 - Offer privacy and security
 - Ability to train/utilize prompt engineering
 - See it another tool, similar to OCR engine that can be leveraged to make Capture more efficient/effective
 - Are still concerns related to ethics, copyrights for training materials, expense, power consumption

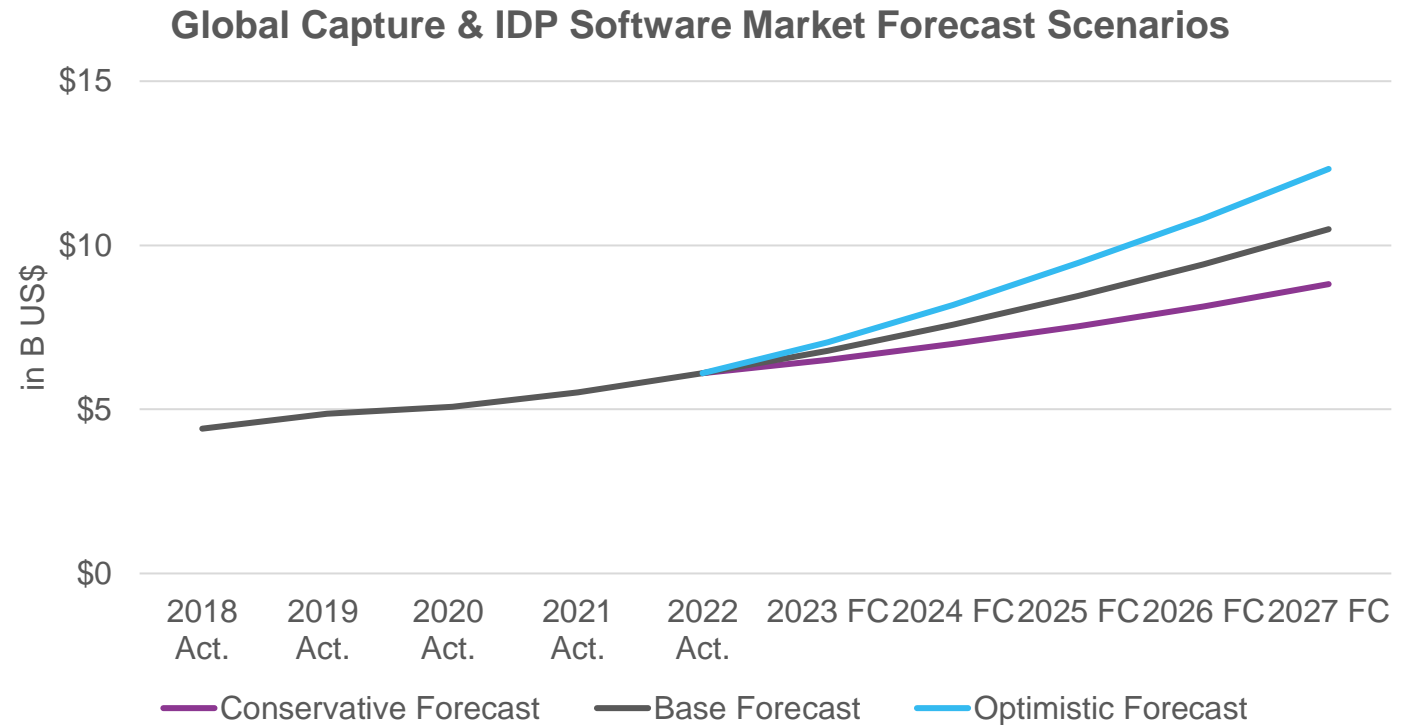
FUTURE STATE OF CAPTURE & IDP, AND IMPACT OF AI

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FUTURE IMPACT OF AI TOOLS ON CAPTURE & IDP

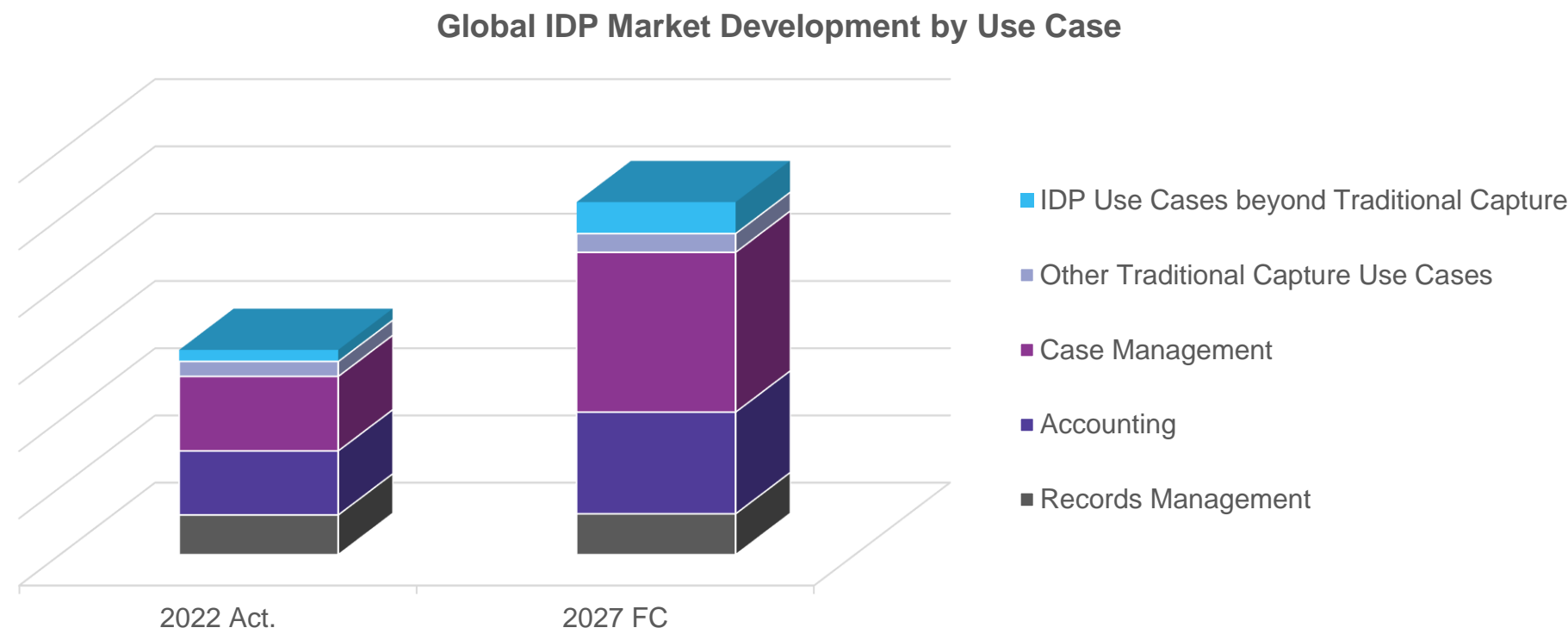
Advanced AI Technologies Will Accelerate the Capture & IDP Market Growth.

- Accelerated adoption of process automation
- Integration with customer communication
- Availability of analytics and predictive analytics
- Accessibility of data in repositories and dark data
- Easier handling of PII



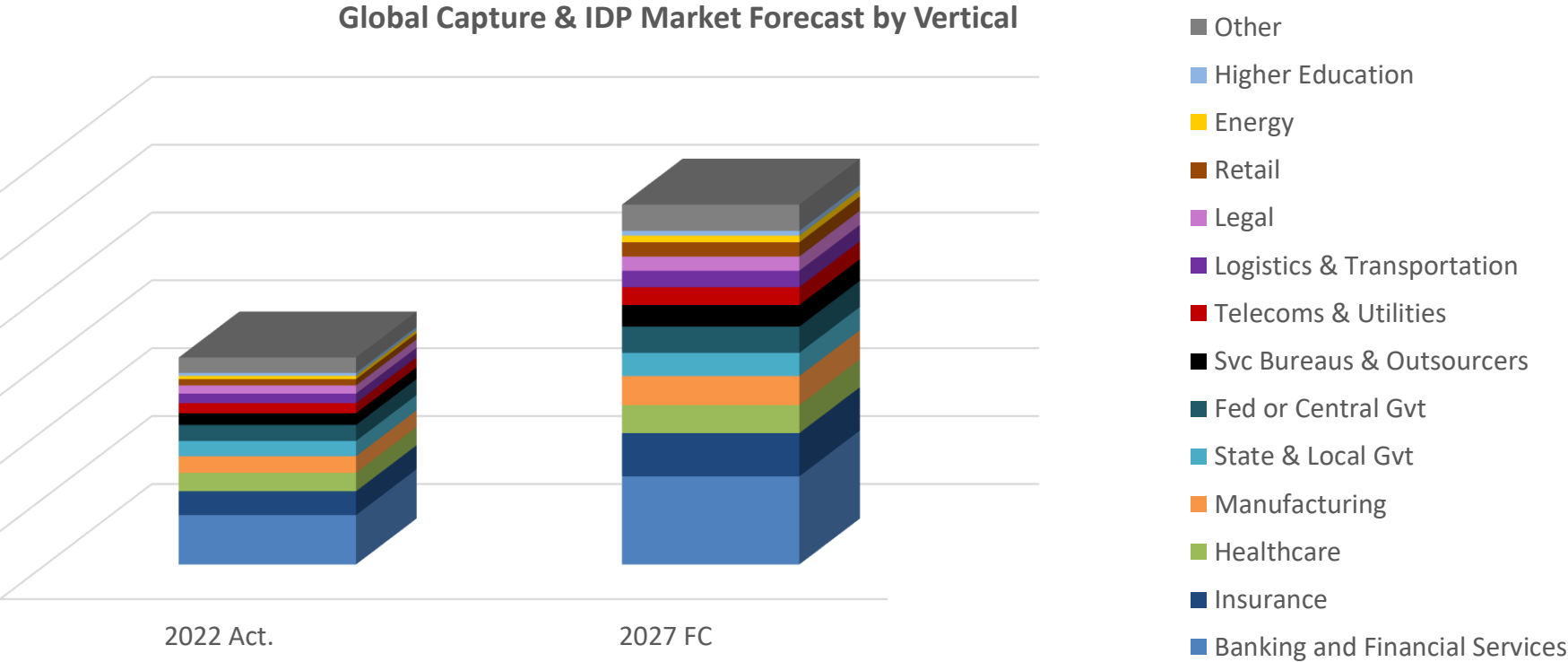
IMPACT OF AI TOOLS ON USE CASES

Major Impact Expected in Process Automation, Particularly in Case Management.



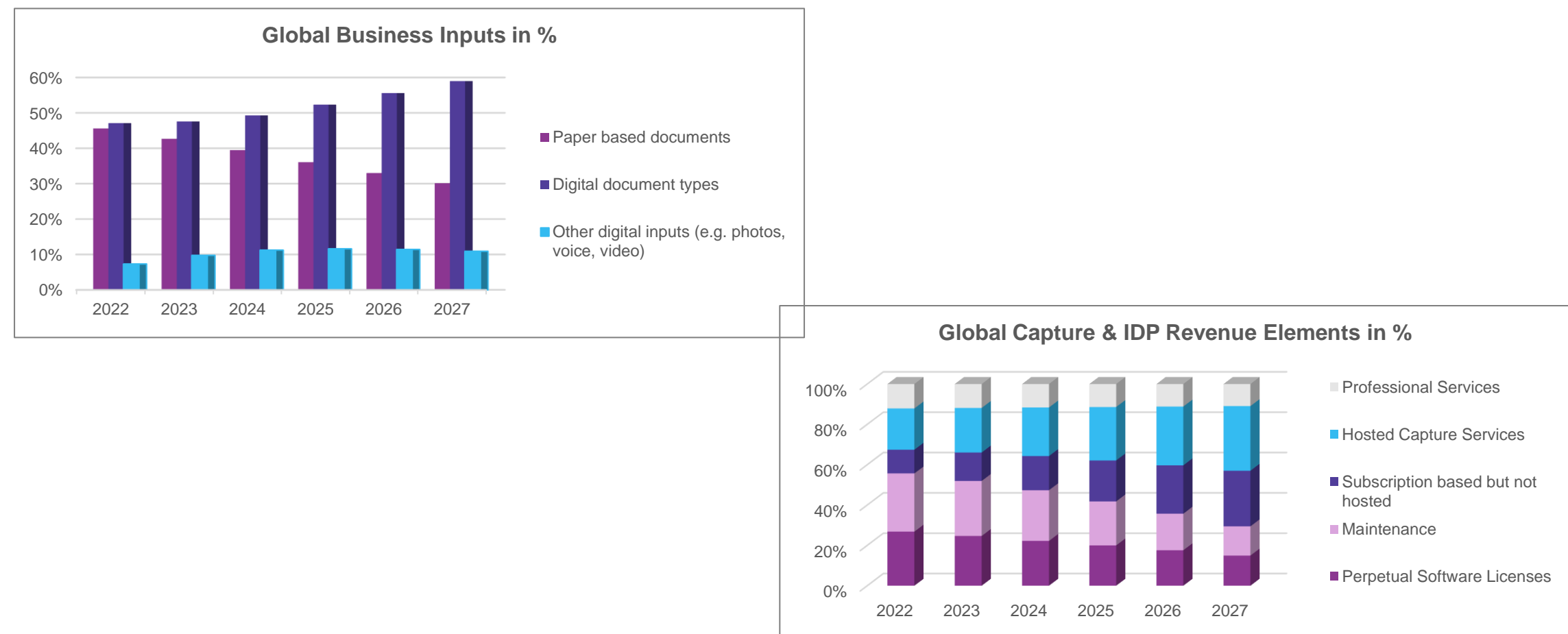
IMPACT OF AI TOOLS ON INDUSTRY SECTORS

Fastest Short-term Adoption of Advanced AI Tools Expected in More Mature Verticals.



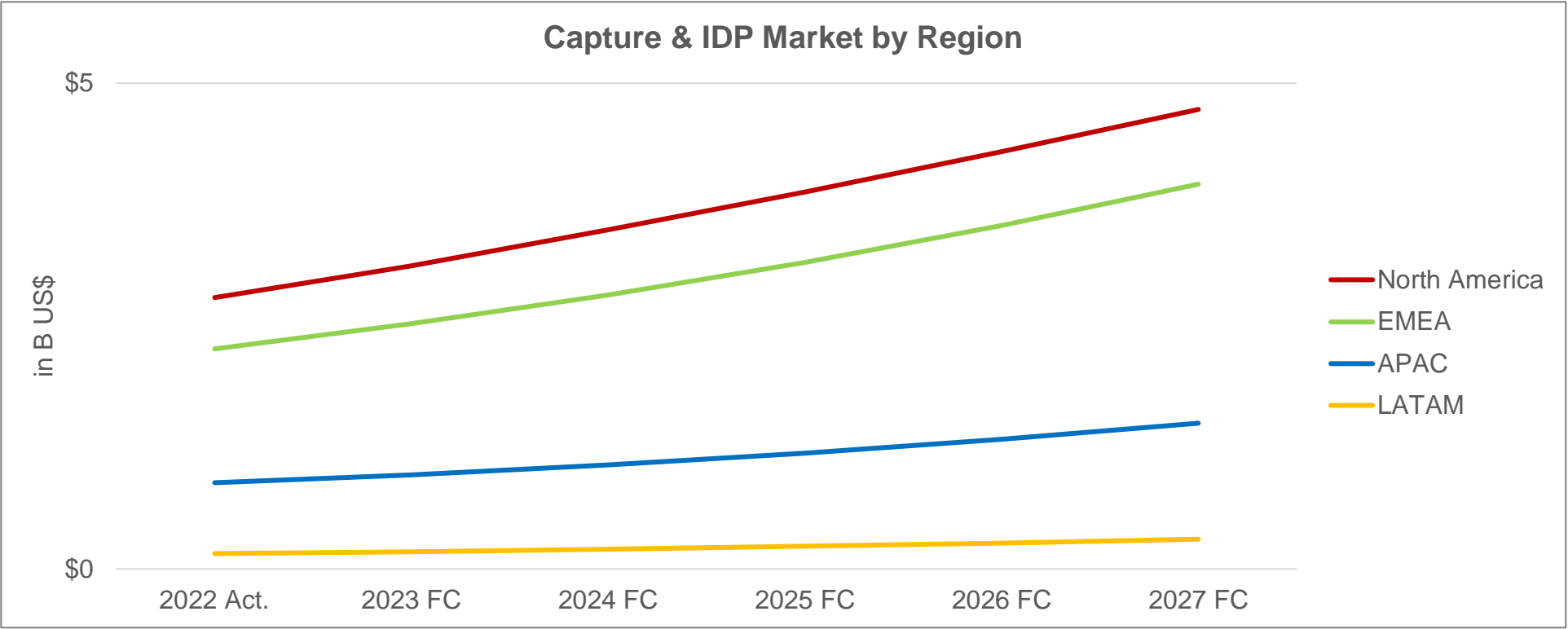
CAPTURE & IDP MARKET IN 2027

Accelerated Shift to Digital Business Inputs and Subscription-based Offers Will Transform the Market.



CAPTURE & IDP MARKET IN 2027

Strongest Growth Expected in Digitally Advanced Geographies.



RECIPES FOR SUCCESS

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WHAT TYPES OF VENDORS WILL EMERGE?

Still Very Early but Some Tradewinds are Forming.

Hyperscalers will continue to dominate market for Generative AI

- Google, MS, and Amazon will gain share in Capture/IDP space
- There will still be opportunities to develop solutions leveraging hyperscalers' tools

Specialized IDP models will have their place

- Foundation models trained on specific document types can be more efficient than LLMs for Capture
- OCR will continue to have value
- Still a healthy market for on-prem applications i

Successful vendors and integrators will combine multiple tools and offers

- Fruition of Infosource vision of SOA
- Understanding of document workflows and effective Us still required for success on enterprise level
- Coding rules and regex will continue to be utilized to increase accuracy levels

RECIPES FOR FUTURE SUCCESS IN THE MARKET



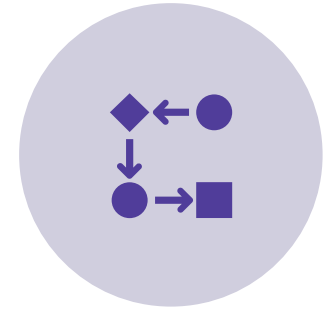
AIM FOR END-TO-END
AUTOMATION



LEVERAGE THE
LATEST AI TOOLS



ENSURE EASY
DEPLOYMENT



PROCESS EXPERTISE
IS KEY, NOT JUST
TECHNOLOGY

Q&A

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