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Embedded AI: The World's Most AI-forward SaaS Companies

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Summary

Catalyst

While the practical application of AI in the enterprise has grown during the past two years, artificial intelligence (AI) expertise remains a limited, coveted resource. As a result, many enterprises are struggling to build and operationalize AI.

Alternatives exist, such as traditional third-party end-to-end AI solutions providers. A third option—embedded AI—is becoming increasingly available. An increasing percentage of popular software as a service (SaaS) vendors embed AI capabilities into their enterprise solutions for customer relationship management (CRM), enterprise resource planning (ERP), cybersecurity, human resources (HR), e-commerce, and communications. The goal is to improve their product's outcomes through AI. Still, the trend is resulting in a second benefit to SaaS customers—SaaS vendors implement potential AI tasks, use cases, and functionality an enterprise might have otherwise felt required in-house AI.

An elite group of SaaS companies has identified how they can embed AI into their technology stack to improve their products and business outcomes for their customers. They have invested significant time and resources into AI and are on a spectrum range for delivering business outcome results. The impact of embedded AI will be felt broadly—SaaS customers will significantly benefit, and AI-forward SaaS players have the potential to tilt their specific competitive SaaS ecosystems.

Who are these AI SaaS leaders? How are they embedding AI to create better outcomes for their customers? What AI lessons can be learned by their competitors and enterprises at large? How will being AI-forward impact these SaaS companies' paths?

This report is for:

- Enterprises who want to understand embedded AI SaaS and how it may help them
- SaaS solutions providers, both those who have begun to embed AI into their products and those who have not yet done so, to understand the market opportunities and best practices of embedded AI as well as the potential risks involved in not pursuing embedded AI

What is embedded AI?

Embedded AI refers to SaaS applications that leverage AI to solve enterprise problems, including but not limited to collaboration, communication, CRM, ERP, process optimization, and security. These AI capabilities are built into an application to improve the business outcomes of said application. No AI expertise is required for the end user to use embedded AI. Users often might not even know AI is part of the application.

Omdia view

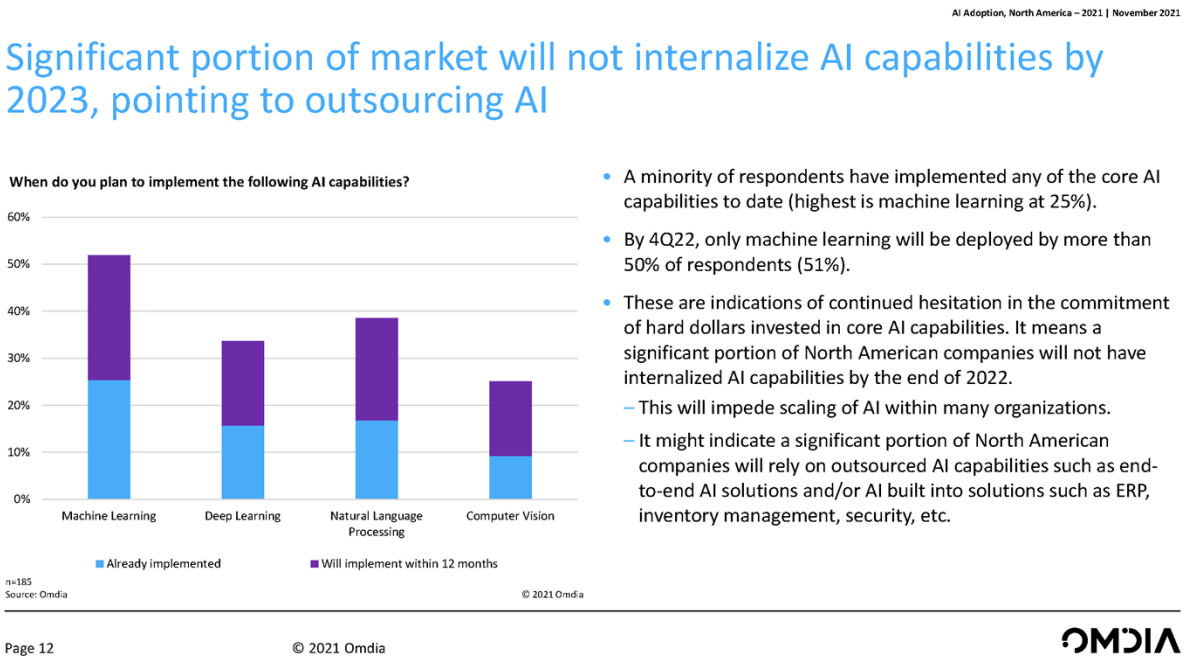
This report has two key themes: embedded AI SaaS's role in driving business outcomes and the DNA of AI-forward SaaS companies.

The role of embedded AI SaaS to drive business outcomes

Enterprises will increasingly lean on SaaS solutions to drive business outcomes, and embedded AI is perfectly suited to help improve many of those outcomes. Consequently, enterprises will be able to focus their homegrown AI investments on high-value use cases outside of what their embedded AI SaaS vendors provide. Recent Omdia research has shown that enterprises are fundamentally challenged to build core AI capabilities. The data in **Figure 1** only reinforces that enterprises need to be strategic about how they use their in-house AI resources.

Given the limited supply of AI expertise and talent, many enterprises who might have been initially enamored with building internal AI capabilities might revisit a tried-and-true edict of business—to stick to their core competencies and let that be their guide to their AI investments. In this case, they should ask themselves, "Is AI core to what we do, and if it is, how is it core to what we do? When does it make sense to rely on other options such as embedded AI SaaS?"

1. Figure 1: The market challenge of building in-house AI capabilities



Source: Omdia

The DNA of AI-forward SaaS companies

AI will fundamentally change the SaaS market—positively for those companies who are patient enough with their AI investments and negatively for those who do not invest in AI or those who make a shallow commitment. To succeed requires commitment, patience, and investment in AI from SaaS companies who seek to leverage it. This approach is part of AI-forward SaaS companies' DNA. In the analysis for this report, it was clear AI-forward SaaS companies have shown they share some common characteristics with all AI-forward companies:

- They have committed vision, investment, and patience for building AI from the highest level of company leadership.

- They focus on solving a problem/improving an outcome, then look for the right solution to solve it instead of looking for a way to use a technology like AI.
- They choose a business champion to lead. AI projects led by business champions are typically better able to secure AI resources and funding required because they tend to align the investments with business goals.
- They leverage multidisciplinary teams. While business champions lead these successful AI initiatives, active, coordinated cooperation is required across various functional areas, including IT, operations, product management, and finance.

Of these characteristics, company leadership's support is the most critical to successfully embedding AI into SaaS. In the research for this report, Omdia found that the highest-ranked SaaS companies worked on their initiatives to embed AI for five or more years. They showed patience and the willingness to accept failures and missteps. Leadership within these companies is not focused on short-term return on investment; they have taken longer-term views. It is most likely these long-term windows of investment will continue for SaaS companies seeking to embed AI.

While market adoption of emerging technologies typically accelerates as the technology matures because of advanced tools and best practices, the investment required to build embedded AI SaaS will remain significant for some years. It will prove a barrier to entry for some SaaS companies seeking to develop embedded AI SaaS. This will likely lead to some competitive advantages for those SaaS players who have spent time and money on AI. This investment will mean Omdia's list of the most AI-forward SaaS companies will undoubtedly change in the years ahead.

Key messages

- An increasing percentage of popular SaaS solutions enterprises use, from CRM, ERP, and cybersecurity to HR, e-commerce, and communications applications will have AI built into them.
- Embedded AI will fundamentally change the SaaS market. AI-forward SaaS companies are embedding AI into their solutions to deliver incrementally better outcomes for their customers.
- Embedded AI is having a material impact on SaaS today. Omdia estimates global SaaS revenues reached more than $200 billion in 2021, and 37% of that revenue (more than $78 billion) was SaaS revenue that included embedded AI. By the end of 2023, Omdia estimates that 44% of SaaS revenues will consist of embedded AI.
- Enterprises will be able to focus their AI investments more narrowly because the SaaS they use will leverage embedded AI. Thus, eliminating the need to build in-house AI solutions in areas SaaS applications address, such as CRM, ERP, Security, etc.
- AI-forward SaaS companies are changing the competitive landscape within SaaS categories, creating winners and losers.
- The world's most AI-forward SaaS companies do not fit into a simple category. The 30 companies comprise an eclectic mix of hyperscalers, focused SaaS players, and established technology companies. Some compete with each other, but most do not.
- The most successful AI-forward SaaS companies share a common characteristic -- vision, investment, and patience for AI from company leadership.

- Embedded AI investments require patience and typically take several years to produce a return on investment (ROI). Consequently, some SaaS companies may not choose to invest in building embedded AI

Recommendations

Recommendations for enterprises

- Assess how any embedded AI SaaS you currently use might act as a substitute for in-house AI. This strategy will allow you to focus on the highest impact AI initiatives that suit in-house development and lifecycle maintenance.
- Given the potential gains for AI-forward SaaS companies over their competitors, review your current SaaS vendors and understand whether there are better SaaS options for you.

Recommendations for SaaS vendors

- Make sure leadership is committed to embedding AI. Investment to embed AI requires top leadership's vision, direction, investment, and patience.
- Follow classic business discipline to embed AI. While AI is rocket science, embedding AI into SaaS requires traditional business discipline.
  - AI initiatives are not successfully born in the lab; they require a business champion.
  - Your AI initiatives should not be a technology looking for a problem to solve but rather the best answer to an existing problem you as a SaaS provider are looking to solve.
  - Stick to business case development discipline or do not pursue embedding AI. This involves classic business case and product development practices—opportunity costs, investment level, ROI, effort, timescale, and gating processes.

Definitions

There are many interpretations of the definitions for services that fall under "as a Service" and which types of offerings are "software as a service." In developing the list of the most AI-forward SaaS companies, Omdia defines SaaS as follows:

- **SaaS** provides a complete, typically web-based application with a pay-per-use pricing model; it includes applications such as CRM, ERP, collaboration, security, management, virtual desktop, and business analytics. SaaS products are typically designed for non-technical business users and sold to departments other than IT.

Other "as a service" offerings are related to SaaS but are not part of the scope of this analysis. They include:

- **Infrastructure as a service (IaaS)** includes servers, network, storage, database, network (layer 4) applications, and management

- **Platform as a service (PaaS)** provides application development and execution environment; includes application runtime and middleware (web servers, database management systems), servers, network, storage, management, and data center orchestration software—cloud operating system (OS); purchased as a bundle and priced based upon usage. PaaS products are typically designed for professional developers and technical users and sold to IT departments.

Market outlook

Embedded AI is having a material impact on SaaS today. Omdia estimates global SaaS revenues reached more than $200 billion in 2021, and 37% (more than $78 billion) was SaaS revenue that included embedded AI. By the end of 2023, Omdia estimates that 44% of SaaS revenues will consist of embedded AI.

Table 1: SaaS revenues, embedded AI revenues

	SaaS revenues	SaaS revenues that include embedded AI	% of SaaS revenues that include embedded AI
2021	$208.4 billion	$78.6 billion	37.7%
2023	$295.6 billion	$131.7 billion	44.5%

Source: Omdia

The winners

The world's most AI-forward SaaS companies are an eclectic mix of hyperscalers, focused SaaS players, and established technology companies. Some are specialists, and some are generalists in their offerings. Some are cloud-native, while others are undergoing digital transformations.

The variety is evident even in the top five companies in 2021. Adobe, at number one, provides software solutions primarily to creatives and marketers. Salesforce (no. 2) specializes in CRM, SAP (no. 3) focuses mainly on ERP; no. 4 Amazon Web Services (AWS) and Google Cloud are two of the world's biggest cloud service providers who also happen to have deep AI expertise.

Table 2: The world's most AI-forward SaaS companies

Rank	2021 rank	2023 rank	Change for 2023 (+/-)
1	Adobe	Adobe	
2	Salesforce	Salesforce	
3	SAP	SAP	
4	AWS	AWS	
5	Google Cloud	IBM	+5
6	Zoom	Microsoft	+1
7	Microsoft	Zoom	-1
8	Cisco	Google Cloud	-3
9	SAS	Cisco	-1
10	IBM	SAS	-1
11	Oracle	Oracle	
12	Atlassian	Atlassian	
13	Tencent	Tencent	
14	Box	Intuit	+6
15	Xero	Service Now	+1
16	Service Now	Box	-2
17	HubSpot	HubSpot	
18	Zendesk	Xero	-3
19	GoTo (LogMeIn)	Zendesk	-1
20	Intuit	GoTo (LogMeIn)	-1
21	Shopify	Shopify	

22	ADP	Dropbox	+1
23	Dropbox	ADP	-1
24	Coupa	Coupa	
25	Alibaba	Workday	+2
26	Zuroa	DocuSign	+2
27	Workday	Twilio	+3
28	DocuSign	Alibaba	-3
29	Software AG	Zuroa	-3
30	Twilio	Software AG	-1

Source: Omdia

Table 2 shows Omdia's ranking of the 30 most AI-forward SaaS companies in 2021. SaaS and AI revenue-related estimates were developed based on data collected from fiscal year (FY) 2021 public documents, including annual reports, 10-Qs, and financial performance presentations. The table also includes a forecast of how that ranking will look at FY-end 2023.

While there is no change in the top four rankings for 2021–23, there is some movement up and down the rest of the list.

Of note:

The two biggest positive movers are Intuit and IBM.

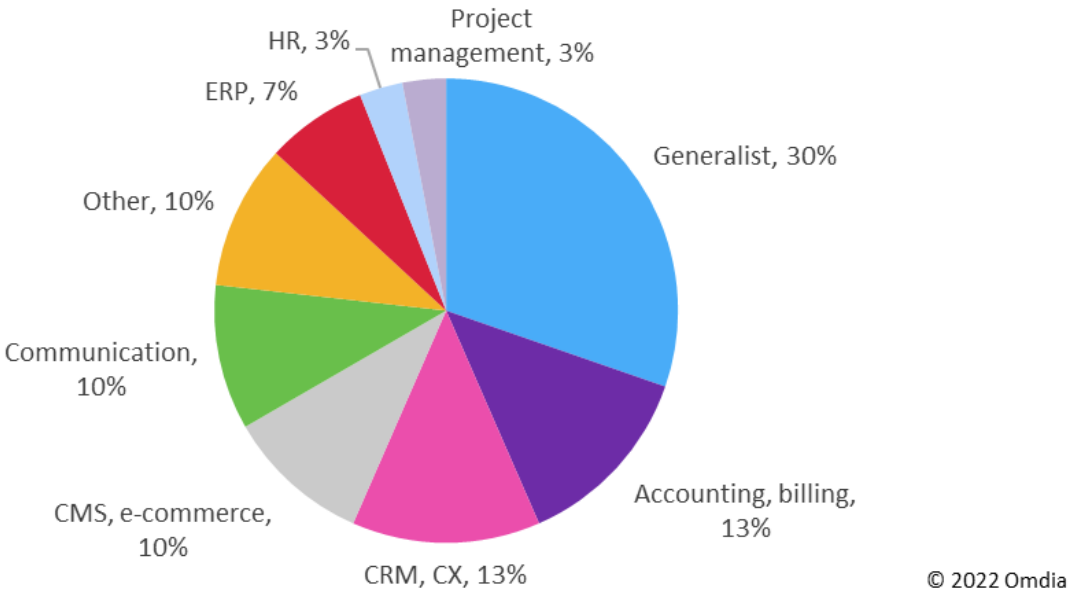
- Intuit is in the early stages of its AI investment, but Omdia believes its commitment, vision, and compelling use cases will significantly impact its rating.
- Last 2021 marked only the first full year of IBM's pivot to hybrid cloud and AI. Omdia believes IBM will gain significant steam with its strategic pivot in 2022 and 2023 and be able to leverage its considerable AI expertise to move up five rankings to the top five in 2023.

The biggest negative movers are Google Cloud, Xero, Alibaba, and Zuroa.

- Google Cloud will lose ground because others below it in the 2021 ranking emphasize AI-forward SaaS, while SaaS remains a limited initiative for Google Cloud.
- Xero and Zuroa do not signal firm commitments to AI, thus, impacting their rankings.

SaaS categories

2. Figure 2: World's most AI-forward SaaS companies by SaaS category



Source: Omdia

The world's most AI-forward SaaS companies focus on a wide range of SaaS deliverables. Based on their embedded AI SaaS focus, the 30 companies were sorted into nine categories:

- **Generalists** – Adobe, SAP, AWS, Google, Microsoft, IBM, Oracle, Tencent, and Alibaba; represent 30% of the top 30
- **CRM, CX** – Salesforce, Zendesk, HubSpot, and Service Now; represent 13% of the top 30
- **Accounting, billing** – Zuroa, Coupa, Intuit, and Xero; represent 13% of the top 30
- **CMS, E-Commerce** – Box, Shopify, and Dropbox; represent 10% of the top 30
- **Communication** – Zoom, Cisco, and Go To; represent 10% of the top 30
- **Other** – DocuSign, Software AG, and Twilio; represent 10% of the top 30
- **ERP** – SAS and Workday; represent 7% of the top 30
- **HR** – ADP; represent 3% of the top 30
- **Project management** – Atlassian; represent 3% of the top 30

The generalists category is used when a company offers embedded AI SaaS in more than one unrelated category.

SaaS category winners

While an overall ranking of the world's most AI-forward SaaS companies reveals market trends for AI in the enterprise, it is equally important to understand how AI impacts SaaS by category. With that in mind, here are the most AI-forward SaaS companies in 2021 by category:

Winner: Generalists
Adobe

Winner: CRM, CX
Salesforce

Winner: Accounting, billing
Xero

Winner: CMS, e-commerce
Box

Winner: Communication
Zoom

Winner: ERP
SAS

Winner: HR
ADP

Winner: Project management
Atlassian

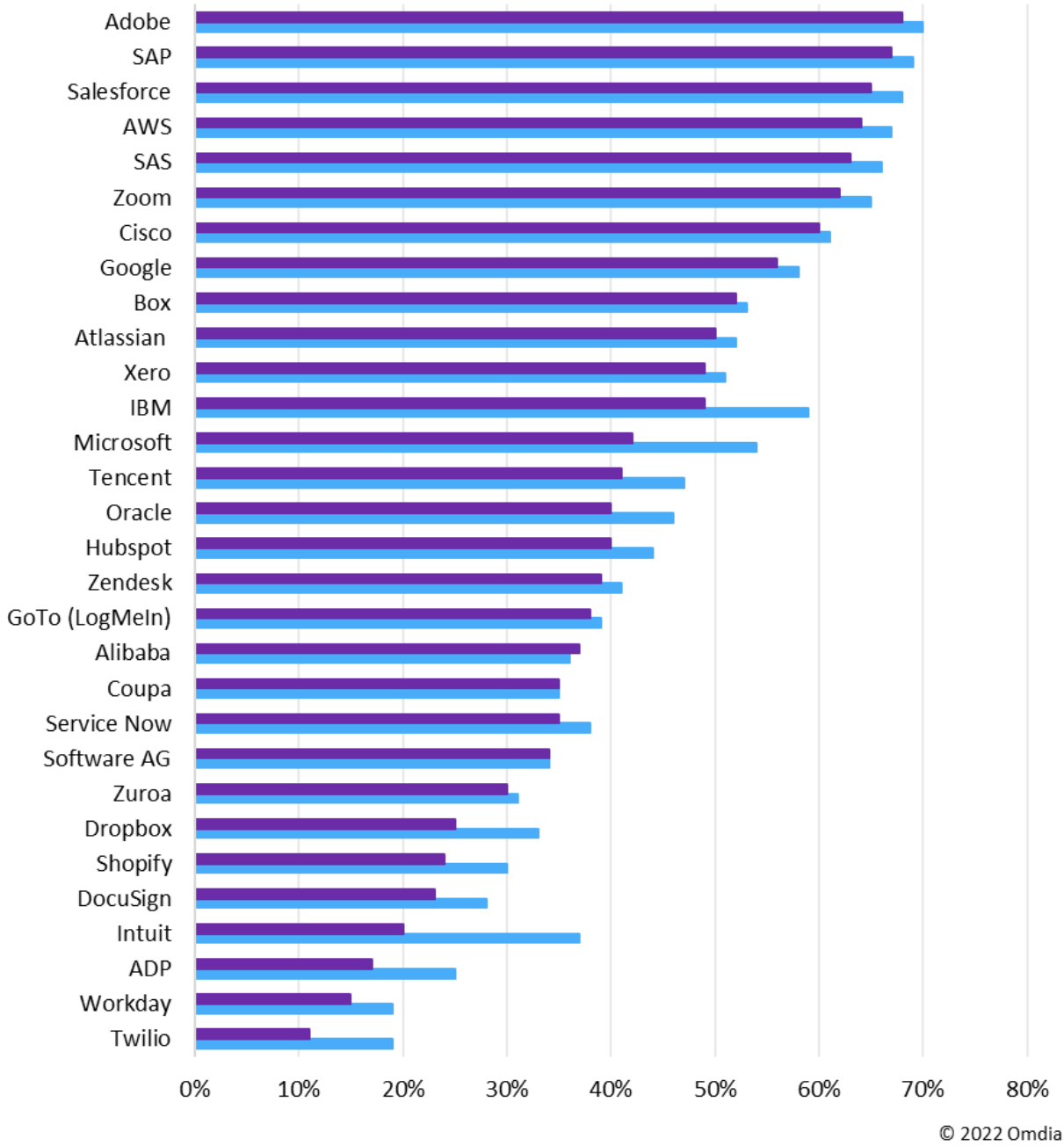
Ranking criteria: % SaaS revenue that includes embedded AI

The most important criterion in determining the world's most AI-forward SaaS companies is the % of SaaS revenues that include embedded AI. A results metric shows success and strategic forethought around focusing AI on product offerings where AI will most impact business outcomes.

There are several key points to focus on in this chart:

- Of the six companies rated 60%+ in 2021 (Adobe, SAP, Salesforce, AWS, SAS Institute, and Zoom), all are forecast to grow their percentages even more through 2023.
- Very few companies in the top 25 show flat growth in % between 2021 and 2023, indicating continued momentum for remaining among the most AI-forward SaaS companies.

3. Figure 3: The world's most AI-forward SaaS companies by % SaaS revenue that includes embedded AI, 2021 and 2023



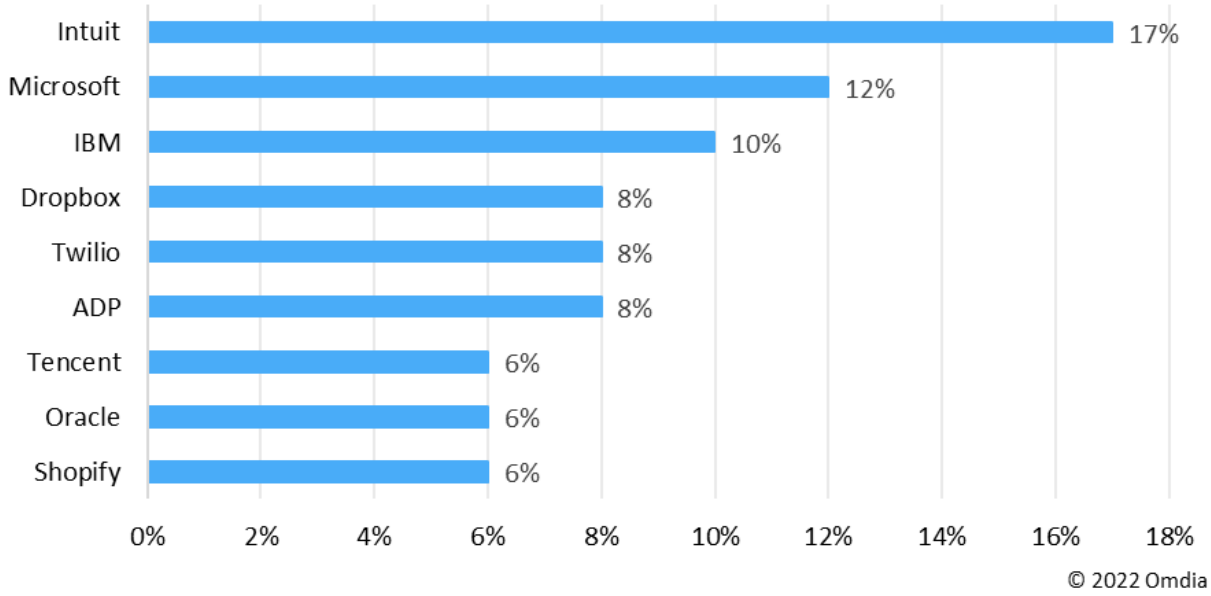
Source: Omdia

Biggest movers: % SaaS revenue that includes embedded AI

The most significant positive jumps in % of SaaS revenue that includes embedded AI between 2021 and 2023 will come from Intuit (a 17-point jump, from 20% to 37%), Microsoft (with a 12-point jump, from 42% to 54%), and IBM (with a 10-point jump, from 49% to 59%). Three other companies will make 8-point jumps: Dropbox (from 25% to 33%), Twilio (from 11% to 19%), and ADP (17% to 25%).

For Intuit, the surge is predicted to come as it nears its AI initiatives' five-year mark by the end of 2023. For Microsoft and IBM, the momentum reflects how rapidly large technology companies with AI expertise can make up ground once they solve the challenges of shifting to SaaS. For Twilio and ADP, the shift is more the result of improving from a relatively low baseline of under 20%.

4. Figure 4: Biggest movers, % SaaS revenue that includes embedded AI, 2021 and 2023



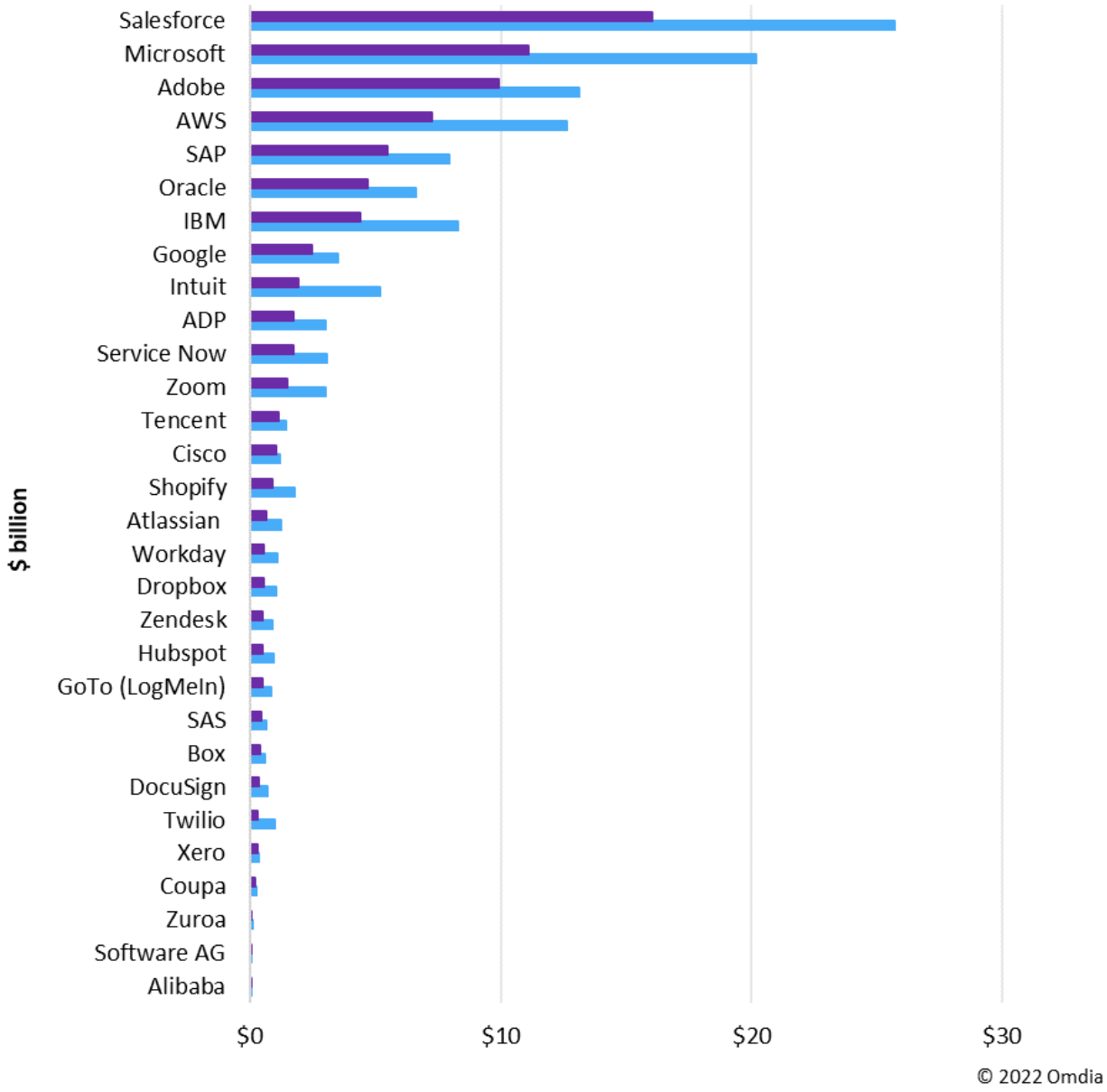
Source: Omdia

Ranking criteria: embedded AI SaaS revenues

Embedded AI SaaS revenues are set to grow across the board for the top 30 AI-forward SaaS companies. However, as the chart below illustrates, there are significant differences in total revenues. There are various factors at play dictating these estimates:

- Historic SaaS revenue year-over-year (YoY), near-term SaaS revenue guidance, and SaaS forecast
- Historic revenues and estimates of which SaaS products will leverage embedded AI

5. Figure 5: The world's most AI-forward SaaS companies by embedded AI SaaS revenue, 2021 and 2023



Source: Omdia

Methodology and scoring criteria

The world's most AI-forward SaaS companies all met a minimum set of criteria:

- SaaS under the Omdia definition
- Estimated annual SaaS revenue of $300 million or more
- Evidence of operationalized, embedded AI

Several other factors play a role in shaping how AI-forward a SaaS company can be:

- **SaaS focused.** The more focused the company is on SaaS (as opposed to PaaS, IaaS, or on-prem software delivery), the more likely it will devote resources to SaaS and be more successful with SaaS.
- **AI experience.** What is the company's AI heritage? How long have they been invested in AI?
- **Cloud-native.** Is the company a cloud-native, or is it in the midst of digital transformation?
- **C-suite investment in AI** indicates the level of commitment to AI.
- **Focused product portfolio.** The broader the product portfolio, the broader the competition for building AI within the company. Narrower product portfolios have an advantage over more comprehensive product portfolios.

Scoring for Omdia's ranking is a composite score of two metrics: an estimate of the percentage of a company's SaaS revenue THAT included embedded AI (roughly 60% of the composite score) and an estimate of the value of that SaaS revenue (approximately 40% of the composite score).

(NOTE: All rankings in this report are based on Omdia estimates. Whether expressed in US dollars or percentages, all revenue numbers in this report are Omdia estimates unless otherwise explicitly attributed.)

Percentage of SaaS revenues that include embedded AI

This metric was the most important element in determining the ranking. Here is an example of how a percentage of SaaS revenue that included embedded AI is determined:

- ABC Corporation embedded AI into its CRM SaaS offering but no other SaaS products
- ABC Corp.'s CRM SaaS revenue represented 50% of ABC Corp.'s 2021 SaaS revenue
- ABC Corp.'s percentage of SaaS revenue that included embedded AI in 2021 was 50%

To arrive at this percentage of SaaS revenue that includes embedded AI estimation, Omdia reviewed company SaaS products for evidence of embedded AI.

In Omdia's view, this estimate provides a more accurate representation of an AI-forward SaaS company than estimating the percentage of a company's SaaS product portfolio that includes embedded AI. The reason for this is the percentage of SaaS revenue that includes embedded AI reflects the current impact of embedded AI much more accurately than the percentage of SaaS products with embedded AI. A results metric shows success and strategic forethought around focusing AI on product offerings where AI will most impact business outcomes.

Year rankings versus the forecast period

The analysis does not show a traditional market forecast because the report is not a market forecast; it is a ranking of AI-forward SaaS companies. SaaS companies' approaches to and investments in AI and dynamic overall growth of SaaS will likely mean significant changes to the top 30 ranking year to year, including introducing new companies to the list.

In addition to estimating momentum for embedded AI projects, including the level of leadership commitment, there are several assumptions and factors for determining metrics beyond 2021, including:

- SaaS growth by company for fiscal 2022, based on official guidance where available
- SaaS growth by company for fiscal 2023, based on recent historic company growth trends
- Digital transformation initiatives, if any, by company

Anatomy of winners

What can be learned from the profiles of the world's most AI-forward SaaS companies about success with embedded AI? What are the key factors to embedding AI in SaaS, and how did the top 30 fare in addressing those key factors? What is the heritage of the top 30, and how do they position themselves in the market? What SaaS areas make the most sense for embedded AI, and do the top 30 compete against each other in those areas?

While this section will not answer all these questions thoroughly, it will provide insights into many of those questions to form some ideas about what is required to succeed in embedded AI SaaS.

Rating embedded AI DNA factors

As noted earlier, several factors can contribute to a company becoming AI-forward in SaaS. Looking at the following table, it is rare for a company to rank highly in all five categories. However, if there is one category that can most impact the shape of an AI-forward SaaS company, it is the rating one receives in the C-suite investments in AI.

Table 3: Key factors to determining AI-forward SaaS companies

	SaaS-focused	AI experience	Cloud-native	C-suite investments in AI	Focused product portfolio
Adobe	★★★★	★★★★	★★★★	★★★★	★★
Salesforce	★★★★	★★★★	★★★★	★★★	★★
SAP	★	★★★	★★	★★★	★★
AWS	★	★★★★	★★★★	★★★★	★★
Google Cloud	★	★★★★	★★★★	★★★★	★
Zoom	★★★★	★★	★★★★	★★	★★★★
Microsoft	★★	★★★★	★★★	★★★★	★
Cisco	★	★★	★★★	★★	★★★
SAS	★	★★★	★★	★★★	★★★★
IBM	★	★★★★	★★	★★★★	★
Oracle	★★	★★★	★★	★★	★★
Atlassian	★★★★	★★	★★★★	★★	★★★
Tencent	★★	★★★	★★★★	★★★	★★★
Box	★★★★	★	★★★★	★★	★★★★
Xero	★★★★	★	★★★★	★	★★★★
Service Now	★★★★	★	★★★★	★	★★★★
HubSpot	★★★★	★	★★★★	★	★★★★
Zendesk	★★★★	★★	★★★★	★★	★★★★
Go To	★★★★	★★	★★★★	★	★★★

Intuit	★★★★	★	★★★★	★★	★★★★
Shopify	★★★★	★	★★★★	★	★★★★
ADP	★★★★	★	★★★★	★	★★★
Dropbox	★★★★	★	★★★★	★	★★★★
Coupa	★★★★	★	★★★★	★	★★★★
Alibaba	★	★★★	★★★★	★★★	★
Zuroa	★★★★	★	★★★★	★	★★★★
Workday	★★★★	★	★★★★	★	★★★
DocuSign	★★★★	★★	★★★★	★★	★★★★
Software AG	★	★	★★	★	★★
Twilio	★★★	★★	★★★★	★	★★★

Source: Omdia

Understanding heritage and positioning

The heritage and positioning of the 30 most AI-forward SaaS companies provide insights into how clear or difficult the path to embedded AI can be. There are two spectrums to consider:

- Cloud spectrum: Transitioning to the cloud - Cloud-native
- Product focus spectrum: Generalist - Specialist

There are advantages for a SaaS company to be cloud-native for the cloud spectrum. Companies transitioning to a cloud face additional challenges that cloud-native companies do not. Customers might be less enthused because of the lack of a cloud-based track record. Also, while transitioning, a SaaS company's resources focus on digital transformation, leaving fewer resources for embedded AI.

The product focus spectrum does not necessarily translate into advantages or disadvantages specifically for embedding AI in SaaS. In general, companies with a broad product offering appeal to customers from a trust perspective—if a customer is happy with one product, they could be inclined to try other products from that vendor, regardless of whether the products are related. Specialists and companies that offer a narrower product offering are usually regarded as experts who are more knowledgeable about the specific issues their products address for customers. Specifically, for embedded AI SaaS initiatives, it is possible that a narrower product offering means the specialist SaaS company can focus its embedded AI efforts in a way that a generalist cannot.

The chart below shows where the top AI-forward SaaS companies sit on these two spectrums.

- 12 of the 20 are on the cloud-native end of the spectrum
- 14 of the 20 are more specialists than generalists

Most companies with considerable AI expertise – AWS, Google, Microsoft, and IBM—are more generalist in their complete product offerings. Companies evolving their businesses towards cloud services faces, such as IBM, SAS, Oracle, Tencent, SAP, and Cisco, face certain headwinds in delivering more AI-forward SaaS that more cloud-native companies do not.

6. Figure 6: AI-forward SaaS companies, type clustering

Source: Omdia

What embedded AI metrics show about competition

The chart below shows the intersection between our two metrics: embedded AI SaaS Revenues and the percentage of SaaS revenues that included embedded AI in 2021.

This chart is helpful for competitors to understand their strengths and weaknesses to each other in embedded AI. Two key areas represent significant competition: CRM and hyperscalers/large technology companies.

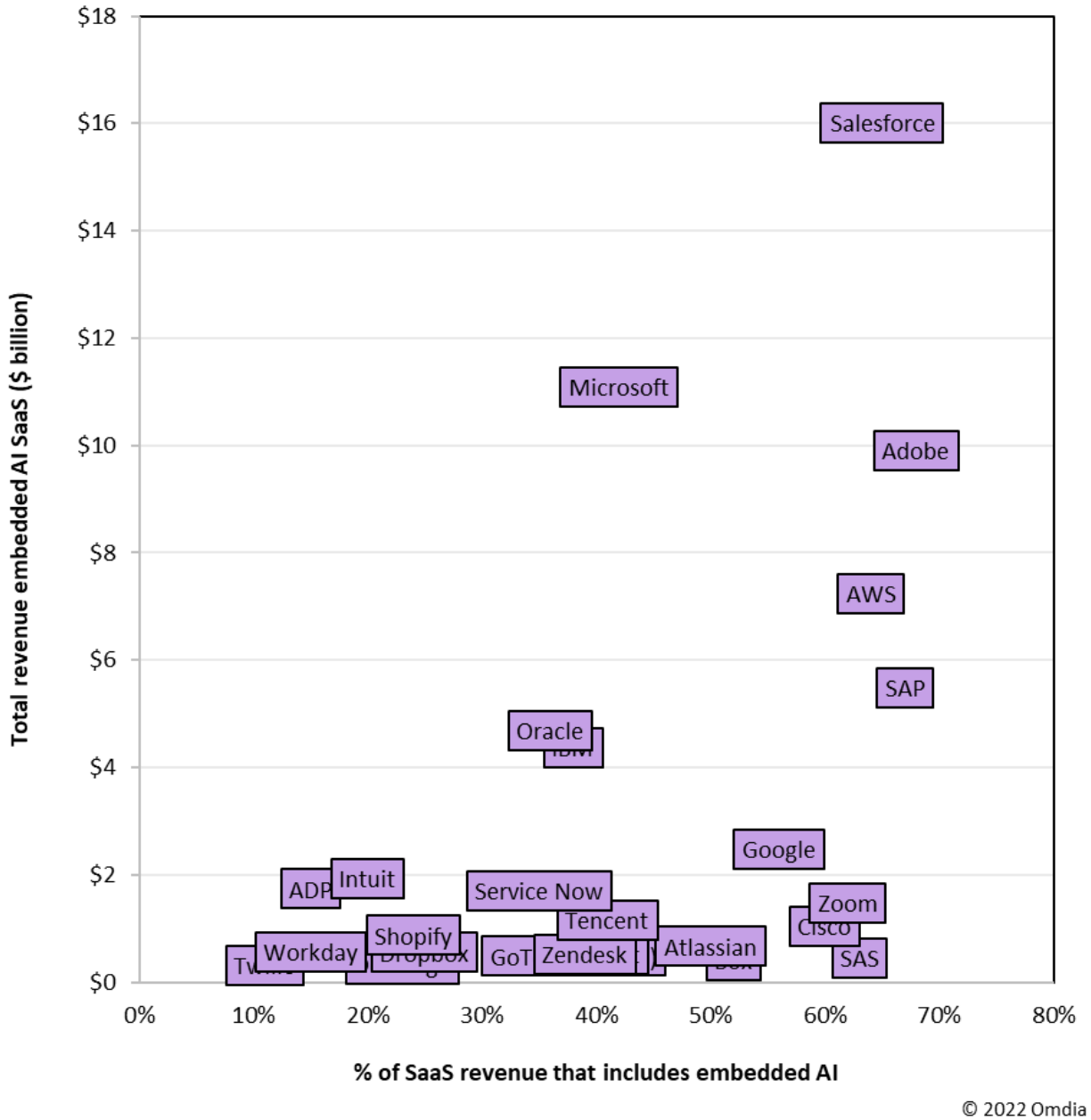
CRM

In CRM, Salesforce shows significant advantages in revenue against competitors SAP, Oracle, Microsoft, HubSpot, and Zendesk. Salesforce also shows a significant advantage in % of SaaS, which included embedded AI compared to Oracle and Microsoft, but no real advantage versus SAP.

Hyperscalers/large technology companies

Comparing hyperscalers/large technology companies in the 2021 rankings, AWS shows significant advantages in % of SaaS revenue that included embedded AI over its competitors—Google, Microsoft, and IBM—but only holds a total revenue advantage over Google and IBM. Omdia predicts this competitive sector will rapidly shift over the next few years, with AWS and IBM advancing their embedded AI SaaS and Microsoft slightly less so. Meanwhile, Google's ambition in embedded AI SaaS will remain relatively cool.

7. Figure 7: AI-forward SaaS companies' total revenue/% view



Source: Omdia

Key players

The following are profiles of selected ranked companies based on our projected 2023 rankings.

Adobe

Overall rank - 2021: no. 1 2023: no. 1

% of SaaS revenue that includes embedded AI rank - 2021: no. 1 2023: no. 1

AI revenue rank - 2021: no. 3 2023: no. 3

The most AI-forward SaaS company in the world today (year-end 2021) and tomorrow (the Omdia forecast for 2023) is Adobe. Its AI success has a lot to do with its core business philosophy and culture. Five essential principles/practices Adobe abides by making a great roadmap to success for SaaS companies seeking to leverage AI:

- **Adobe continually disrupts itself.** Adobe leadership is future-forward and has developed and nurtured a culture, which encourages and rewards future thinking. There is no other way Adobe would have identified AI's unproven potential to improve its business seven to eight years ago when AI began to emerge from its most recent AI winter.
- **Listening carefully to customer needs.** Doing so drives innovation in the only realm that counts in businesses—solving your customer's problems.
- **Adobe looks at AI from a business-first perspective** and asks: Do we have a business challenge that AI can best solve?
- **Commitment to and patience with AI from the C-suite.** Adobe leadership committed investments to AI more than seven years ago. Adobe leadership has shown patience—understanding ROI would take time and that there would be missteps and path corrections.
- **Business units, not technologists or data scientists, are the champions for embedding AI.** This reflects the "what is the business problem, then seek the best way to solve it" approach. Too many companies fall in love with technology and research and development for technology, research, and development's sake.

Omdia has tracked Adobe's AI journey for several years. Take, for instance, Adobe's progress noted in this Tractica-Omdia blog post from November 2019 entitled, *AI Use Cases in Advertising, Marketing Fit Adobe:*

In late 2016, Adobe announced that Sensei, the company's AI technology, would begin to power and assist in some of their Digital Media applications, such as Photoshop and Illustrator. While that was only three short years ago, in the dawning of the AI era, Sensei's role makes Adobe one of the pioneers of machine learning and deep learning-powered AI. What started in 2016 as narrow AI technology aimed at narrow use cases has become an AI engine that, according to the Adobe Group Product Marketing Manager for Sensei, now powers dozens of different features across Adobe. "We don't tag any of the features with Sensei, it's just the engine behind Adobe products," said the spokesperson.

Whether the technology is effective or not, the concept is advanced AI thinking. There are very few companies today who have built or are building an AI core to run their business. Only a few come to mind such as Google, Amazon, Microsoft, Baidu, Alibaba, Tencent, IFlytek, perhaps Apple and a few others.

Why would such a strategy at such an early stage make sense for a company like Adobe? In Tractica's opinion, it comes down to this – building a core of AI technologies positions Adobe to provide underserved or unserved challenges in Adobe's core customer market – the advertising industry… All told, that would add up to AI use case market opportunity in the advertising industry of $26.2 billion. Adobe is a dominant player as a provider of digital tools for creative professionals, but they face significant competition on the business side of advertising and marketing and CX from the likes of Salesforce, Oracle, SAP and others. Can Adobe leverage Sensei to address these use cases and gain a competitive advantage in digital marketing and CX? The next 2-3 years could prove to be significant battleground in the space.

The principles/practices Adobe abides by in becoming the most AI-forward SaaS company surfaced time and again when Omdia spoke with Ali Bohra, Director of Product Marketing, Adobe Experience Cloud for the Digital Experience Business Unit. Adobe segments its business into three areas: Creative Cloud, Document Cloud, and Digital Experience Cloud.

Q: In thinking about going forward, what is the Adobe vision for continuing to embed AI in Adobe DX?

Bohra: When we think about AI for DX, we aren't looking at building general-purpose AI. Our focus is on purpose-built AI, which enable people to do their jobs. Over the past few years, customers have been telling us they don't know they are using AI. That is our intention, that's part of the magic we create.

Q: To get to where Adobe is now with AI, what was the journey like? Bumpy? Smooth? What lessons did Adobe learn?

Bohra: Five years ago, the way we leveraged AI was very siloed. We have grown as a company because we are able to adapt and take a broader approach. It's the same philosophy we applied to how we absorbed companies and became better through acquisitions.

An example of that is how we used AI in propensity modeling (statistical scorecard used to predict the behavior of customers or prospect bases). We had the use case in different teams, created by different teams, so the results were different and that created distrust. Silos. So we learned to build AI that fits vertically into areas, but also horizontally as shared service across our Adobe Experience Cloud applications. This was a re-architecting.

Another learning was that we tended to bring in a technology and then look to connect the pipes—connectors to the business. If AI was part of that team, those experts would continue to work on that, but we also had a team that worked across departments on AI—data science, product management, etc. We were thinking about migrating towards an intelligence hub within Adobe.

Q: Do you mean, like an AI center or excellence?

Bohra: Yes, something like that, but we learned that was a mistake. In that approach you have this desire to build something unique, but it might not be applicable to a customer. Our approach is and has always been everything is driven by application and customer need first. We have embedded AI into services that already existed, and we made them better with AI.

Q: So, there are different approaches to whether AI makes sense or not by different Cloud areas and product teams. No centralized AI resources.

Bohra: Right. And the reason for that is we are each thinking about a very different set of users.

Q: Talk about Adobe leadership and AI.

Bohra: It starts all the way at the top. Sensei is a CEO initiative—the concept and the investment. That investment in core set of services was a risk, the biggest investment Adobe has ever made in any technology. It's really something because here we are seven to eight years into AI commitments and the ROI wasn't visible until recently. That's very different now, we have been seeing the fruits of that labor exponentially in the last 12 months. In thinking about the existing products we had, they have evolved and been fundamentally changed by AI. Examples that come to mind of that are Adobe Campaign to Adobe Journey Optimizer.

Adobe has done a great job of continually disrupting itself. We do lots of realignments. It's company strategy, which keeps you ahead of the curve. That circles back to the fact that Adobe lets the customer drive the new ideas. And throughout our ongoing conversations, we heard a ton about the lack of AI experience. Our customers are not technical, they are marketing people. These customers have data science teams, but do they work with the marketing people? No, they are wrestling with data management. When our customers use Adobe, it frees the customer's data science teams to work on high-value AI projects outside of Adobe functionality.

Where they go from here

Bohra's comment about Adobe "continually disrupting itself" might be the key to embedded AI SaaS. The practice and philosophy is continual. In March at Adobe Summit the highlight was the annual "Sneaks" session, which dates back to 2010. It's when Adobe shares innovation ideas that are typically in concept stages or beta. Seven innovations were presented. Each was tied to a specific product with a specific improvement. All seven included embedded AI.

Salesforce

Overall rank - 2021: no. 2 2023: no. 2

% of SaaS revenue that includes embedded AI rank - 2021: no. 3 2023: no. 3

AI revenue rank - 2021: no. 1 2023: no. 1

Perhaps it is no surprise that the world's largest SaaS company is also one of the world's most AI-forward SaaS companies. In and of itself, that fact speaks volumes to the positive trajectory of Embedded AI SaaS as one of the key ways enterprises will operationalize AI. As Salesforce goes, many other SaaS players will follow.

AI permeates nearly every corner of Salesforce's expansive suite of products and solutions. According to a company spokesperson, embedded AI features (Einstein) are live in roughly 50 different areas. Sales Cloud Einstein enables better lead prioritization and predictive forecasting and features predictive routing, reply to recommendations, and the next best actions. Meanwhile, Marketing Cloud Einstein enables targeted and personalized communications, and Commerce Cloud Einstein provides product recommendations. Numerous Einstein features work with Salesforce's vertical functions like Financial Services and Salesforce.org (a customized version of Salesforce for nonprofits). None of this happened overnight or by luck. The key growth moment for Salesforce AI started in 2017, with the goal to embed AI capabilities into Salesforce's solutions and platforms.

Salesforce built global, anonymized models to offer customers an option, which led the company to build transformer models (a transformer is a deep learning model). Transformers do not train on any proprietary models or data; instead, they leverage vast portions of the entire web. It is an excellent example of how the company learned, adapted, and improved how to use AI in real time, over time.

Salesforce has also adapted AI innovation to practical Salesforce use cases, including a commonsense use for GPT-3. One of the technical wonders of the past two years, the language model GPT-3 trains on a nearly incomprehensible 175 billion parameters of public data to enable users to generate text automatically. Some critics, including Omdia (see the "Analyst Commentary: OpenAI's GPT-3 – Natural Language breakthrough or hype?"), have questioned the practicality of such a tool, citing a lack of compelling use cases coupled with significant compute time (which equals considerable expense).

GPT-3's promise of natural language generation did not make sense for Salesforce as a standalone use case, but the company found it could leverage it narrowly. It began to use it to automate subject line creation within Market Cloud and to develop variations of product descriptions, which customers can then test. In both cases, the GPT-3 capability is simply a component of some type of larger solution or deliverable; its capability is not a use case on its own.

If Salesforce's willingness and ability to adapt to AI is maturing sign number one, there have been other signs of significance:

- AI is one of top management's priorities.
- Salesforce teams are talking less and less about the ins and outs of AI and more about the value it brings in meeting KPIs.

When asked if it thought using embedded AI opened new business opportunities for Salesforce or was AI more of making core Salesforce products better, the company said embedded AI at Salesforce is literally changing how work is done for its customers.

SAP

Overall rank - 2021: no. 3 2023: no. 3

% of SaaS revenue that includes embedded AI rank - 2021: no. 2 2023: no. 2

AI revenue rank - 2021: no. 5 2023: no. 6

One of the world's leaders in enterprise application software, SAP has been steadily transitioning its business to the cloud. In 2021, 34% of SAP's total revenue came from cloud offerings, a growth rate of 17% YoY, 2020–21.

SAP was an early investor in AI technology. Like some other companies that developed significant AI IP, SAP initially tried to "sell" AI as PaaS tools and other solutions. However, during recent informal discussions with company spokespeople, SAP made it clear it does not "sell" AI anymore, "we are busy embedding AI into what we do," said a source.

SAP has been very strategic about where it is embedding AI. It leveraged it in some of its highest revenue-generating SaaS solutions, including the SAP Fieldglass, SAP Concur, and SAP S/4 HANA Cloud, which collectively represented an estimated 62% of SAP cloud revenue in 2021. Other SAP SaaS solutions that feature AI include the SAP Customer Experience and SAP SuccessFactors.

AWS

Overall rank - 2021: no. 4 2023: no. 4

% of SaaS revenue that includes embedded AI rank - 2021: no. 4 2023: no. 4

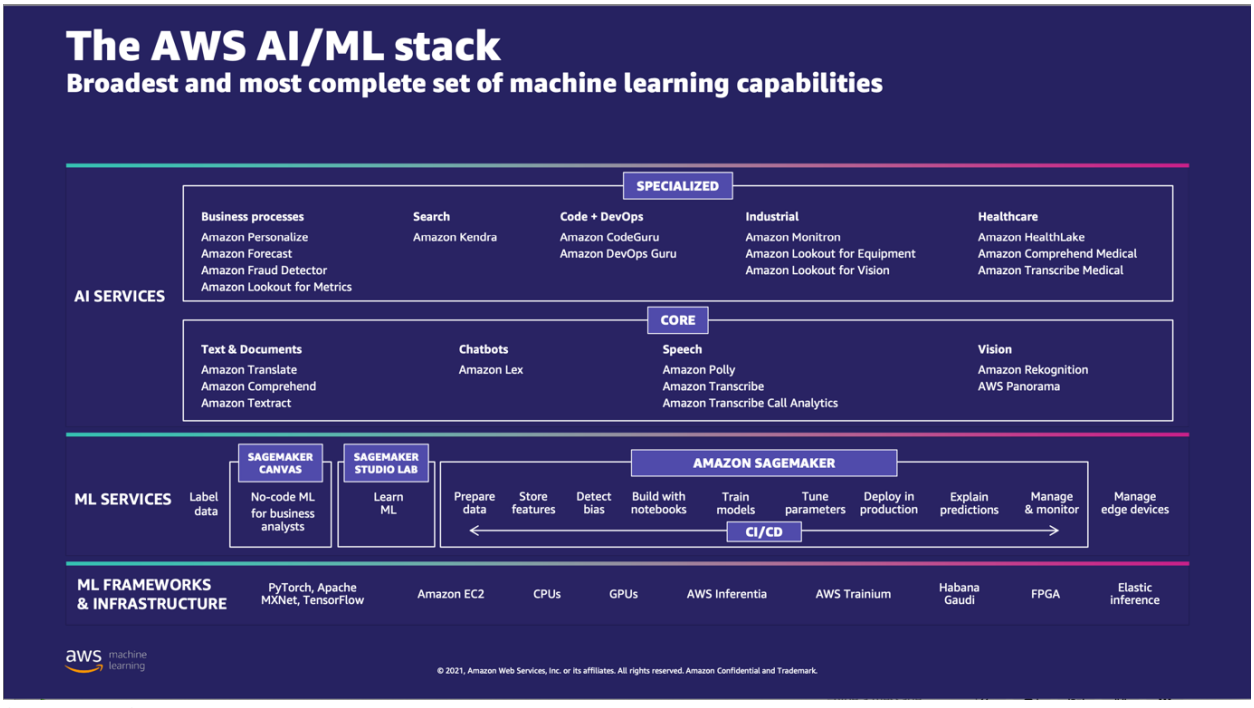
AI revenue rank - 2021: no. 4 2023: no. 4

Cloud king AWS provides an interesting case study of the enterprise market shift to SaaS and the rise of embedded AI SaaS. Key elements to the story are Amazon's long history of seeking scalability, leveraging IP, and its ingrained habit of listening to customers. One of the reasons AWS came about was that Amazon decided to build its cloud infrastructure to serve Amazon's core e-commerce business better. Consequently, it heard from customers who said they were looking for cloud services options and asked Amazon if it would consider working with them. Since Amazon's focus (and first of the well-known Leadership Principles) is Customer Obsession, it worked with these early customers and, in 2006, offered its first customer-facing cloud service, Elastic Cloud Compute service, or EC2.

Similarly, Amazon built PaaS solutions and AI capabilities to support core Amazon products. The same thing happened—Amazon and AWS customers asked if Amazon would consider working with them and offering those capabilities to the broader market. In this manner, the AWS stack has evolved—core cloud networking and infrastructure as the base, tools, platforms, and engines for pro developers and technical users (PaaS) in the middle. Most recently, SaaS solutions aimed more at non-technical business users on top.

This philosophy is mirrored in AWS' AI stack as well—ML frameworks and infrastructure, open-source resources such as PyTorch, TensorFlow, and Amazon elements such as Amazon EC2 and Amazon S3 storage are the base. ML services like Amazon Sagemaker represent an AI engine layer. Core PaaS services—such as Amazon Lex, Amazon Textract, Amazon Polly, and Amazon Rekognition—make up more directed PaaS services for pro developers. Relatively new and burgeoning SaaS services like Amazon Forecast, Amazon Comprehend Medical, and Amazon Personalize represent the top layer.

8. Figure 8: AWS AI hierarchy



Source: AWS

AWS has mapped its current AI-embedded SaaS capabilities like this:

- Enhance customer experience - Intelligent contact center, chatbots, and virtual assistants, personalization, and content moderation
- Better and faster decision-making - Intelligent search, forecasting, anomaly detection, content moderation, and fraud prevention
- Improve business operations – Intelligent document processing, demand planning, predictive maintenance, quality control and visual inspection, and AI for DevOps

Note that these are not necessarily the names of specific AWS AI services but rather the description of their AI solutions and what roles they play.

With this background, how does AWS fit into the embedded AI SaaS picture, and where are they headed? Omdia spoke with Albert Esplugas, Head of AI Solutions Marketing for AWS, about the company's philosophy around embedded AI SaaS.

Q: In thinking about going forward, what is AWS's vision for continuing to embed AI in AWS SaaS?

Esplugas: *From a horizontal use case point of view, we are focusing our efforts on managed AI services that address the following areas: enhancing customer experience, better and faster decision-making, and improving business operations. But we are also thinking about how some these services will evolve to address the needs of specific industries. For example, Amazon Personalize (recommendations) is a horizontally focused service, but we are developing some vertical-specific sub-use cases for media/ entertainment and retail, so we will continue to consider vertical-specific services where it makes sense and where we see an opportunity. In addition to retail and media/entertainment, other verticals we are focused on include Healthcare & life sciences, Industrial & manufacturing, and financial services.*

Whether it's horizontal use cases or vertical slices of those horizontal use cases, we will continue to be driven in our pursuits of AI services through the lens of what our customers are asking about-- what problems they are trying to solve. Customer needs are the priority, but we are listening to what our partners are saying about very specific use cases as well.

AI services are like building blocks. Some of them offer a complete solution to a particular use case, while other are combined to address more complex use cases. For example, we offer a service for Intelligent Document Processing. It is a solution made up of three AI Services (Amazon Comprehend, Amazon Textract, Amazon Augmented AI). A technical buyer audience will value the flexibility of the services, while a business buyer audience will be more interested in the end-to-end solution. In other examples, such as Amazon Personalize or Amazon Forecast, the service is very specific and tightly packaged to address a particular use case like personalization or forecasting. This overall packaging approach, where we can bundle certain services into an offering, gives us flexibility we need today. Over time, we will develop more and more specific services that will be used to solve more use cases.

Omdia's view of AWS embedded AI SaaS

While they have deep experience and capabilities in AI, AWS is admittedly new to most forms of SaaS. (Note: the exception is security. AWS is a formidable, established provider of SaaS security services. Omdia estimates security represented more than 70% of AWS SaaS revenues in 2021.)

AWS's AI services, within their stated areas of focus (see earlier services for enhanced customer experience, better and faster decision-making, and improved business operations), generally line up to address market gaps. Most do not necessarily duplicate legacy solutions from established ERP and CRM vendors.

The challenges for AWS in embedded AI SaaS come down to this—can it definitively draw the line between PaaS tools built for pro developers, technical users, and true SaaS solutions designed for non-technical business users, which might require more customization and ongoing customer support?

IBM

Overall rank - 2021: no. 10 2023: no. 5

% of SaaS revenue that includes embedded AI rank - 2021: no. 14 2023: no. 8

AI revenue rank - 2021: no. 7 2023: no. 5

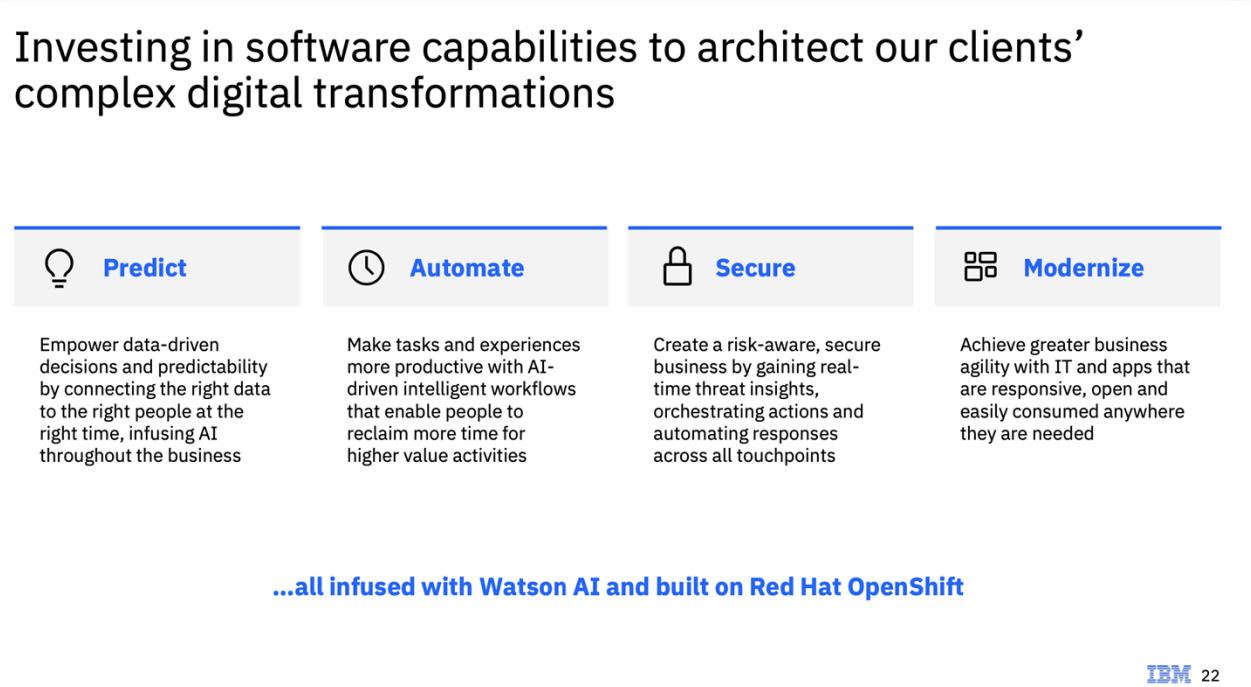
In 2020, IBM began a massive companywide pivot to focus on hybrid cloud and AI. A worldwide leader in AI technology and associated IP, IBM's challenge of ranking even higher as an AI-forward SaaS company is not from a lack of AI expertise or AI IP. Instead, it is tied directly to how well it shifts significant portions of its business to SaaS. While SaaS is vital to IBM, PaaS models and the concept of hybrid cloud, which IBM defines as "public cloud services, private cloud services and on-premise infrastructure that provides orchestration, management and application portability across all three," are also important. This means that IBM may not necessarily plan to be a SaaS-first, SaaS-dominant company.

Regardless, IBM grades out in the top-tier of Omdia's AI-SaaS rankings. As its planned journey into hybrid cloud and AI unfolds, it will likely climb higher in future Omdia rankings. Its overall transformation is formidable. According to IBM public documents, cloud revenues represented 29.7% of total IBM revenues in 2019; 31.8% in 2020. Omdia estimates SaaS revenues represented roughly 11–15% of total IBM revenues in 2020; that percentage is likely to climb steadily over the next several years.

IBM's AI-embedded SaaS solutions fall across five of IBM's six Cloud Pak segments: Business Automation, Network Automation, Data, Security, and Integration, with most AI-embedded SaaS revenues coming from Security, Business Automation, and Integration. Omdia estimates that approximately 25% of IBM's 2020 AI-embedded SaaS revenues came from its Security products.

IBM did not provide revenue guidance for this report. However, the company did give its view on the evolving market and embedding AI in more IBM software. In thinking about IBM's vision for continuing to embed AI in IBM SaaS solutions, Seth Dobrin, Global Chief AI Officer, recently told Omdia, "Our goal is to embed 100% of IBM SaaS with AI. AI will be continuously delivered across the four key horizontal outcomes our software products are focused on, the ability to predict, to automate, to secure, and to modernize functions, system and processes across the enterprise."

9. Figure 9: IBM software vision, AI's role



Source: IBM Investor Briefing, 2021

While most IBM SaaS is designed for non-technical users, IBM is improving how AI lifecycle issues are handled with increased automation. "Watson Core provides a consistent set of AI capabilities internally to IBM; Watson Core Trust engines ensure that our AI enabled products minimize bias where appropriate and provide explainability where appropriate. IBM SaaS," said Dobrin, "so the better we can automate how these SaaS solutions operate, the better the resulting software does its job. For example, for Watson Core, machine learning automatically updates libraries so the SaaS product teams using these capabilities don't have to update them – we have a single set of deployment models, which makes for better governance. In Watson Core Trust, we have systems that automatically monitor, detect and correct drift (drift refers to the variance in model accuracy over time)."

Dobrin said that since there is a tight alignment of AI to business outcomes because of the pivot to hybrid cloud and AI, new yet pragmatic opportunities are blooming for AI within IBM SaaS. This includes the automation of AI governance and intelligent virtual agents customer interfaces across all IBM Cloud Paks.

Microsoft

Overall rank - 2021: no. 7 2023: no. 6

% of SaaS revenue that includes embedded AI rank - 2021: no. 12 2023: no. 10

AI revenue rank - 2021: no. 2 2023: no. 2

By their nature, hyperscalers have very diversified businesses; Microsoft is an acknowledged leader in enterprise software solutions thanks to its Office 365 services. Omdia estimates that SaaS solutions currently make up approximately 16% of Microsoft's total revenues (2021).

Microsoft's AI pedigree is nearly peerless like its contemporaries at Google, IBM, and AWS. Yet, through 2021, Omdia estimates the percentage of Microsoft SaaS revenue that includes embedded AI is roughly 42%. A significant portion of that revenue (just more than 19%) comes from cybersecurity SaaS.

The list of SaaS products where Microsoft will quickly accelerate embedding AI includes Office Commercial (Office 365 including Skype for business), Office Consumer (including Skype for non-business use), LinkedIn, and the Dynamics business solutions (Dynamics 365, which include the formidable Power Apps platform). With Microsoft's continued focus on SaaS, Omdia expects Microsoft to be challenged as one of the top five most AI-forward SaaS companies by 2024.

Zoom

Overall rank - 2021: no. 6 2023: no. 7

% of SaaS revenue that includes embedded AI rank - 2021: no. 6 2023: no. 6

AI revenue rank - 2021: no. 12 2023: no. 11

Zoom has certainly benefitted by being the right solution at the right time during recent COVID-19 times. The company is also a great example of what a native cloud-based, 100% SaaS model can accomplish with a use case and value proposition that takes advantage of market opportunities.

The 10-year-old company has embedded AI into a broad range of its solutions—computer vision powers the virtual background feature, which blurs your background or allows you to add one or applies filters to smooth skin or reduce blemishes. AI is used to power video compression, which dynamically shifts resolution to the most critical elements of a frame, reducing the bandwidth load and, consequently, the bandwidth cost to the parties that pay for it. Deep learning is leveraged to handle noise suppression, speaker recognition, and other audio issues. Natural language processing (NLP) technologies—such as speech to text, translation, and sentiment analysis—enable live transcription. With a focused market and an agile approach to new generation collaboration, Zoom is positioned to remain one of the top AI-forward SaaS companies.

Google Cloud

Overall rank - 2021: no. 5 2023: no. 8

% of SaaS revenue that includes embedded AI rank - 2021: no. 8 2023: no. 9

AI revenue rank - 2021: no. 8 2023: no. 9

Given its widely acknowledged leadership in AI, it might be a little surprising Google does not grade higher in Omdia's rankings for AI-forward SaaS companies. The main factor impacting Google Cloud's ranking is that it has not embraced SaaS as thoroughly as some of its peers, such as AWS and Microsoft. Omdia estimates that Google Cloud SaaS revenues represent between 20% and 25% of Google Cloud revenues in 2020 and 2021. While Google Cloud revenues will likely rise aggressively over the next few years, Google Cloud SaaS revenues may not.

In Omdia's view, Google Cloud's primary SaaS focus is cybersecurity. Of the company's SaaS revenue that includes embedded AI in 2021, Omdia estimates that 40% of it is tied to its cybersecurity products. Analysis of Google Cloud's portfolio of 100+ products found most of their AI emphasis remains on PaaS products, such as DialogFlow, Vision AI, Cloud Translation, Text-to-Speech, and other tool-like products. In addition to cybersecurity products, other key SaaS offerings from Google include Workspace, Recommendations AI,

Contact Center AI, and various forms of Document AI (which address the significant AI use case Intelligent Document Processing).

Various solutions that would appear as SaaS are essentially packaged PaaS solutions. In looking at retail solutions, Google Cloud offers one called "Product Discovery Solutions," which seems to be SaaS. It uses Recommendations AI and Retail Search, but most other industry-specific solutions listed are PaaS tools such as Apigee API management.

In a February 19, 2020 article in Acceleration Economy, Google Cloud CEO Thomas Kurian explicitly said Google Cloud's software strategy is not to compete in SaaS with CRM, ERP, and other established enterprise applications. Instead, it is to help enterprises maximize outcomes for those solutions using Google Cloud tools.

Kurian: *"When you look at our industry-specific solutions, a lot of investment has already gone into business-process automation: ERP, supply chain, logistics, etc.*

We are not trying to replace those solutions; those business-process implementations take years, and there's a lot of cost associated with going to a customer and telling them 'Please rip out your supply chain.'

However, what we are doing is helping them, by using our data analytics and machine learning, extract data from these solutions and be much more intelligent in how these applications function."

One of Google's great strengths is the ability to change direction rapidly if a product or strategy does not seem to be working rapidly. So, there is the possibility Google Cloud may change its strategy regarding SaaS. Should it do so, the company has nearly peerless AI experience and IP it will leverage into SaaS, just as it has already done with its PaaS offerings.

Cisco

Overall rank - 2021: no. 8 2023: no. 9

% of SaaS revenue that includes embedded AI rank - 2021: no. 7 2023: no. 7

AI revenue rank - 2021: no. 14 2023: no. 16

As a percentage of Cisco's overall revenue, SaaS is a small component. Omdia estimates SaaS represented between 3% and 4% of total revenues for Cisco in its last FY (2021). Webex solutions lead its SaaS portfolio, which also includes security and customer experience solutions.

Cisco has invested in AI for several years across the company. In its SaaS offerings, it is most prevalent in Webex solutions.

With AI, our first Webex focus has been around collaboration with media – using it for noise cancellation, defining 'single speaker,' background noise removal and other features that improve Webex's effectiveness," said Jason Copeland, VP of Webex Developer Platform, but we are also using AI to improve media quality, introducing gesture recognition, deploying voice assistants, and using voice recognition in language translation. We have developed a social graph to tap insights about how you are working and interacting with other people, just to name some of how AI is embedded in Webex. AI is an enabling technology -- it's only useful when we embed it into what we do. Some of these things are very visible, like voice commands, but most of the AI we embed is not. 'The AI effect' is a reality in Webex – AI is embedded in the solution, but most people just see new or improved features, they don't think of it as AI, it's just Webex and they don't know how it works.

SAS

Overall rank - 2021: no. 9 2023: no. 10

% of SaaS revenue that includes embedded AI rank - 2021: no. 5 2023: no. 5

AI revenue rank - 2021: no. 22 2023: no. 24

SAS is the self-proclaimed leader in analytics. The company has indeed been applying analytics to business problems for decades. Based on the company's DNA so closely aligned with one of AI's primary strengths—analytics—it is no surprise that SAS announced a $1 billion investment in AI in 2019. At the same time, like many companies, SAS is transitioning to cloud-based services, so while its investment into AI is significant, it is logical that SAS's AI efforts are not solely focused on its SaaS offerings. In a May 2021 interview with WRAL, a SAS spokesperson said:

And, while we are in a cloud transition era, we are committed to our on-prem customers. In fact, 97% of our customers are still on premises right now, and we won't just leave them behind. So, while this may impact our growth short-term, our customers will succeed. We have a turn-key platform to help them in their cloud transition, and we are meeting them where they are.

We are confident that SAS is in a great position to take advantage of the current and future landscape to compete with the top players and to ultimately thrive.

Oracle

Overall rank - 2021: no. 11 2023: no. 11

% of SaaS revenue that includes embedded AI rank - 2021: no. 15 2023: no. 15

AI revenue rank - 2021: no. 6 2023: no. 7

Oracle has been significantly investing in AI for several years. The company has steadily embedded AI capabilities into some key product areas; its suite of products in ERP and CRM is a natural fit for AI. In Omdia's opinion, Oracle has the potential to be ranked in the top five or six in the Omdia composite list ranking. However, it will not occur until 2025 or 2026 for two primary reasons:

- Distributed business management likely means embedded AI initiatives will move at the pace business champions within units choose
- The challenge of Oracle's overall movement into cloud offerings

A statement from Oracle's 2021 annual report does an excellent job of pointing this out:

Our belief that our Oracle Cloud Software-as-a-Service and Infrastructure-as-a-Service (SaaS and IaaS, respectively, and collectively, Oracle Cloud Services) offerings are opportunities for us to expand our cloud and license business, ***and that we are in the early stages of what we expect will be a material migration of our existing Oracle customer base from on-premise applications and infrastructure products and services to the Oracle Cloud.***

This challenge of migrating Oracle business from on-premise to cloud could mean significant resources will be focused on this core concept, with fewer resources and investments available for AI initiatives within SaaS offering. However, this is a bit of a case of "splitting hairs" around the degree of Oracle's impact as an

AI-forward SaaS company—there is not much doubt it is and will be one of the top AI-forward SaaS companies.

Atlassian

Overall rank - 2021: no. 12 2023: no. 12

% of SaaS revenue that includes embedded AI rank - 2021: no. 10 2023: no. 12

AI revenue rank - 2021: no. 16 2023: no. 15

Project management and agile software development are Atlassian's specialties, thanks to its Jira software. More than half of its revenues come from SaaS, and the company is growing exponentially. Over the last few years, Atlassian has invested in AI capabilities to power predictive issue assignment, predictive triage, intelligent automation, and personalized search. In late 2020, the company announced an AI-powered smart search in its Confluence Cloud, Jira Software Cloud, Jira Service Desk Cloud, and smart predictions in Bitbucket Cloud. Since then, the "Smarts" functionality has been expanded. In January 2022, the company acquired Percept.AI, a virtual agent maker, to expand frontline support capabilities in Jira Service Management.

Tencent

Overall rank - 2021: no. 13 2023: no. 13

% of SaaS revenue that includes embedded AI rank - 2021: no. 13 2023: no. 14

AI revenue rank - 2021: no. 13 2023: no. 14

Famous for its consumer domination in messaging (Weixin) and mobile gaming primarily within China, Tencent is not recognized as a significant cloud provider offering enterprise SaaS. However, its FinTech and Business Services segment, which represents roughly one-third of total revenue, has grown by 30% YoY (3Q20–3Q21), the biggest gain for the company.

Tencent offers a range of SaaS products that leverage AI, including collaboration tools like:

- Tencent VooV Meeting and Tencent Cloud Conference
- Smart building service Tencent Cloud Weiling
- Video analysis with Instavue
- Language tutoring with iHearing, an out of the box e-commerce solution called Smart Retail Go China
- Video quality detection and enhancement
- Virtual assistants, to name a few

According to Tencent's 2020 annual report:

Tencent Meeting has become the largest standalone app for cloud conferencing in China. The recently released enterprise version of Tencent Meeting penetrated the energy, healthcare and education industries. We rolled out new conference room solutions, Tencent Meeting Rooms and Connector, which are compatible with customers' existing audiovisual equipment and facilitate high-quality interactive communication. WeCom, the enterprise version of Weixin, has become an integral communications tool for

remote workplaces, serving over 5.5 million enterprise customers, better connecting them internally and to over 400 million Weixin users.

Omdia believes Tencent will continue to invest aggressively in building AI into its expanding SaaS offerings.

Intuit

Overall rank - 2021: no. 20 2023: no. 14

% of SaaS revenue that includes embedded AI rank - 2021: no. 27 2023: no. 20

AI revenue rank - 2021: no. 9 2023: no. 8

Intuit companies include Credit Karma and Mailchimp (the acquisition was completed in November 2021), TurboTax, QuickBooks, and Mint. Intuit has been on a significant growth trajectory for the past three years, and it plans to leverage AI within its offerings. Omdia believes there is a significant opportunity for AI to be used for decision-making and predictions. Still, the caution here is that Intuit is early in its investment in AI, and it will take time for those investments to bear fruitfully. Intuit states in its 2021 annual report (year-end July 31, 2021) in its mission segment that "The rise of Artificial Intelligence (AI) is fundamentally reshaping our world — and Intuit is taking advantage of this technological revolution to find new ways to deliver on our mission. We are focused on capitalizing on this opportunity to improve prosperity globally and inspire our workforce, while investing in our company's reputation and durable growth in the future."

In some detail within the report, Intuit said it is prioritizing resources on two strategic AI initiatives companywide: speed to benefit (by minimizing manual inputs) and unlocking smart money decisions (through personal virtual financial assistants).

HubSpot

Overall rank - 2021: no. 17 2023: no. 17

% of SaaS revenue that includes embedded AI rank - 2021: no. 16 2023: no. 16

AI revenue rank - 2021: no. 20 2023: no. 20

HubSpot is a SaaS company focused on CRM solutions for mid-market B2B companies (up to 2,000 employees). It offers a range of software for marketing, sales, service, operations, and content management from a single platform, which enables integrated approaches.

HubSpot leverages AI across various HubSpot functions, described in detail under specific headings. Under "Data Cleanliness," HubSpot's mobile app uses AI to parse relevant information from business cards. AI is used to identify duplicate contacts, fix typos in the customer's database, import and map data correctly, record and transcribe calls, and automatically gather contact information from live chat sessions to update the database. The second category is "Content Optimization," which HubSpot leverages AI to deliver adaptive testing for webpages and powers suggestions/recommendations for improving search engine optimization (SEO) functionality.

ADP

Overall rank - 2021: no. 22 2023: no. 23

% of SaaS revenue that includes embedded AI rank - 2021: no. 28 2023: no. 28

AI revenue rank - 2021: no. 10 2023: no. 12

HR management giant ADP is in the early stages of its investment in AI; it will take some time for AI to impact most ADP solutions significantly. However, that is not to say the company has not already made progress, particularly around applying AI to analyze HR data and make recommendations around elements such as compensation, skills gaps, and candidate matching.

From its 2021 (year-end June 30) annual report:

… (ADP) DataCloud analyzes aggregated, anonymized and timely HCM and compensation data from more than 920,000 organizations across the country, powering solutions that provide clients with in-depth workforce and business insights that enable critical HR decisions. ADP DataCloud's Skills Graph, our proprietary data structure, is based on more than 30 million employee records, 50 million resumes and 5 million job postings across more than 20 industries and 500 geographic areas, and extracts, aligns and normalizes key information such as skills, job titles and levels, education and qualifications from non-structured data and infers missing skills and qualifications from context. Skills Graph powers ADP's Candidate Profile Relevancy tool to help score, assess and predict candidates who are the best fit for a job opening, as well as our new Organizational Benchmarking Dashboard which enables companies to decide how best to deploy their workers by comparing organizational metrics like headcount, labor costs and turnover against other similar businesses.

ADP's Model-Based Benchmarks… extend benchmarks to include compensation for up to 150 million workers. Model-Based Benchmarks are powered by a set of deep learning models that extract patterns and knowledge from millions of payroll records and job profiles to provide accurate information that reflects the reality of the position being shown. ADP's Pay Equity Storyboard combines analytics and benchmarking to help employers better understand potential pay gaps and provide them with real, up-to-date, aggregated and anonymized market data to understand how their compensation for a particular job compares to other similar employers.

Dropbox

Overall rank - 2021: no. 23 2023: no. 22

% of SaaS revenue that includes embedded AI rank - 2021: no. 24 2023: no. 24

AI revenue rank - 2021: no. 18 2023: no. 18

Relatively new, cloud-native SaaS companies like Dropbox leverage a competitive advantage over more mature companies in operationalizing AI because one of the core pillars of its existence is handling cloud-based data. This is most certainly true for Dropbox. According to its most recent annual report, "Machine learning further improves the user experience by enabling more intelligent search, better organization, and utility of information. This ongoing innovation broadens the value of our platform and deepens user engagement." An example of using AI to improve organization, Dropbox uses ML in its Doc Scanner functionality to automatically detect the document being scanned, extract the data in optimal form and clarity, and save it as a PDF or image file.

Appendix

Methodology

Analysis for this report came from primary research interviews conducted in February and March 2022 with key AI-forward SaaS companies and public financial documents.

Further reading

"Analyst Commentary: OpenAI's GPT-3 – Natural Language breakthrough or hype?" (August 2020)

"Google Launches New Era in Cloud with AI-Powered Industry Solutions" (retrieved April 5, 2022)

AI Adoption, North America – 2021 (November 2021)

AI Readiness Barometer – 3Q21 (November 2021)

AI Readiness Barometer – 3Q21 Pivot Data (November 2021)

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