

Battery 

# Battery Ventures

---

**STATE OF THE OPENCLOUD**

NOVEMBER 2024

# AI is driving the next wave of cloud growth

- 1 AI is catalyzing a new technology supercycle, with the potential to disrupt core cloud industry dynamics.
- 2 Infrastructure companies have been the early beneficiaries, laying the foundation to support new AI workloads.
- 3 Enterprises are moving from experimentation to production, but it's still early.
- 4 Public company software multiples have stabilized, and growth still matters.
- 5 The IPO backlog continues to grow; AI can't save everyone.
- 6 The opportunity has never been larger, with \$4T+ up for grabs as AI disrupts software, services and labor markets.



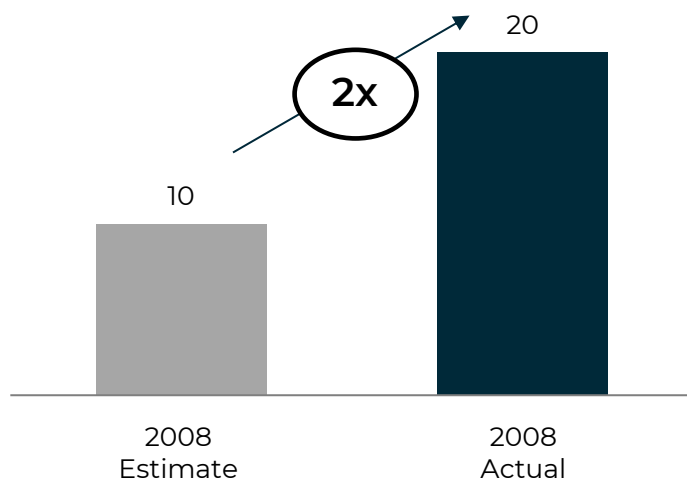
---

# Macro Update

# Just like mobile and cloud, AI is the next platform shift

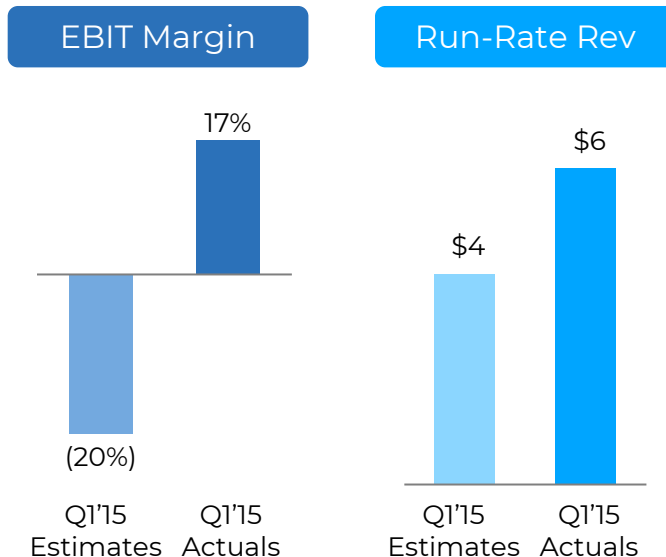
## Mobile

iPhone Units Shipped (M)



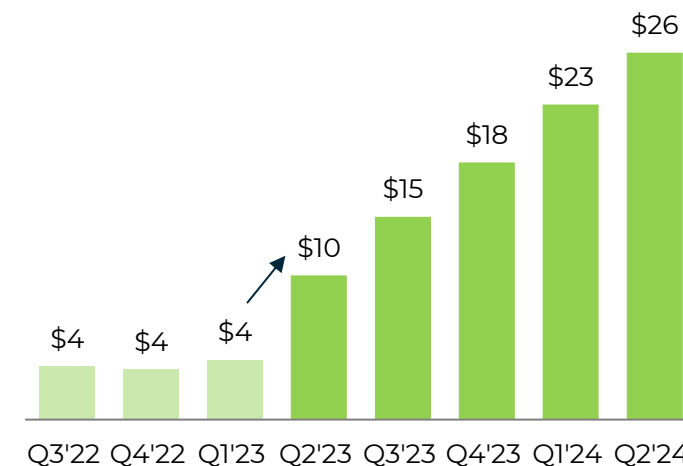
## Cloud

AWS EBIT Margin / Revenue (US\$ B)



## AI

Data Center Revenue (US\$ B)

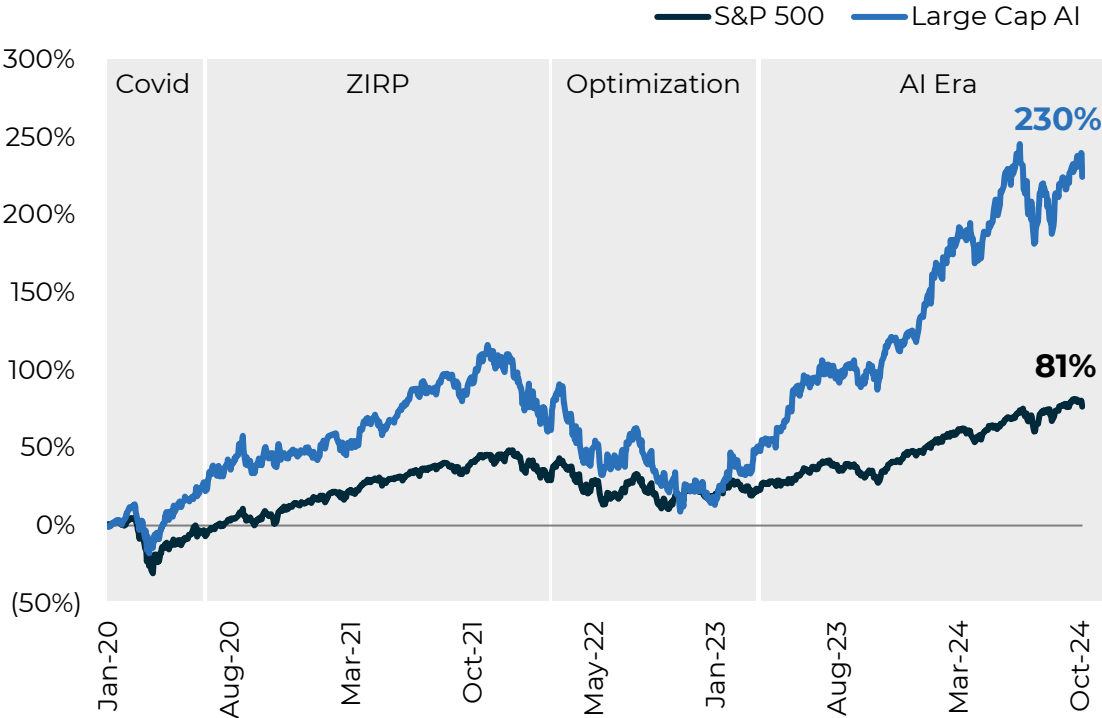


Infrastructure build-outs are a precursor to technology supercycles.

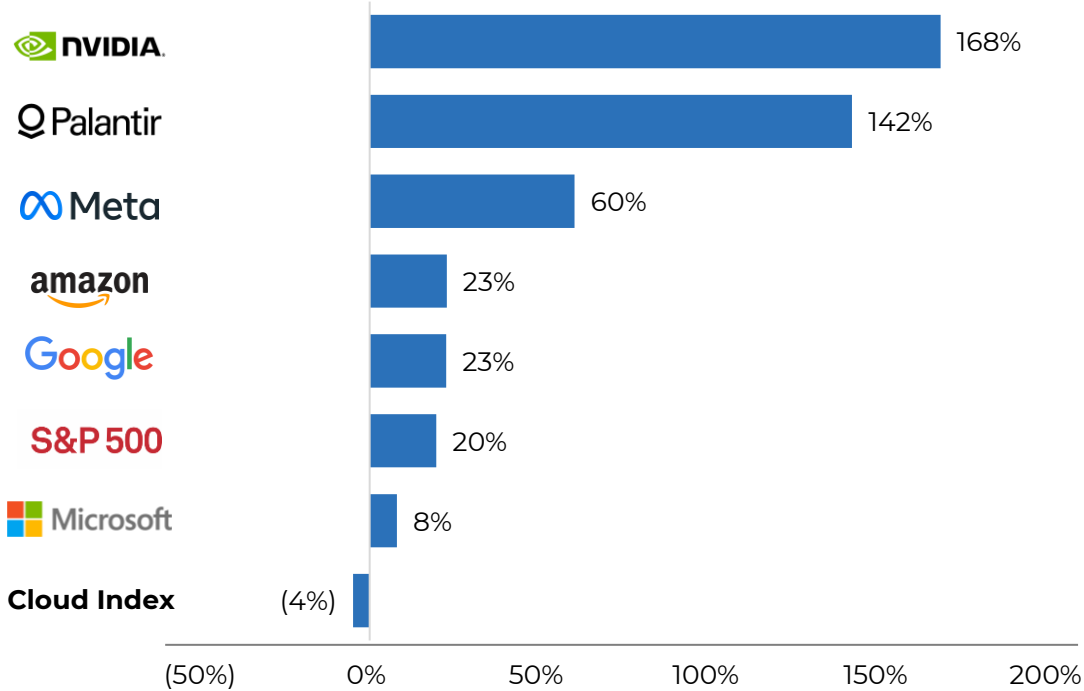
Source: Apple, Amazon and Nvidia earnings. Goldman Sachs Research.  
 Note: Apple data CY2008. AWS FYE 12/31 and estimates based on consensus figures. Nvidia FYE 1/31.

# Markets reached new highs, driven by large-cap AI

S&P 500 Performance vs. Large Cap AI



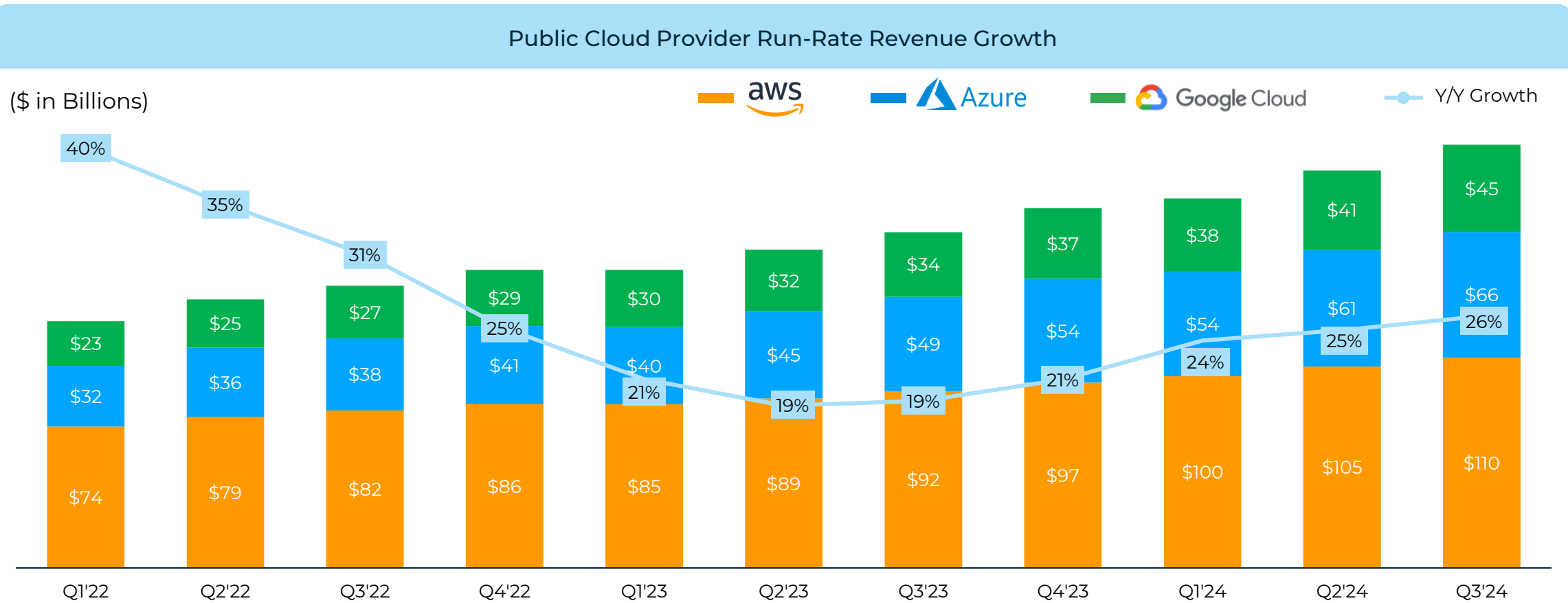
Returns are Concentrated (YTD 2024 Returns)



The S&P 500 is experiencing strong growth, driven by core infrastructure companies laying the foundation for an AI-powered future.

Source: CapIQ. Cloud Index represents EMCLOUD.  
 Note: Market data as of 10/31/24.

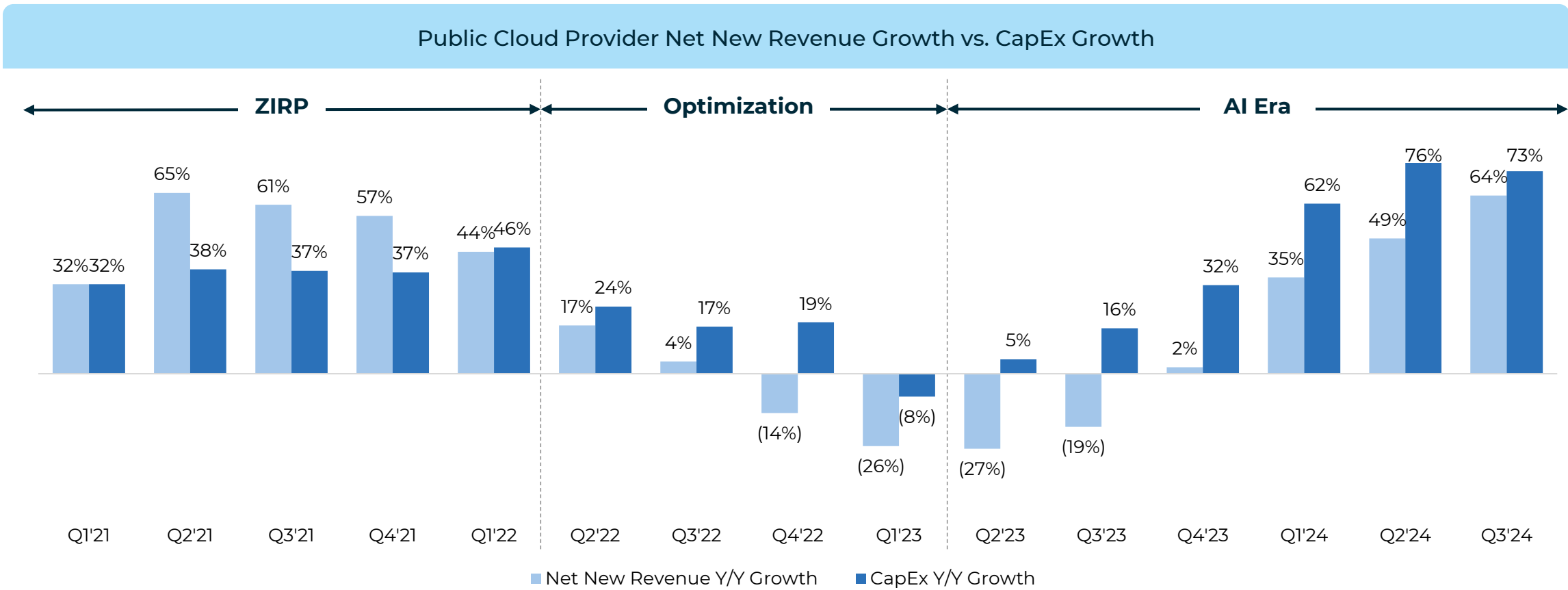
# AI has reshaped public cloud provider growth . . .



AI has unlocked new workloads for cloud providers, reaccelerating growth following optimization headwinds.

Source: Company filings and Goldman Sachs research.  
 Note: In Q3'24 MSFT restated Azure disclosures to better reflect consumption revenue and growth.

# ... and cloud providers continue to invest ahead of the curve.



Cloud providers are aggressively expanding AI infrastructure capacity to meet growing customer demand.

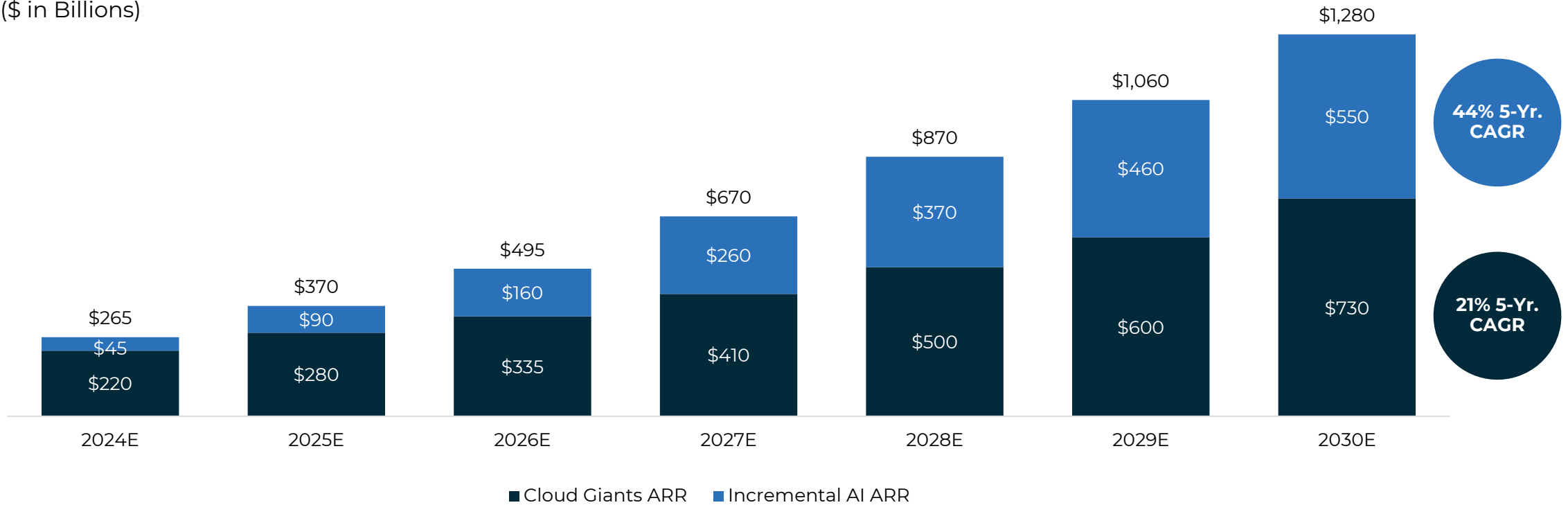
Source: Company filings and Goldman Sachs Research.  
 Note: Represents the sum of AWS, Azure and GCP.



# AI will fuel the next era of cloud consumption

## Public Cloud Provider AI Revenue Uplift

(\$ in Billions)

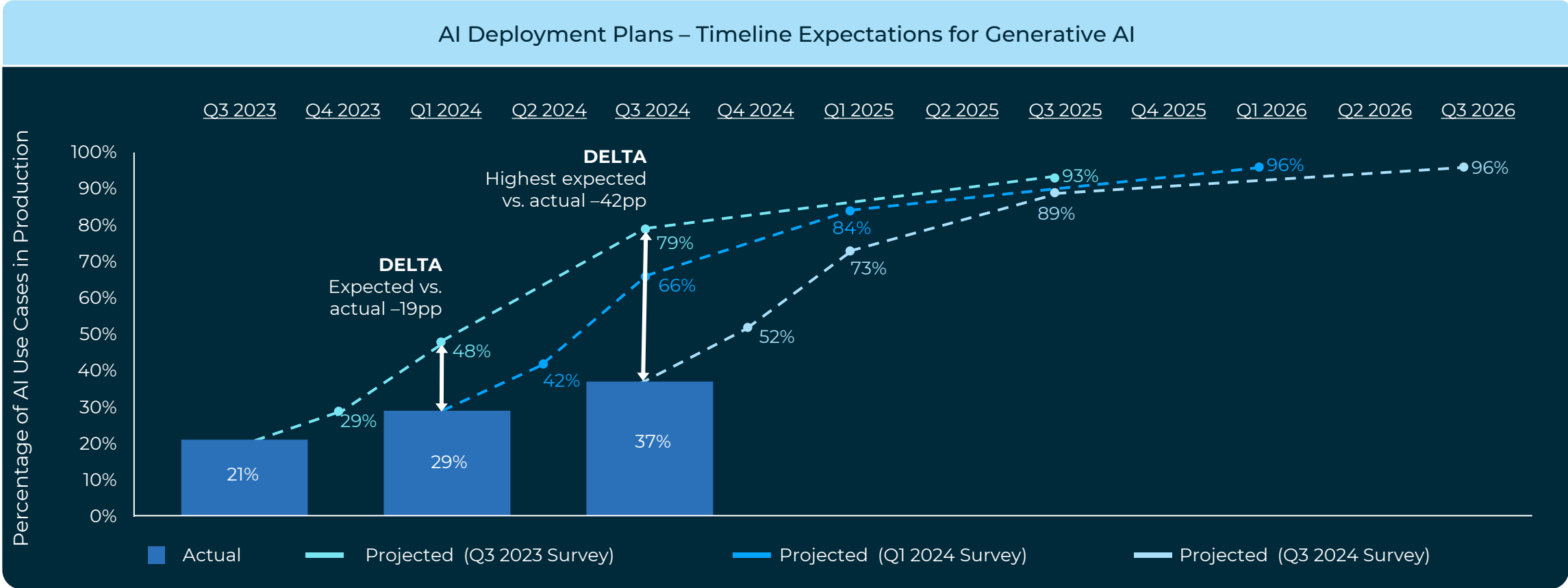


Cloud adoption is rapidly expanding with AI, and the stakes have never been higher. There is ~\$2T+ of incremental cumulative revenue that is up for grabs by 2030.

Source: Goldman Sachs research.  
 Note: Incremental AI ARR implied from Nvidia's data center revenue. Battery estimates and assumptions include \$25K GPU ASP, % of data center revenue attributable to Cloud Providers, Cost per GPU/Hr., and GPU utilization rate. Cloud Giants includes AWS, GCP, and Azure.



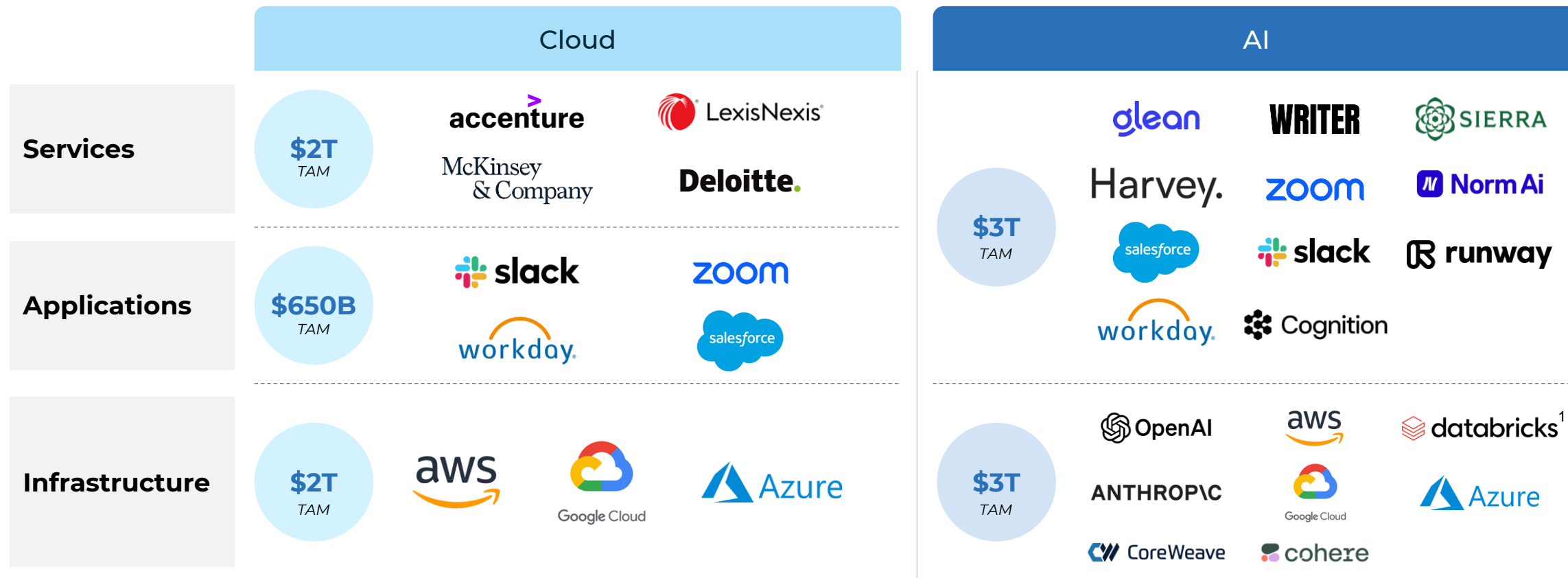
# There is a delineation between experimental vs. established budgets . . .



Excitement about AI is high, but most companies are still in the early stages of deployment, with fewer projects in production than expected.

Source: Battery Ventures 2024 State of Enterprise Tech Spending Survey.

# ... but maturing use cases are driving value creation for AI-native application and infrastructure companies.

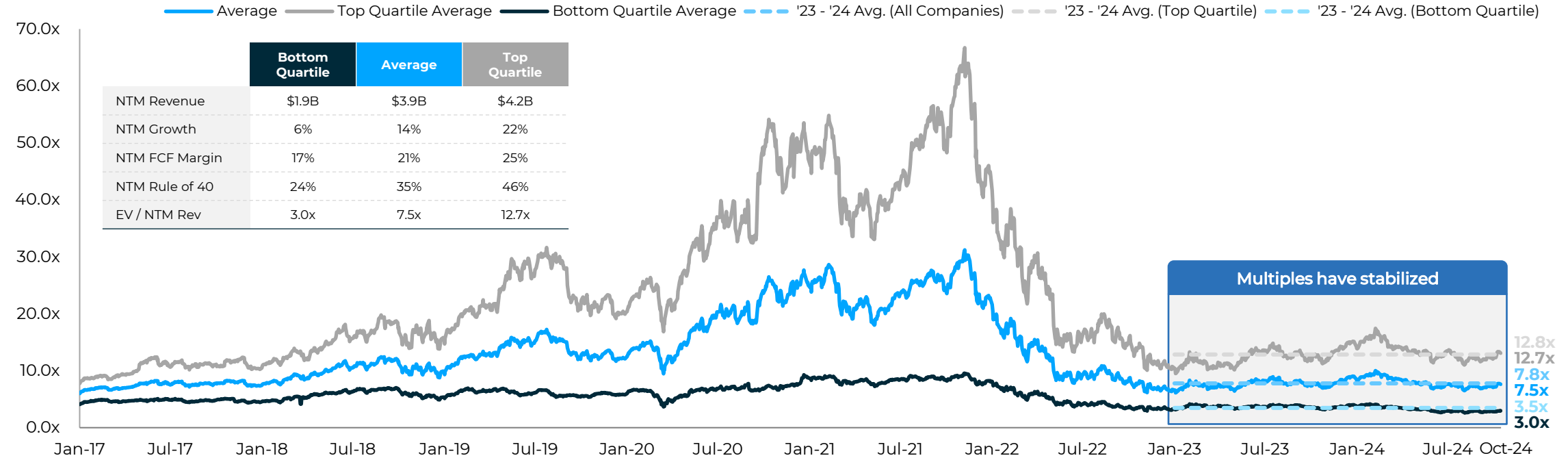


The potential value has never been higher as a new AI stack emerges, allowing software to penetrate a larger market opportunity than ever before.

Source: Gartner.  
 Note: TAM represents 2028 estimate.  
 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

# SaaS multiples have begun to stabilize . . .

## EV / NTM Revenue

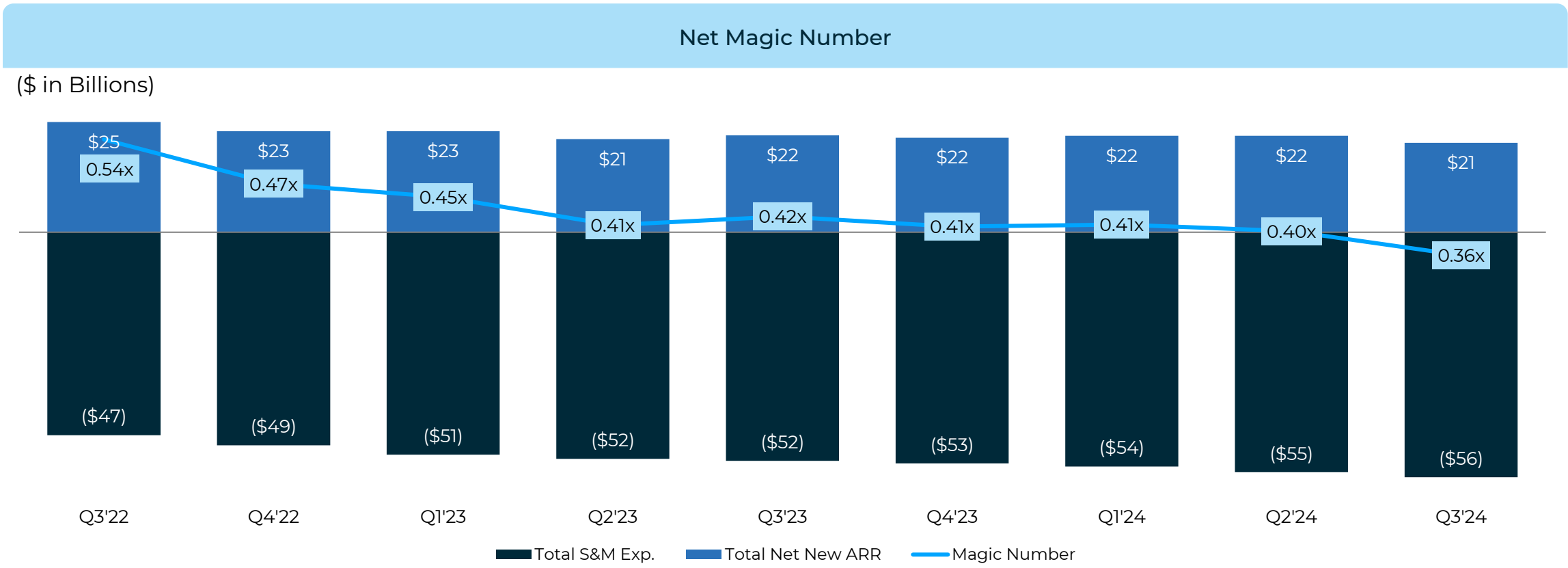


Rising interest rates and a pullback in software spending drove multiple contraction coming out of the ZIRP era, but multiples have since stabilized.

Source: CapIQ.  
Note: Market data as of 10/31/24.



# ... but software is still challenged, and a tough macro is the new normal.



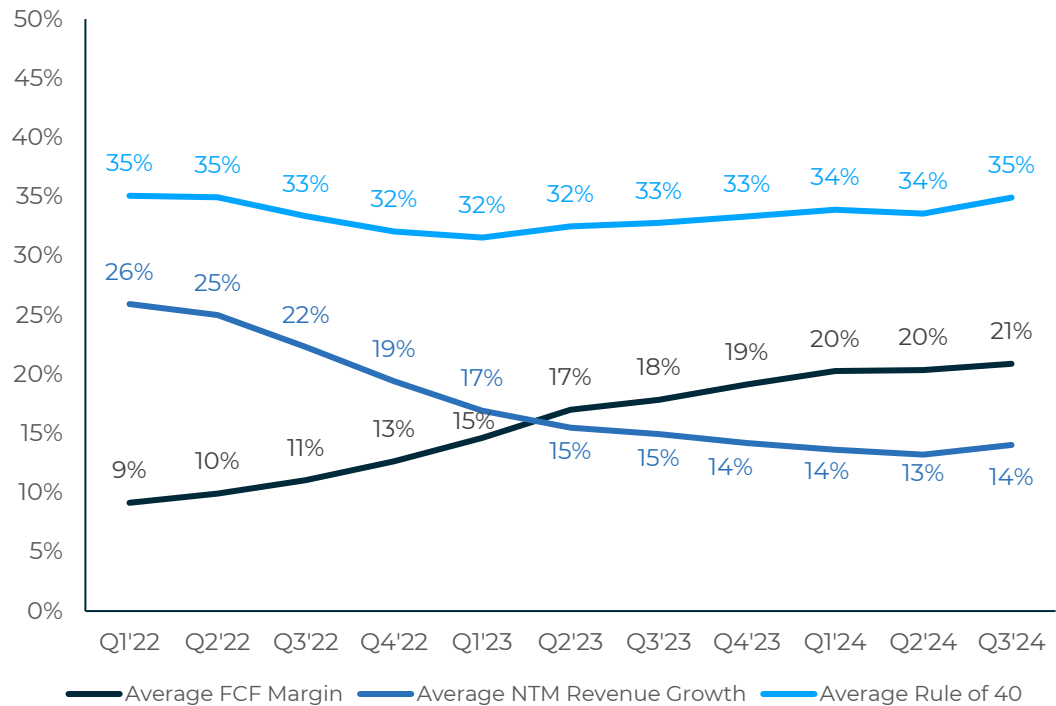
Despite a continued acceleration in sales and marketing spending, net new ARR has not inflected.

Source: CapIQ.  
 Note: All medians based on rolling LTM average.

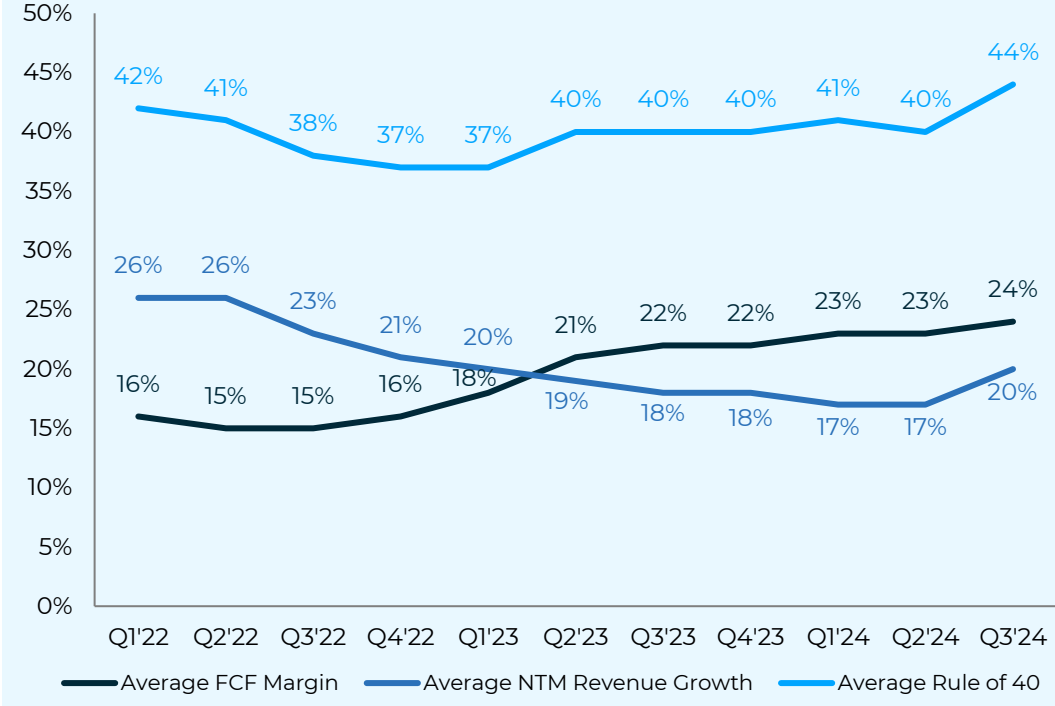


# Macro uncertainty has catalyzed a push toward efficiency, which has come in different forms . . .

Average Software Company



Top Quartile Software Companies

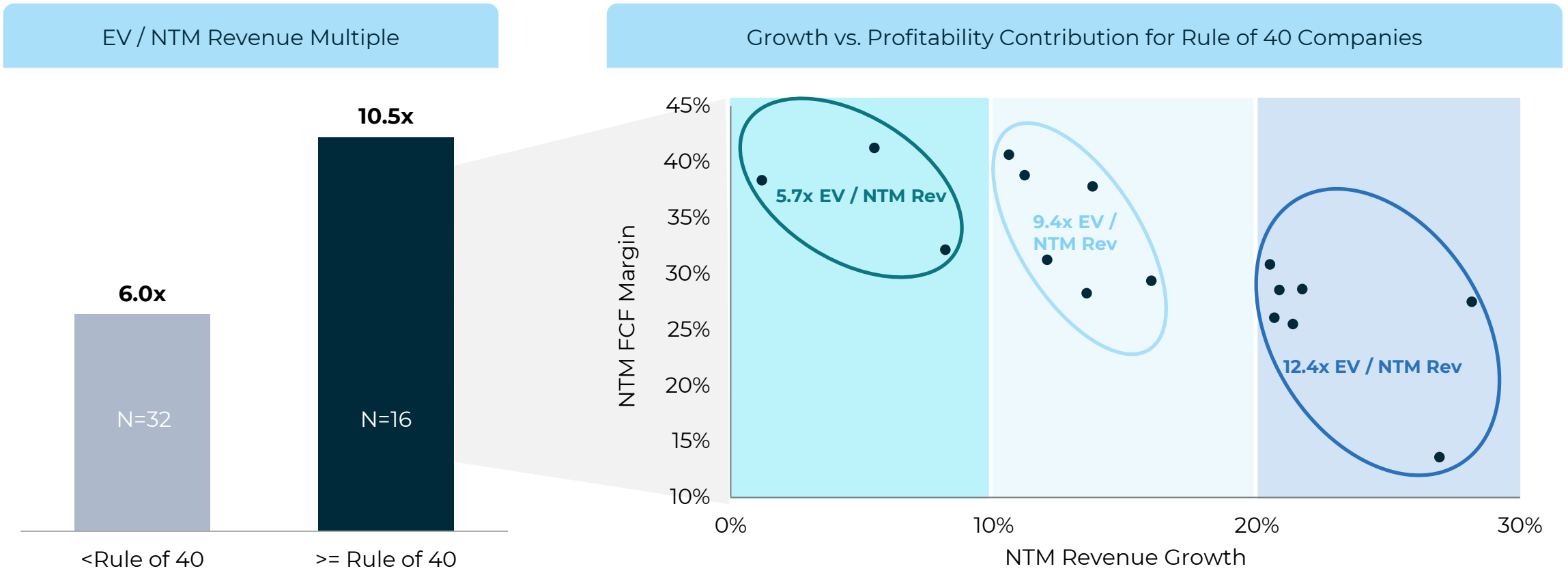


Top-quartile software companies have expanded profitability margins while reaccelerating growth to maintain Rule of 40 status.

Source: CapIQ.  
 Note: Top quartile companies represents those with a >=10x EV / NTM revenue multiple. Market data as of 10/31/24.



# ... but the market still values growth over profitability.

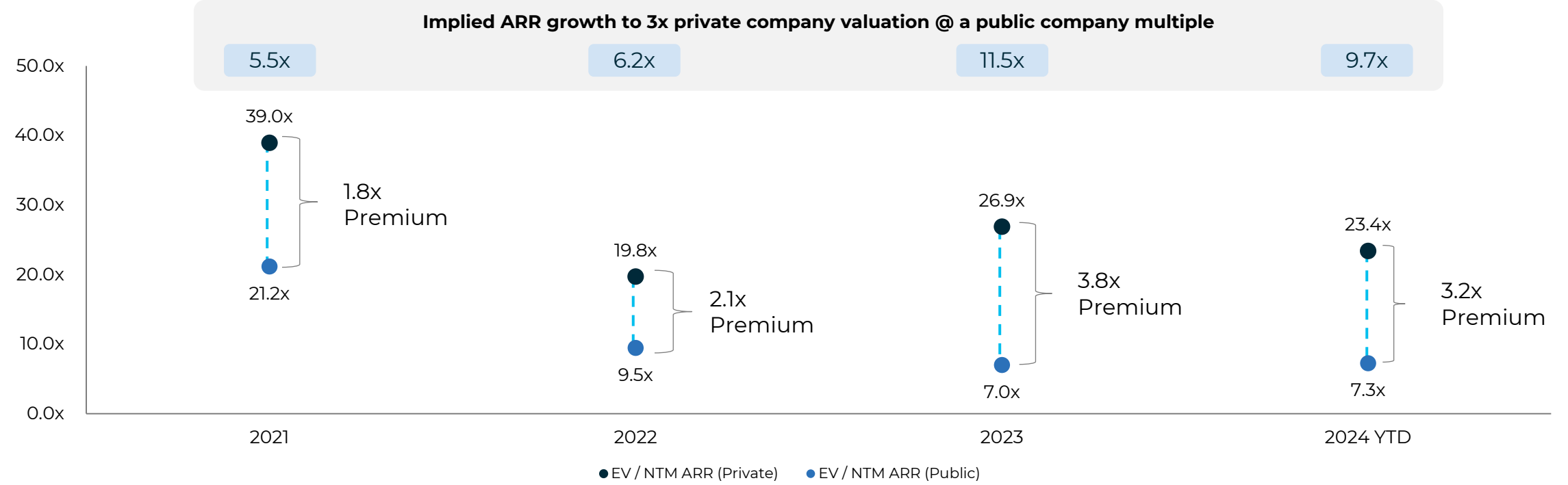


Within the Rule of 40 bucket, companies growing >20% trade at a premium compared to their slower-growth but more-profitable peers.

Source: CapIQ.  
Note: Market data as of 10/31/24.

# Private company multiples trade at a premium, baking in future growth and AI tailwinds

## Private vs. Public Company ARR Multiples



Private companies trade at a premium ARR multiple compared to their public market peers, as private investors bet on scaling ARR by 10x to achieve a 3x return.

Source: CapIQ and internal data.  
 Note: NTM ARR for public companies calculated as NTM quarter revenue x 4. Market data as of 10/31/24

# U.S. software unicorn creation has outpaced IPO and M&A volume; AI isn't a panacea for all startups

■ Significant IPOs 
 ■ M&A > \$1B 
 ■ Beginning # of Unicorns 
 ■ Net New Unicorns



The backlog of software unicorns has grown by 3x since 2020 while the number of large-scale software IPOs and M&A have declined.


Source: Pitchbook


Note: Data represents IT & B2B SaaS companies headquartered in the US excluding blockchain/cryptocurrency. Net new unicorns adjusted for exits and down rounds. Unicorns are private companies with a post-valuation >= \$1B. Logos represent a subset of the total company base. M&A shown in year announced. 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).





# Large capital raises have led to creative early exits

Inflection / 	
\$ Raised	\$1.6B
Last Round Valuation	\$4.0B
Date of Last Round	Jun 2023
Date of Acquisition	Mar 2024
Time Since Last Round	~8 Months

Adept / 	
\$ Raised	\$414M
Last Round Valuation	\$1.0B
Date of Last Round	Feb 2023
Date of Acquisition	Jun 2024
Time Since Last Round	~1.5 Years

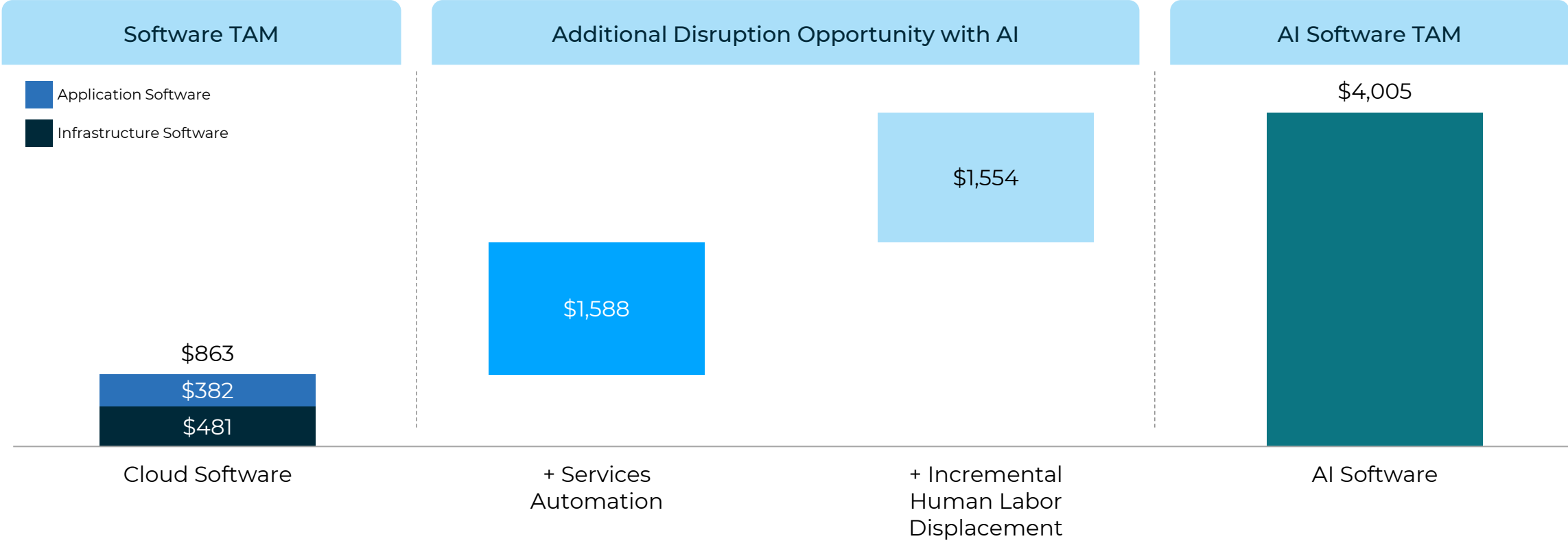
character.ai / 	
\$ Raised	\$193M
Last Round Valuation	\$1.0B
Date of Last Round	Mar 2023
Date of Acquisition	Aug 2024
Time Since Last Round	~1.5 Years

Key executives hired + licensing agreement to use the technology

Large amounts of capital raised early in the cycle at high valuations has resulted in creative acquisitions, structured as large-scale acquihires and licensing agreements.

# The AI opportunity remains massive, but tread carefully

(\$ in Billions)



There is \$4T of software disruption opportunity as AI unlocks additional services and human labor spend.

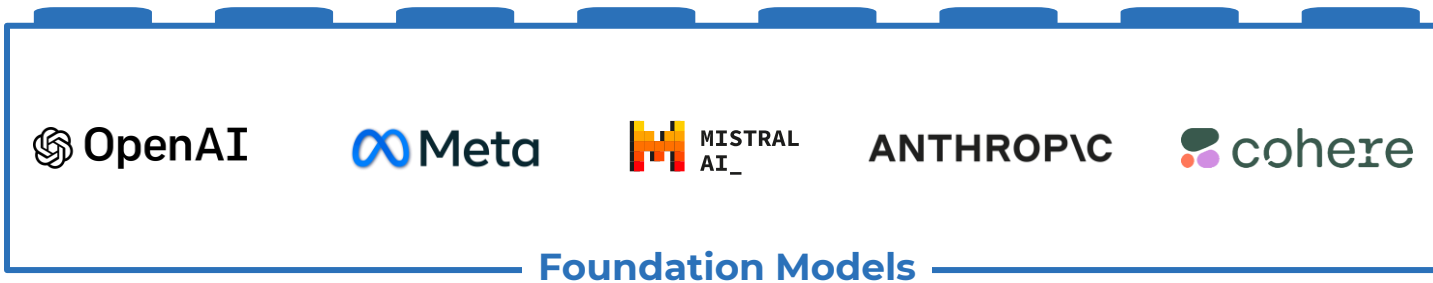
Source: Gartner.  
 Note: Battery assumptions include incremental human labor displacement based on an estimated # of global knowledge workers, penetration rate and avg. salary.



---

# Operational Best Practices to Build a Durable Cloud Company

# 1 Looks and engagement create durable moats



Product design is an offensive force and key differentiator, critical to driving fast adoption and accelerating the time to value.

Technology moats are eroding as powerful off-the-shelf infrastructure building blocks, offered as a service, abstract the complexity of building and managing underlying systems. As technology moats diminish, differentiation at the application layer will be driven by user experience and workflow.

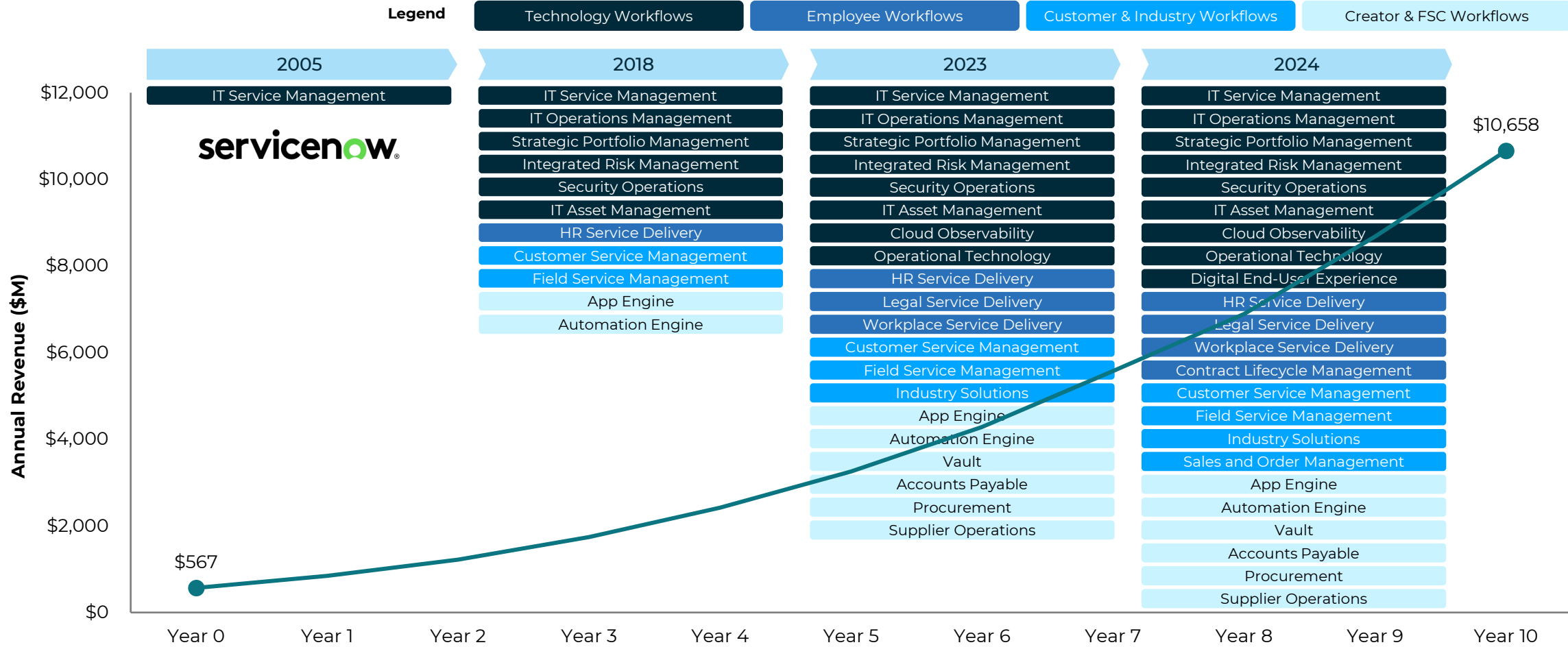
As technology moats erode and competition rises, product design and user experience become core differentiators for software companies.

## 2 New era, new metrics: tracking SaaS and AI product success together

	SaaS Product Metrics	AI Product Metrics
Acquisition	<ul style="list-style-type: none"><li>• % of visits to sign-ups</li><li>• Source mix: organic, paid, referrals, etc.</li></ul>	<ul style="list-style-type: none"><li>• % of new sign-ups via direct traffic or referrals (viral factor)</li></ul>
Activation	<ul style="list-style-type: none"><li>• % of signups that reach “aha moment”</li><li>• Avg. time to activation</li></ul>	<ul style="list-style-type: none"><li>• % of valid or accurate AI responses</li><li>• Avg. time to respond or execute an action</li></ul>
Engagement	<ul style="list-style-type: none"><li>• Daily active users / monthly active users</li><li>• Avg. session duration</li></ul>	<ul style="list-style-type: none"><li>• # of daily prompts / actions / tasks</li><li>• # of monthly users with &gt;X prompts / tasks</li></ul>
Retention	<ul style="list-style-type: none"><li>• M-1, M-6, M-12 user and \$ retention</li></ul>	<ul style="list-style-type: none"><li>• Productivity uplift and time / cost saved</li></ul>

AI products require hybrid metrics: a blend of SaaS product metrics and AI-specific performance indicators.

# 3 Product velocity is critical to long-term growth



ServiceNow has grown at a 34% CAGR over the last 10 years as product innovation has unlocked new market opportunities to fuel growth to \$10B in revenue.

Source: Wall Street research and company investor presentation.



# 4 AI aligns product with value, and pricing models are catching up

## Per Seat

### Copilot



- + Predictable and scalable pricing model where the cost per seat reflects the productivity uplift seen by individual users.
- Rooted in traditional subscription pricing models, often requiring an upfront commitment, which can lead to misalignment between cost and actual customer value.

## Consumption & Outcome-Based

### Autopilot



- + Customers only pay for what they use, and the successful outcomes achieved, resulting in true alignment between customers and vendors.
- Forecasting is difficult with variable consumption in each period, and it is easier for customers to accidentally overspend when not tied to pre-defined commitments.

## Human Labor Augmentation

### Services as software



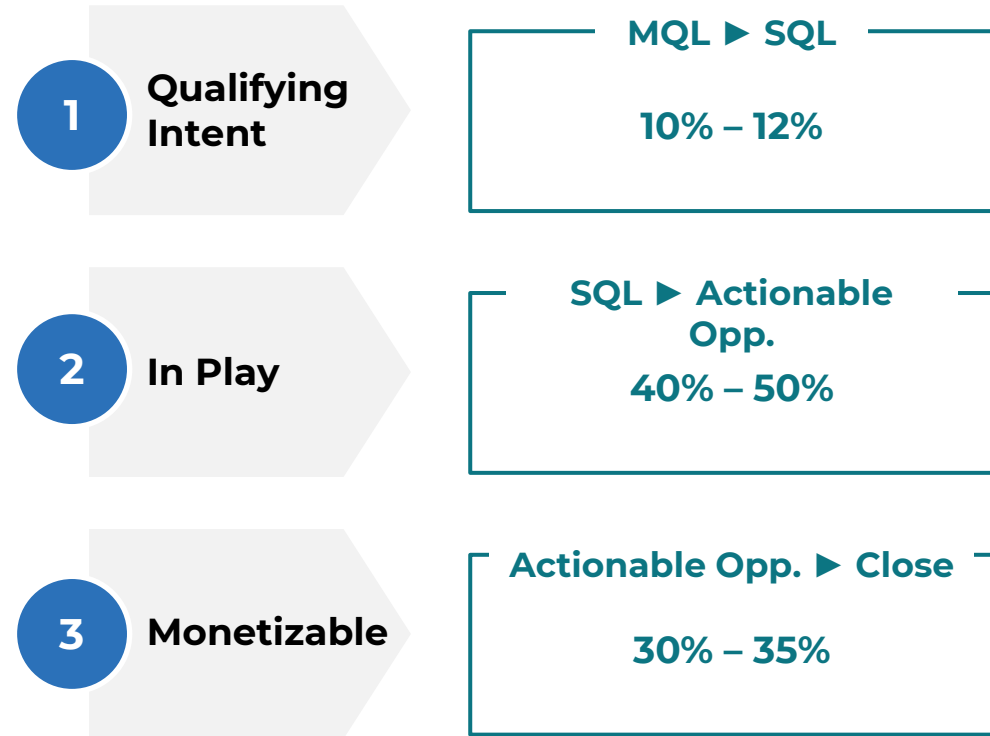
- + Pricing is directly tied to the cost of displaced human labor, making ROI clear by linking the cost of the product to the headcount savings achieved.
- Does not fit every AI use case and may ignore long-term value while focusing on near-term headcount cost savings.

As AI moves from augmentation to automation, value-based pricing is key to aligning customers and vendors.

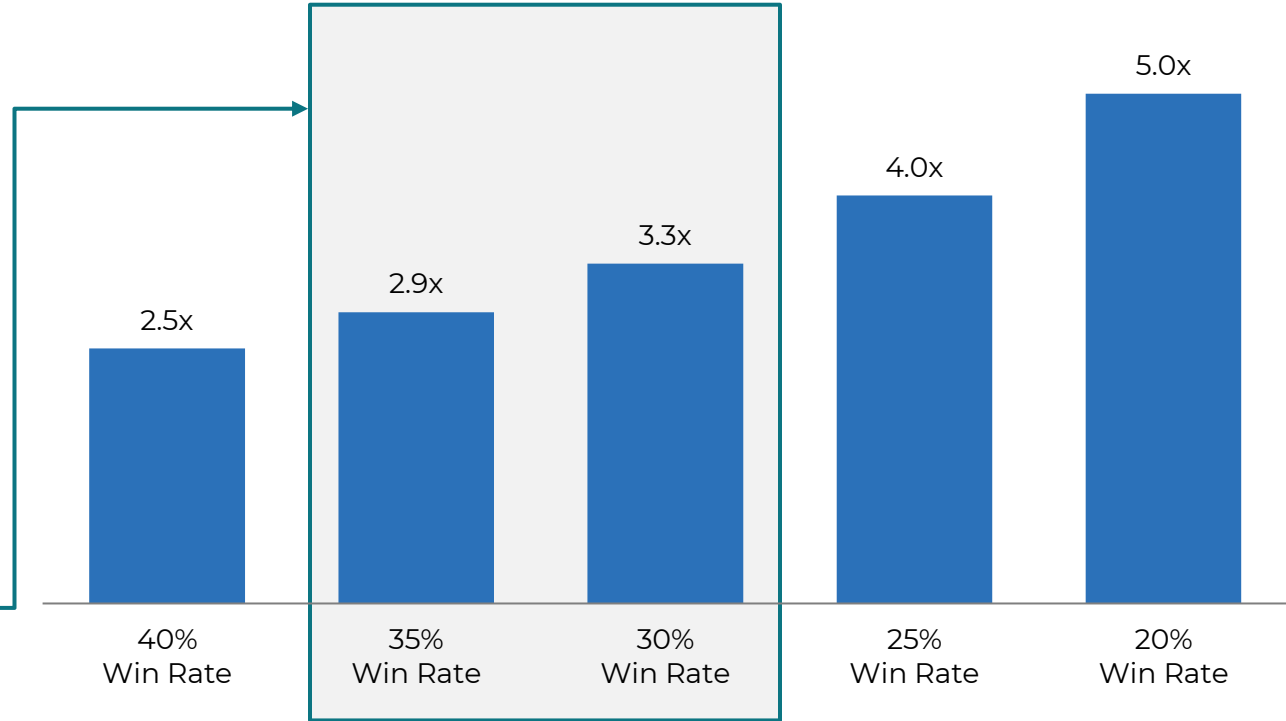
Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

# 5 Pipeline is an output of your sales funnel

## Sales Funnel Breakdown



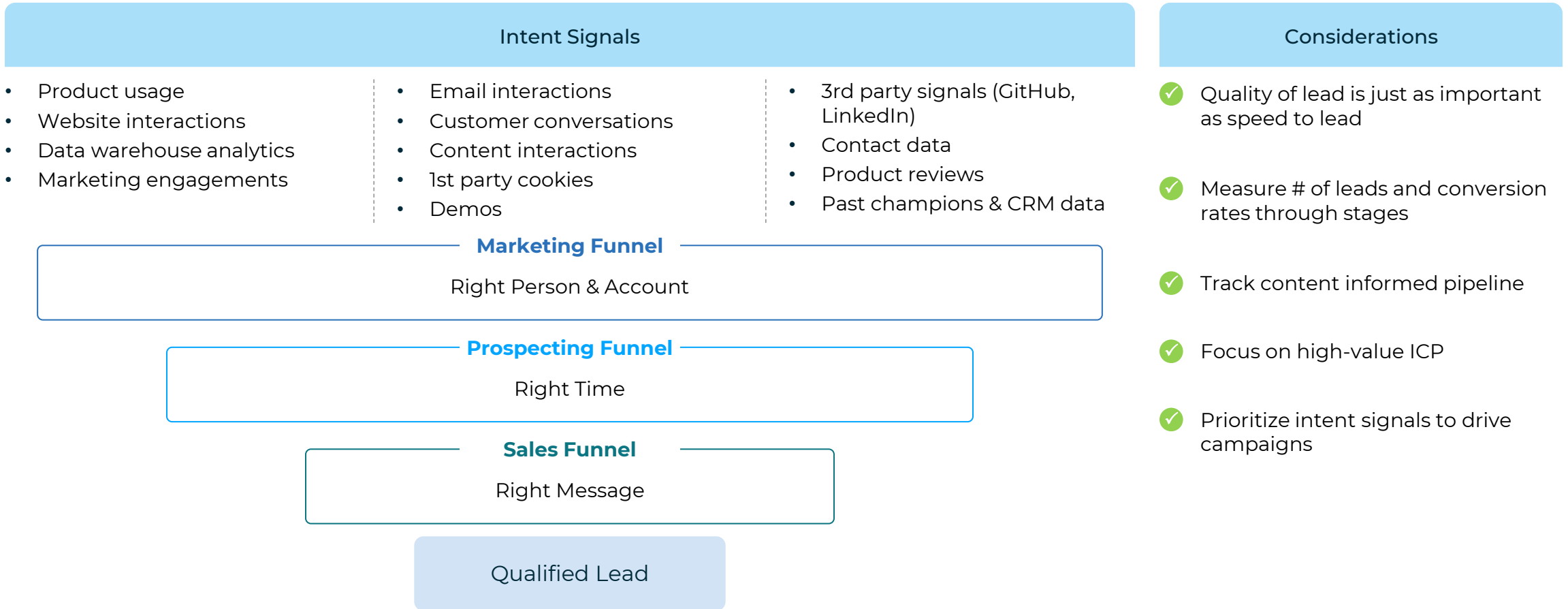
## Opportunity Coverage



A 20-percentage point decrease in win rate requires a 2x increase in pipeline coverage.



# 6 Intent metrics drive pipeline generation and pipeline quality



Be data driven when it comes to demand gen and demand capture to drive higher conversion rates and quality leads.

# 7 Choose your expansion journey

## Existing Products

### Price Increase

#### Basic

- ✓ Provides an immediate revenue boost without requiring additional product development.
- ✓ Offers a simple implementation process.

- ✗ Not sustainable long-term (provides only a one-time revenue increase).
- ✗ Can trigger negative customer reactions and increase churn risk if the perceived value doesn't match the new price.

### Usage / User Expansion

#### Standard

- ✓ Provides a sustainable expansion path as customers naturally grow their usage / users.
- ✓ Aligned with customer success and lowers the risk of churn due to increased user engagement.

- ✗ Introduces infrastructure / scaling challenges.
- ✗ Not applicable for all products and pricing models.

## New Products & Features

### Upsell

#### Intermediate

- ✓ Enhances customer value with additional high-value features and functionality.
- ✓ Requires minimal change to the sales process.

- ✗ Involves elevated development and marketing costs.
- ✗ Managing multiple pricing tiers increases complexity.

### Cross Sell

#### Advanced

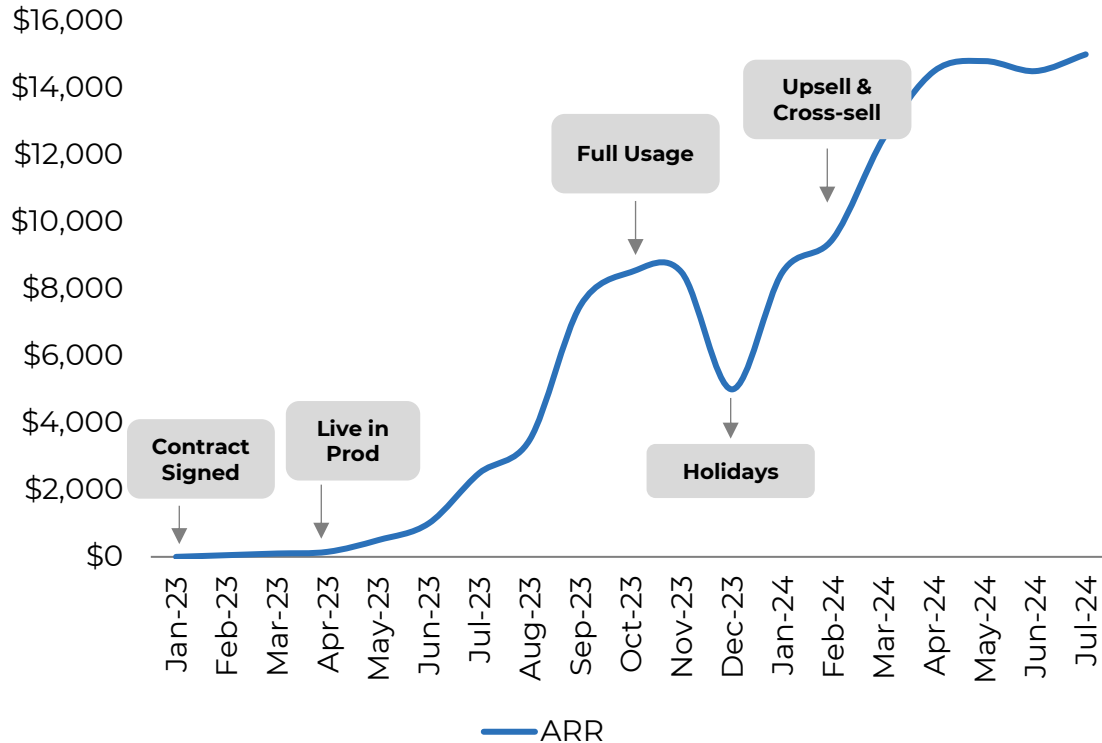
- ✓ Expands TAM through complimentary products.
- ✓ Increases stickiness through bundled offerings and multi-product adoption.

- ✗ May dilute the focus of the core product.
- ✗ May require a new GTM strategy.

Be long-term greedy when it comes to expansion.

# 8 Value-based pricing requires re-thinking sales compensation models

## Consumption Pricing Customer & Revenue Lifecycle



## Sales Compensation Framework

### Base + Variable Structure

- Higher base salary (60-70%) vs. traditional models (50%)
- Reduced variable component to offset delayed revenue realization
- Quarterly or monthly true-ups based on actual usage

### Hybrid Incentive Structure

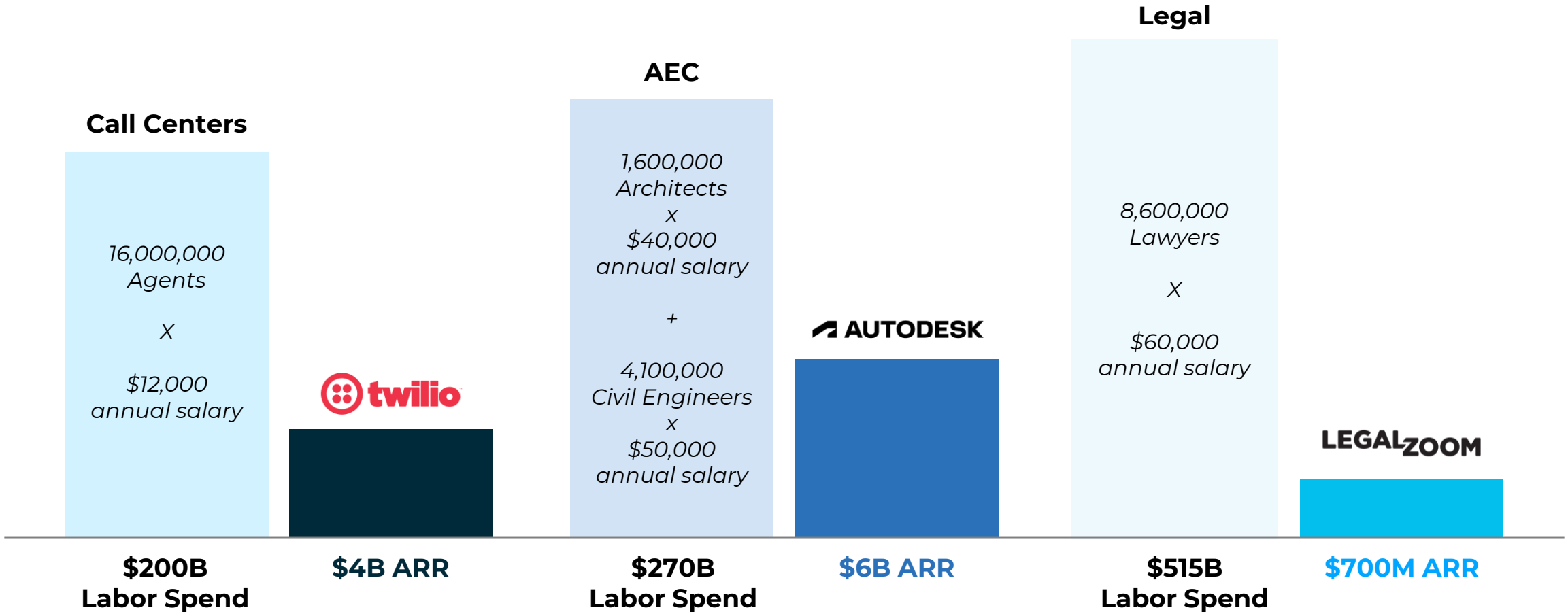
- Initial booking compensation (30-40% of total commission)
- Usage milestone bonuses (60-70% tied to consumption)
- Accelerators for exceeding usage forecasts

### Key Success Metrics to Track

- Initial deployment completion
- Time to first production usage
- Monthly usage growth
- Customer expansion milestones

Sales compensation in consumption models requires balancing immediate rewards with long-term revenue realization.

# 9 Sell work with AI and capture a broader TAM

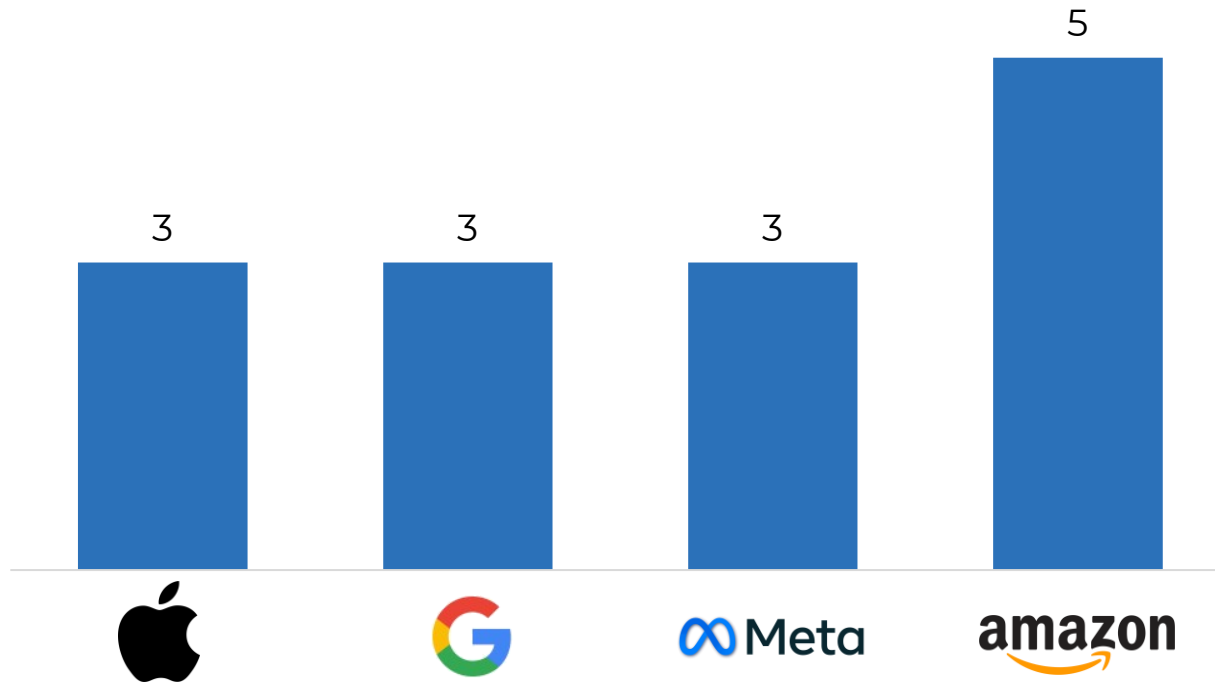


By automating high-value professional work in areas such as these, AI agents can convert salary budgets into software revenue, driving TAM growth.

Source: US Bureau of Labor Statistics and company filings.  
 Note: TAM calculations based on global workforce estimates x average annual salaries in USD. ARR figures reflect latest quarterly revenues annualized.

# 10 Leading tech companies are returning to the office

# of In-Office Days Required for Employees



*“When we look back over the last five years, we continue to believe that the advantages of being together in the office are significant. We’ve observed that it’s easier for our teammates to learn, model, practice, and strengthen our culture.”*

**- Andy Jassy, CEO of Amazon**

*“This analysis also shows that engineers earlier in their career perform better on average when they work in-person with teammates at least three days a week.”*

**- Mark Zuckerberg, CEO of Meta**

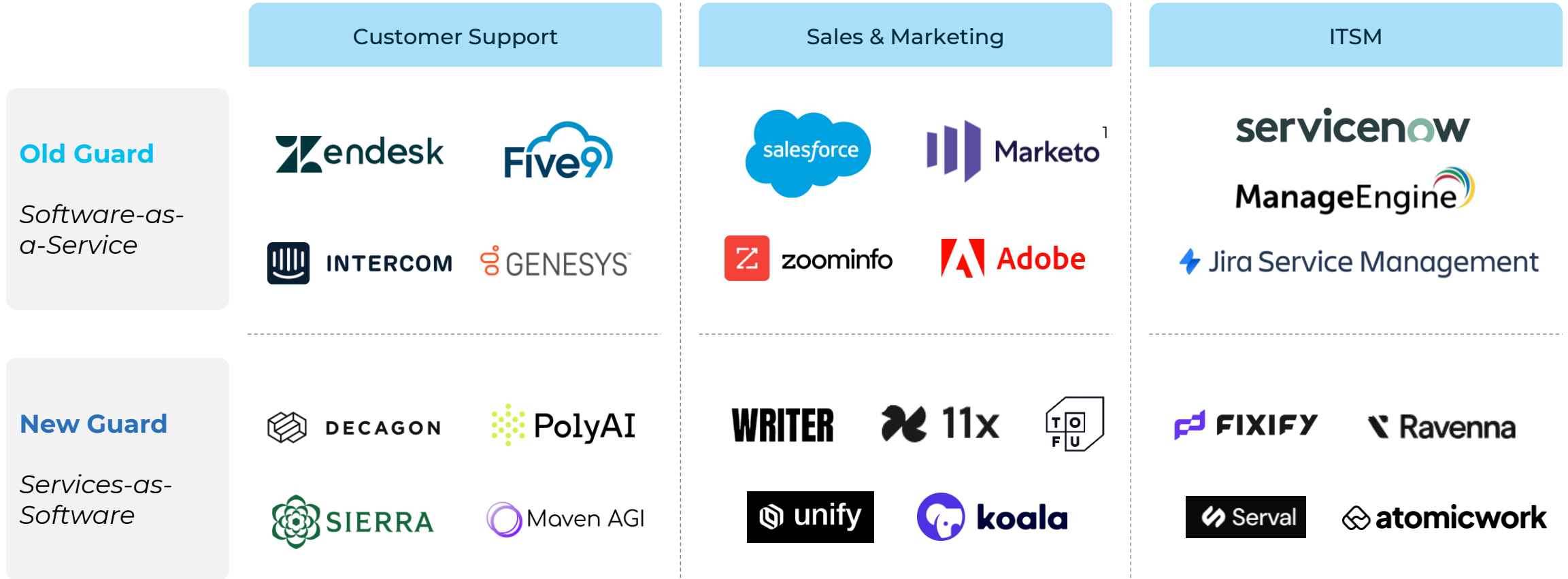
In-person work fosters collaboration, strengthens company culture, enhances learning and development, and accelerates strategic decision-making.



---

# Themes of Interest

# AI is eating services, creating services-as-software companies



A new wave of AI companies is transforming the SaaS business model by shifting from providing workflow tools to fully automating the work itself.

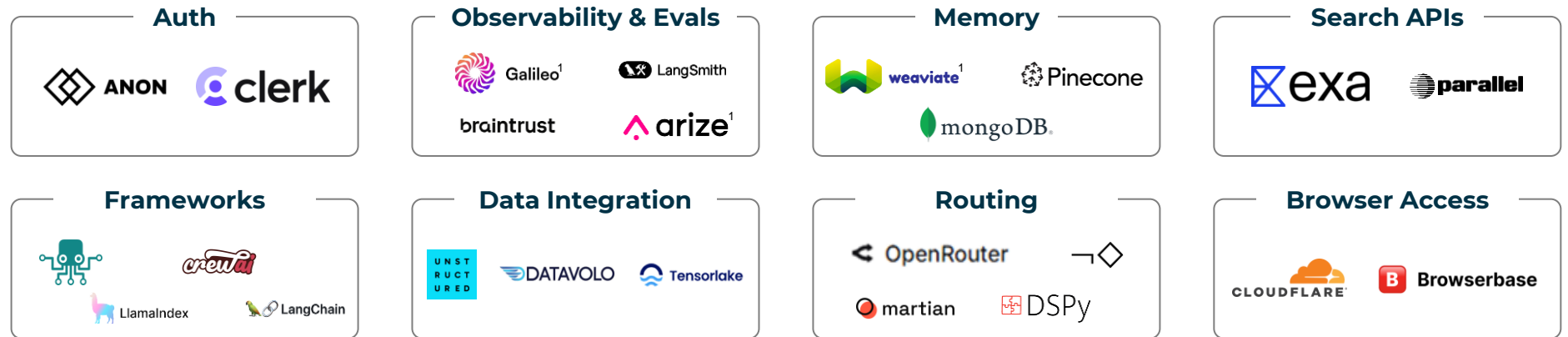
Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

# A new web infrastructure has emerged for AI agents

## Applications



## Developer Tools & Orchestration



## Infrastructure



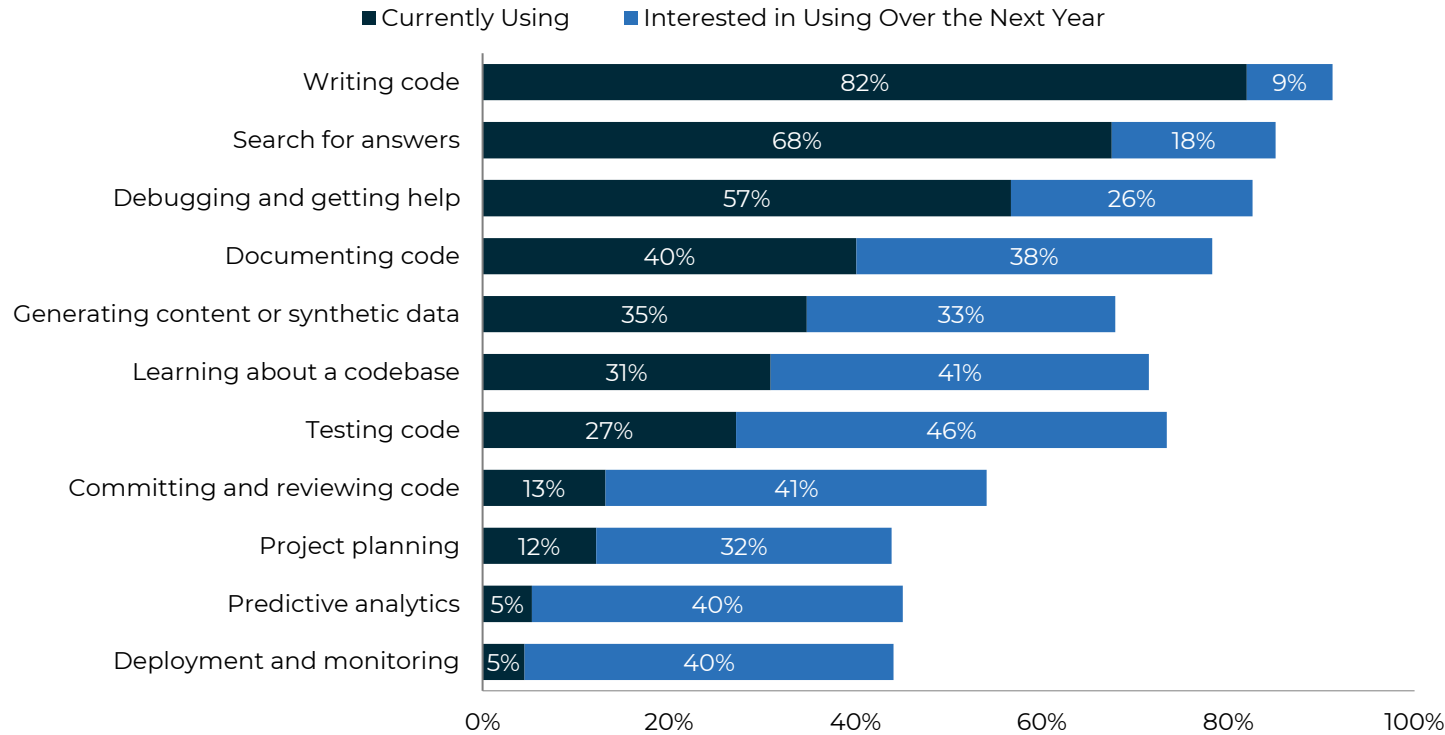
A new agent-native layer for internet information retrieval and automation is emerging.

Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).



# AI redesigns the software-development lifecycle

## Current and Desired Usage of AI in the Developer Workflow



## AI-Native Developer Tools

### Code Generation

replit, supermaven, Cody, augment code, codeium, GitHub Copilot, Cognition, grit, poolside, tabnine, Magic, gitar, bloop., CURSOR, FACTORY, SECOND

### Code Review

GitHub Copilot, sourcery, CodeRabbit

### Documentation

komment, Mintlify, swim

### Testing

qodo, antithesis, diffblue, Hea

### Deploys

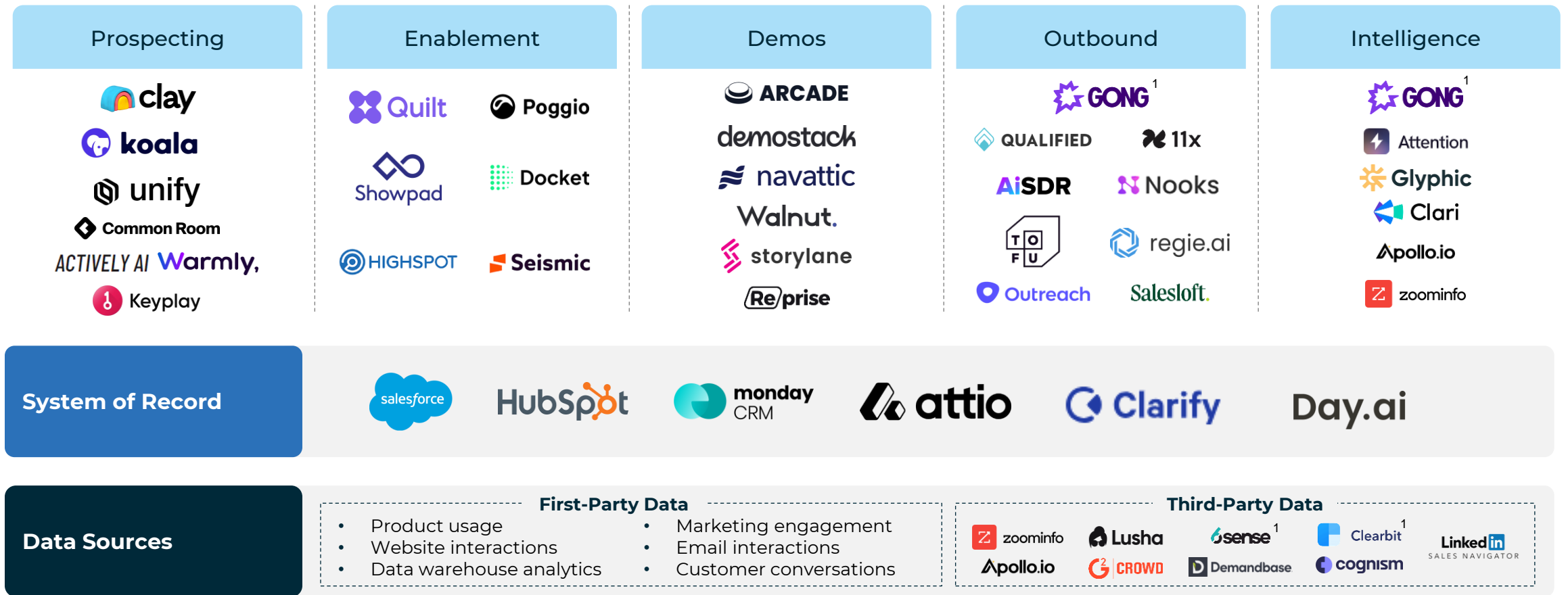
harness<sup>1</sup>, Vercel, LINEARB<sup>1</sup>, GitLab Duo

AI-powered tools are emerging in every part of the developer workflow, from writing to securing code, and have potential to unlock new productivity.

Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

Source: 2024 Stack Overflow Developer Survey

# The AI-native GTM tech stack



AI-powered GTM tools unlock higher velocity and conversion rates through intelligent, data-driven sales workflows.

Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

# Next-gen BI tools evolve from dashboards to meaningful insights

	Incumbents	Next-Gen BI Tools
Companies	Power BI            Looker            MODE            tableau	sigma            omni            HEX            WisdomAI            Lightdash
Users	<b>Data Teams</b>	<b>Data Teams + Business Users</b>
Applications	<ol style="list-style-type: none"> <li>1 Visualization</li> <li>2 Exploratory analysis</li> </ol>	<ol style="list-style-type: none"> <li>1 Visualization</li> <li>2 Exploratory analysis</li> <li>3 Self-serve analytics</li> <li>4 Multi-language support (Python, SQL, NLP)</li> </ol>
Data modalities	<b>Structured</b>	<b>Structured, Semi-Structured, Unstructured</b>
Data Sources	Google BigQuery            amazon REDSHIFT            snowflake            databricks <sup>1</sup>	Google BigQuery            amazon REDSHIFT            snowflake            databricks <sup>1</sup> salesforce            Adobe            slack            box

New BI products have an opportunity to unlock a larger user base and incorporate unstructured data to enhance insights.

Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).



---

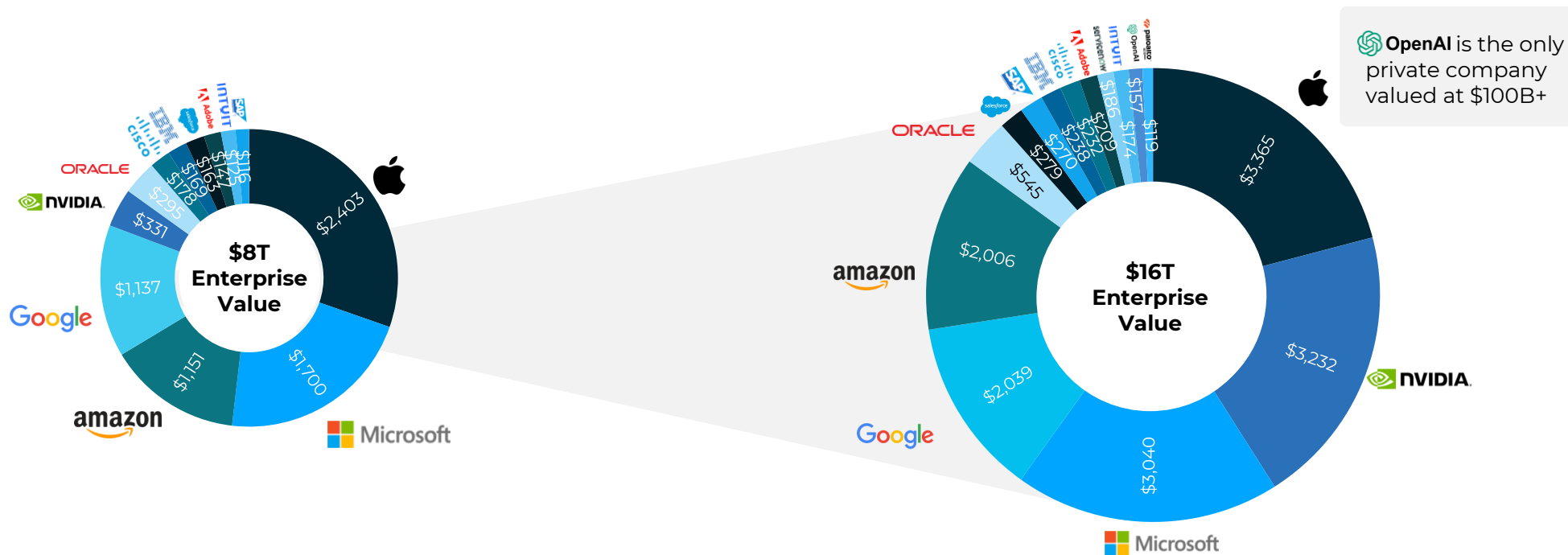
# Future of OpenCloud

# The prize has never been bigger for cloud & AI companies . . .

Hundred-Billion Dollar Club (\$B)

Pre-ChatGPT

Today



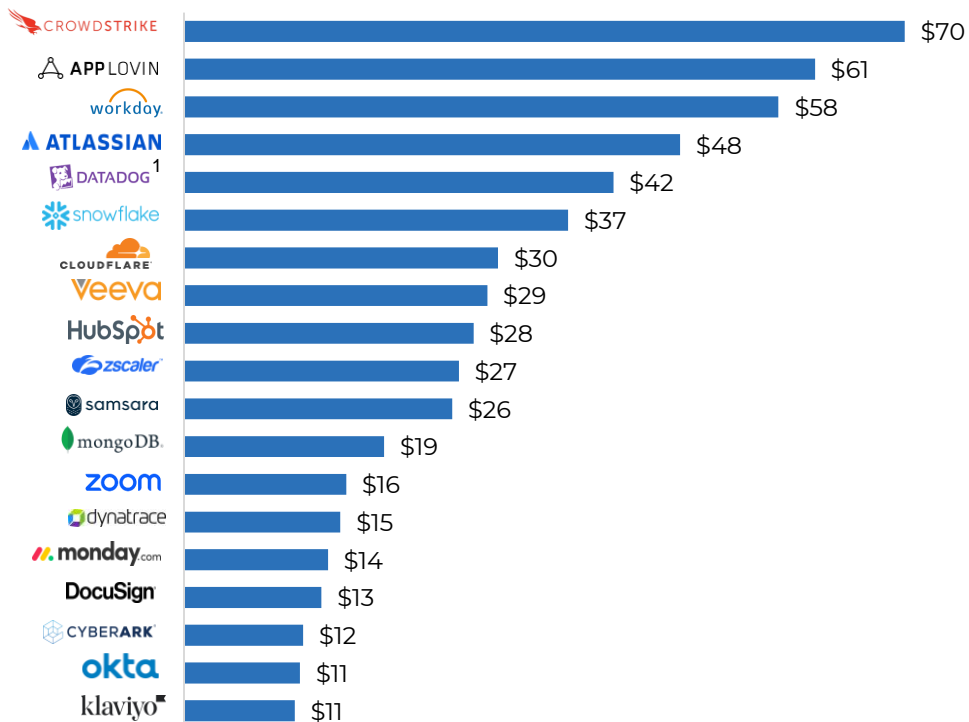
Cloud infrastructure and AI growth has created a new generation of trillion-dollar giants, with an unprecedented number of high-quality companies rapidly scaling.

Source: CapIQ and Pitchbook data as of 10/31/2024.

# ... and the backlog of \$10B+ private companies is promising

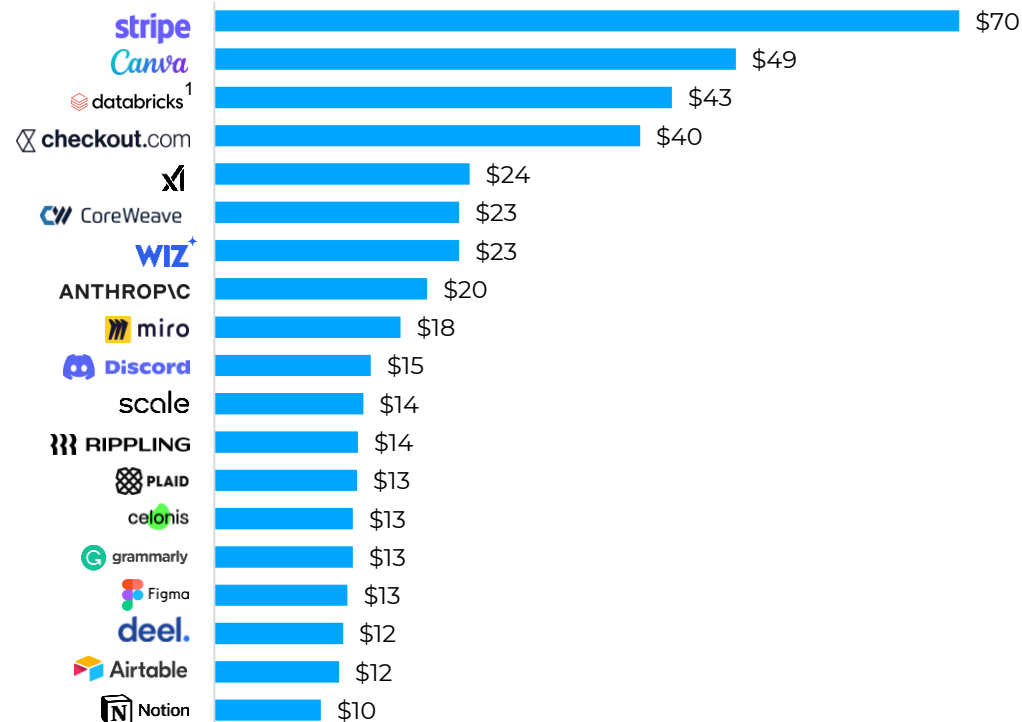
## Public Company Ten Billion Dollar Club

(Enterprise Value \$ in Billions)



## Private Company Ten Billion Dollar Club

(Enterprise Value \$ in Billions)













The number of \$10B+ private software companies equals the number of public software companies, with many private companies growing faster at scale.










Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please visit: <https://www.battery.com/list-of-all-companies>

Source: Pitchbook data as of 10/31/2024. The above listed private companies are enterprise software and infrastructure software companies with valuations of \$10B or greater as of October 2024. Excluded from this analysis are public and private companies that Battery believes are not representative because they are principally vertical-focused (ex. Bentley Systems, Toast, and Guidewire, Anduril, and Brex).

# Cloud-native companies continue to grow at healthy rates at scale

 Date of IPO

		Run-Rate Revenue (\$M)			
		IPO	Current	CY '25E	IPO to CY '25E CAGR
2024	 rubrik	700	820	1,064	87%
2021	 GitLab	233	730	929	55%
2021	 SentinelOne <sup>1</sup>	150	796	1,029	74%
2021	 CONFLUENT <sup>1</sup>	308	940	1,163	46%
2021	 UiPath <sup>1</sup>	832	1,265	1,583	19%
2020	 jfrog <sup>1</sup>	146	412	501	34%
2020	 snowflake	533	3,475	4,356	64%
2019	 CLOUDFLARE	270	1,604	2,109	48%
2019	 CROWDSTRIKE	384	3,855	4,779	58%

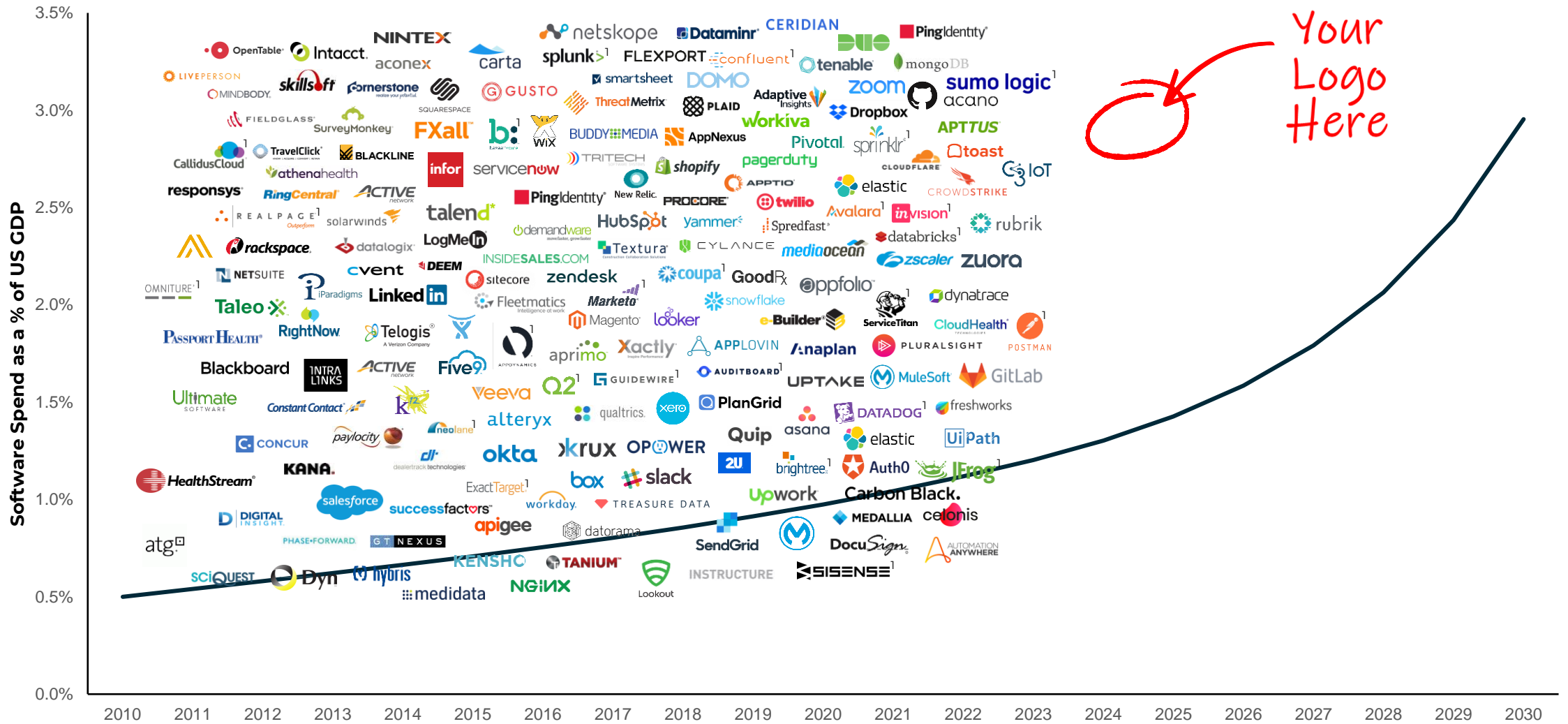
		Run-Rate Revenue (\$M)			
		IPO	Current	CY '25E	IPO to CY '25E CAGR
2019	 DATADOG <sup>1</sup>	333	2,581	3,224	54%
2018	 elastic	227	1,390	1,586	37%
2018	 zscaler <sup>1</sup>	180	2,371	2,872	51%
2017	 mongoDB <sup>1</sup>	142	1,912	2,270	47%
2017	 okta	195	2,584	2,828	42%
2016	 twilio	237	4,330	4,740	42%
2015	 ATLIASSIAN	385	4,526	5,541	34%
2012	 paloalto <sup>1</sup>	263	8,758	9,782	34%
2012	 servicenow	190	10,508	13,242	40%

Cloud-native companies have 10x'ed revenue since IPO while maintaining an average growth rate of 40%.

Source: CapIQ, company filings. Note: Representative companies include cloud infrastructure and software companies that have gone public since 2012.

1. Denotes a past or current Battery company. For a full list of all Battery investments, please visit <https://www.battery.com/list-of-all-companies/>. CAGR defined as the compounded annual growth rate, calculated as  $(\text{Current Revenue} / \text{IPO Revenue})^{1 / (\text{2023-IPO Year})} - 1$

# We're still in the early innings for OpenCloud



Your Logo Here

1. Denotes a past or current Battery company. For a full list of all Battery investments, please visit: <https://www.battery.com/list-of-all-companies/>  
 Source: Gartner Research





# The Battery team



**Dharmesh Thakker**  
*dharmesh@battery.com*



**Danel Dayan**  
*ddayan@battery.com*



**Jason Mendel**  
*jmendel@battery.com*



**Sudhee Chilappagari**  
*sudhee@battery.com*



**Patrick Hsu**  
*phsu@battery.com*



**Payal Modi**  
*pmodi@battery.com*

# Disclaimers

This disclaimer applies to this document and the verbal or written comments of any person presenting it. This document, taken together with such verbal or written comments, is referred to herein as the “presentation.” This presentation is being provided for informational purposes only as part of the OpenCloud 2024 conference. Nothing herein is or should be construed as investment, legal or tax advice, a recommendation of any kind or an offer to sell or a solicitation of an offer to buy any security or offer investment advisory services with regard to securities. This presentation does not purport to be complete on any topic addressed. The information in this presentation is provided to you as of November 6, 2024 unless otherwise noted and Battery Ventures does not intend to update the information after its distribution, even in the event the presentation becomes materially inaccurate. Certain information in this presentation has been obtained from third party sources and, although believed to be reliable, has not been independently verified and its accuracy or completeness cannot be guaranteed. Certain logos, tradenames, trademarks and copyrights included in the presentation are strictly for identification and informational purposes only. Such logos, trade names, trademarks and copyrights may be owned by companies or persons not affiliated with Battery Ventures and no claim is made that any such company or person has sponsored or endorsed the use of such logos, trade names, trademarks and copyrights in this presentation. This presentation includes various examples of companies in which Battery Ventures has invested. For a complete list of all companies in which Battery Ventures has invested, please visit: <https://www.battery.com/list-of-all-companies/>. Past performance is not evidence of future results and there can be no assurance that a particular Battery portfolio company will achieve comparable results to any other company.

The information contained herein is based solely on the opinions of Dharmesh Thakker, Danel Dayan, Jason Mendel, Sudheendra Chilappagari, Patrick Hsu and Payal Modi and nothing should be construed as investment advice. This presentation and the anecdotal examples throughout are intended for an audience of entrepreneurs in their attempt to build cloud-focused businesses and not recommendations or endorsements of any particular business or an offering of investment advisory services.

# Appendix: Public Comp Set

01 Adobe	11 Crowdstrike	21 Guidewire <sup>1</sup>	31 Procore	41 Twilio
02 Amplitude <sup>1</sup>	12 CyberArk	22 Rubrik	32 RingCentral	42 UiPath
03 Asana	13 Datadog <sup>1</sup>	23 Hubspot	33 Salesforce	43 Wix
04 Atlassian	14 Docusign	24 Jfrog <sup>1</sup>	34 SentinelOne	44 Workday
05 Bill.com	15 Dropbox	25 Klaviyo	35 ServiceNow	45 Zoom
06 Box	16 Dynatrace	26 Monday.com	36 Shopify	46 ZoomInfo
07 Braze <sup>1</sup>	17 Elastic	27 MongoDB	37 Smartsheet	47 Zscaler
08 Checkpoint	18 Fastly	28 Okta	38 Snowflake	48 Veeva
09 Cloudflare	19 Fortinet	29 PagerDuty	39 Sprinklr <sup>1</sup>	
10 Confluent <sup>1</sup>	20 Gitlab	30 Palo Alto Networks	40 Tenable	

Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).