

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.

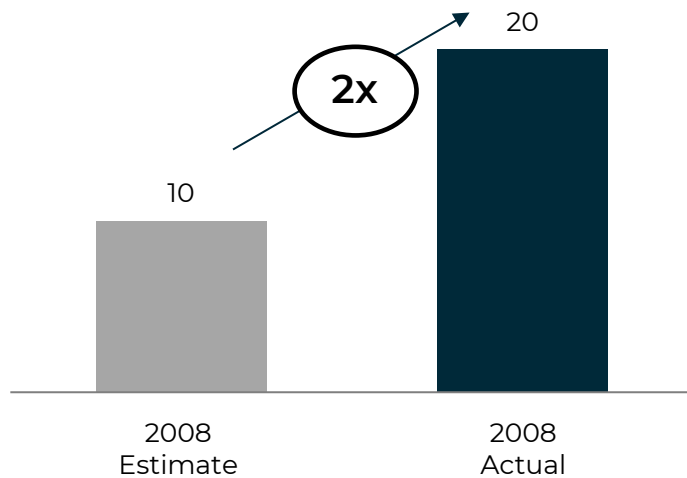


Macro Update

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

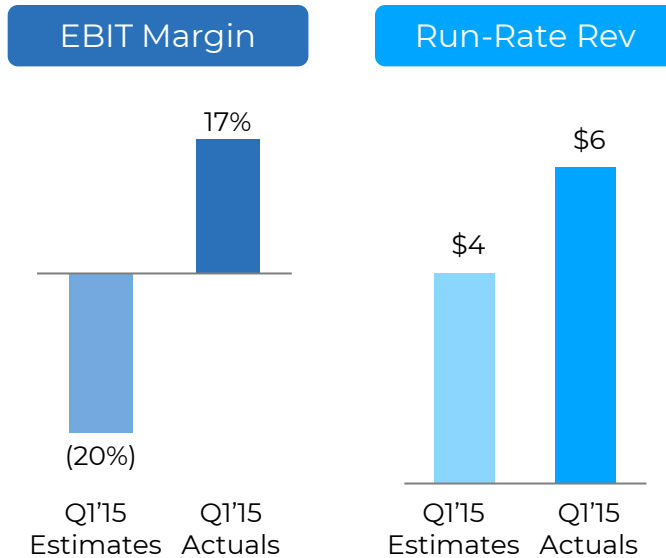
Mobile

iPhone Units Shipped (M)



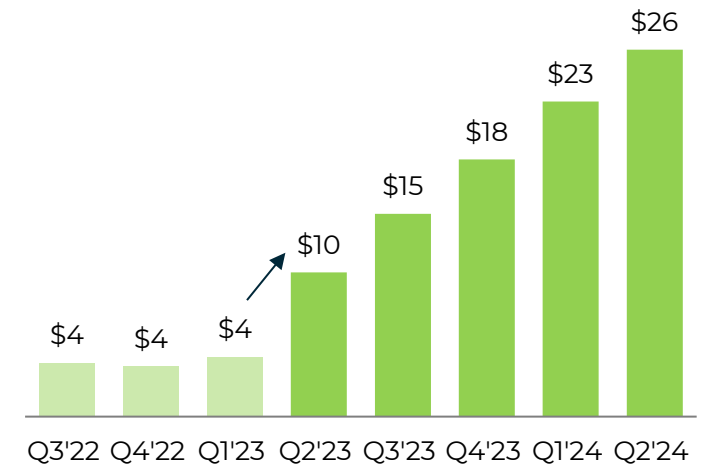
Cloud

AWS EBIT Margin / Revenue (US\$ B)



AI

Data Center Revenue (US\$ B)

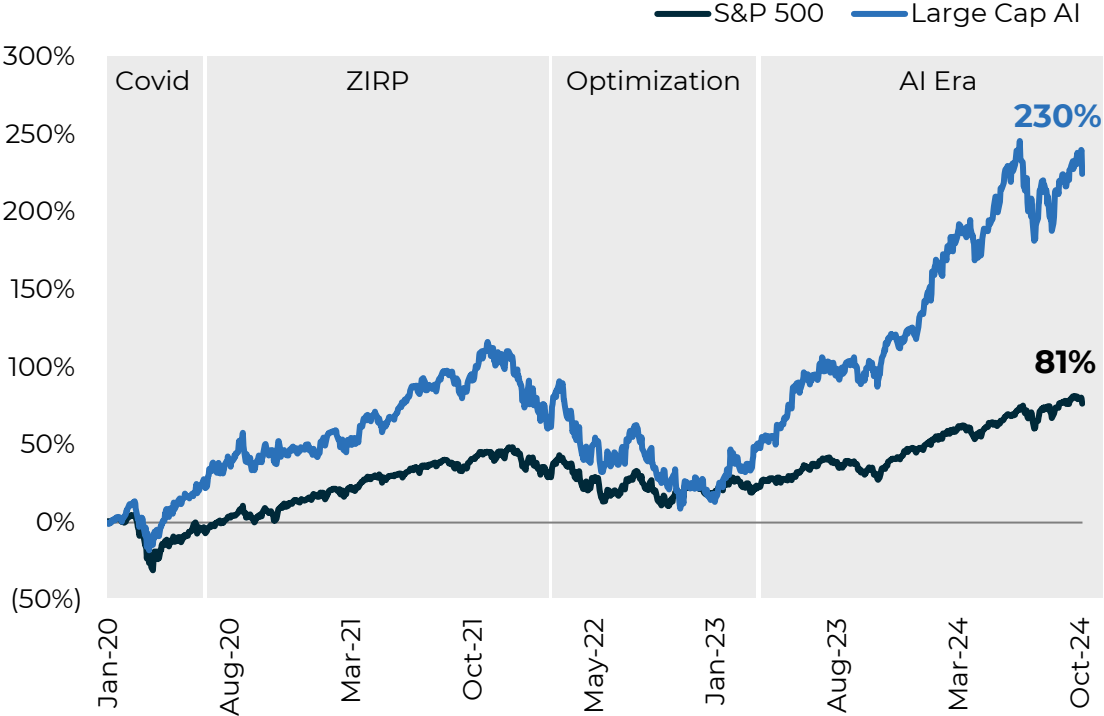


Infrastructure build-outs are a precursor to technology supercycles.

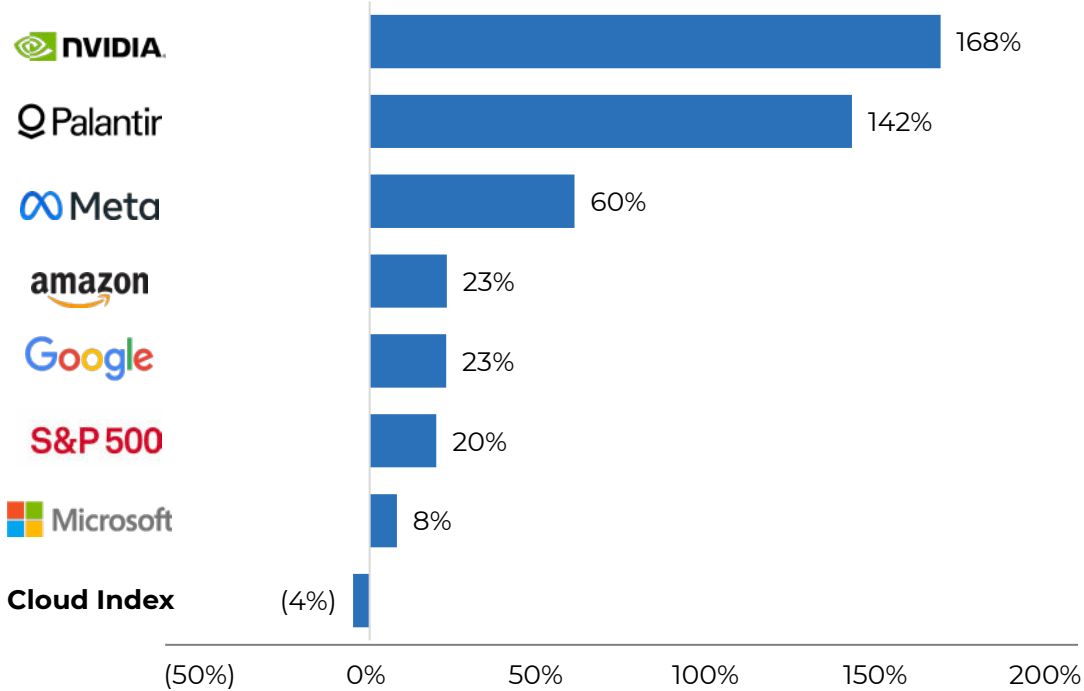
Source: Apple, Amazon and Nvidia earnings. Goldman Sachs Research.
 Note: Apple data CY2008. AWS FYE 12/31 and estimates based on consensus figures. Nvidia FYE 1/31.

Markets reached new highs, driven by large-cap AI

S&P 500 Performance vs. Large Cap AI



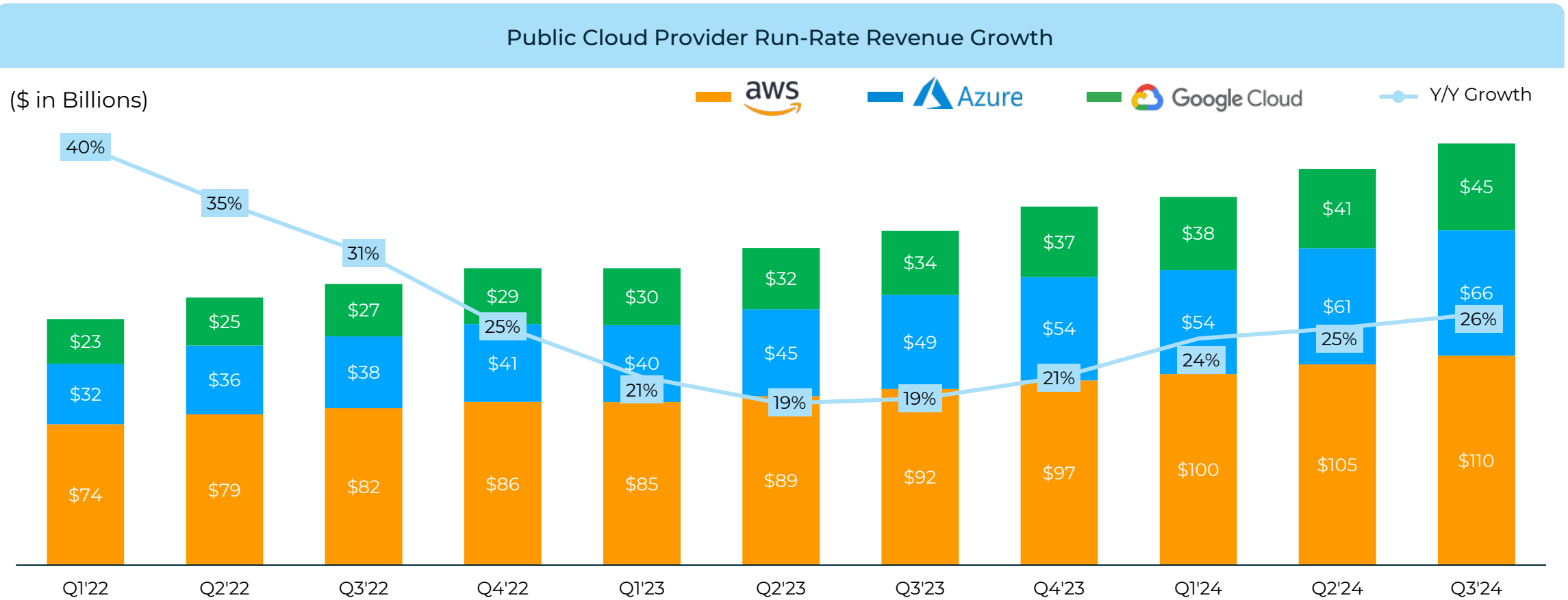
Returns are Concentrated (YTD 2024 Returns)



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.

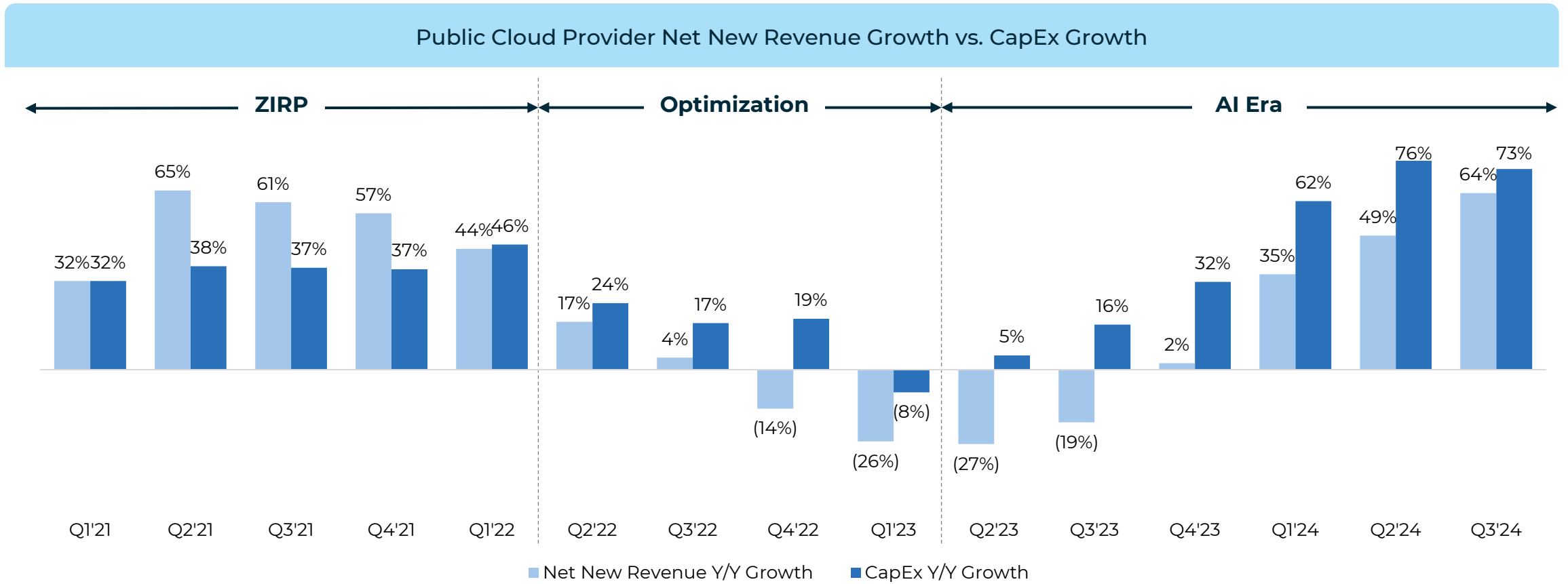
AI has reshaped public cloud provider growth . . .



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.



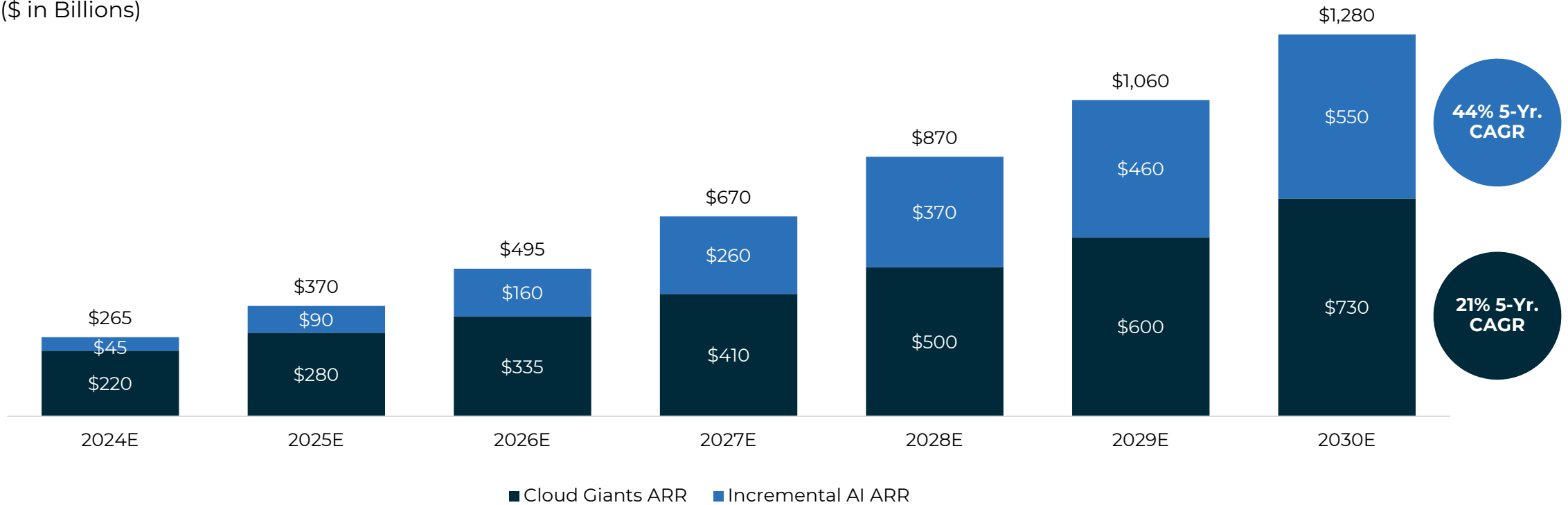
Cloud providers are aggressively expanding AI infrastructure capacity to meet growing customer demand.

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)

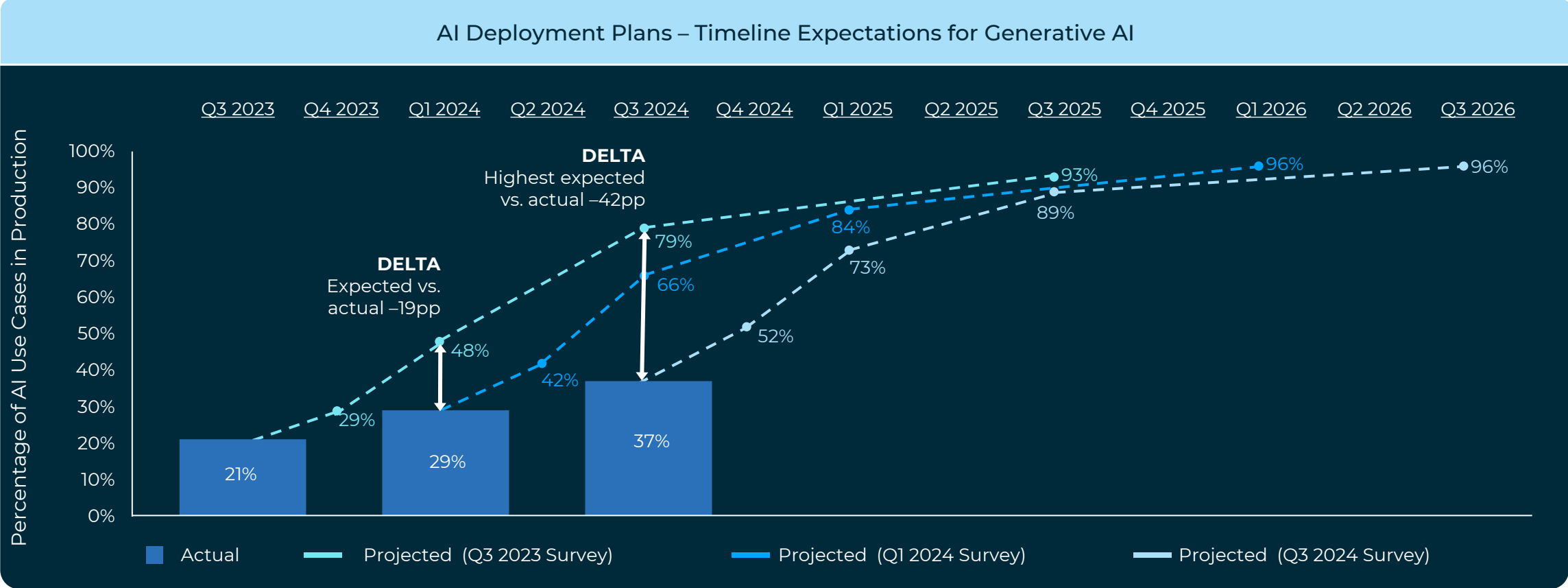


Cloud adoption is rapidly expanding with AI, and the stakes have never been higher. There is ~\$2T+ of incremental cumulative revenue that is up for grabs by 2030.

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.

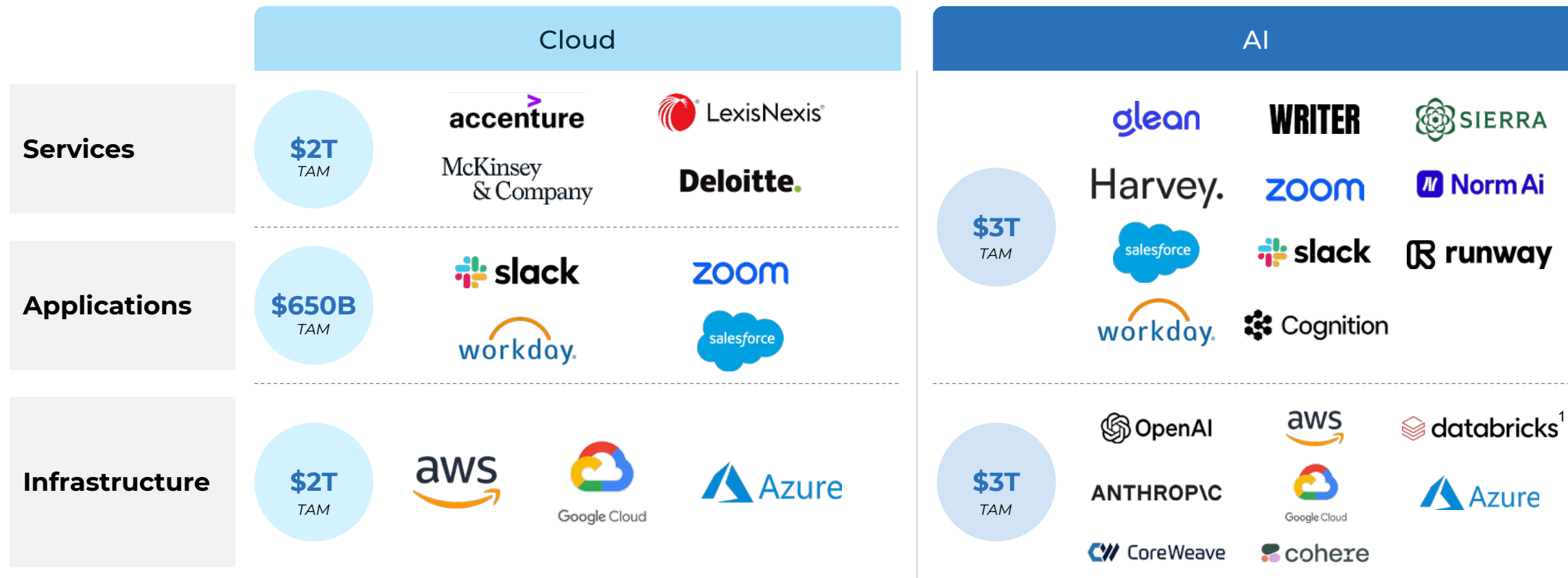
There is a delineation between experimental vs. established budgets . . .



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.

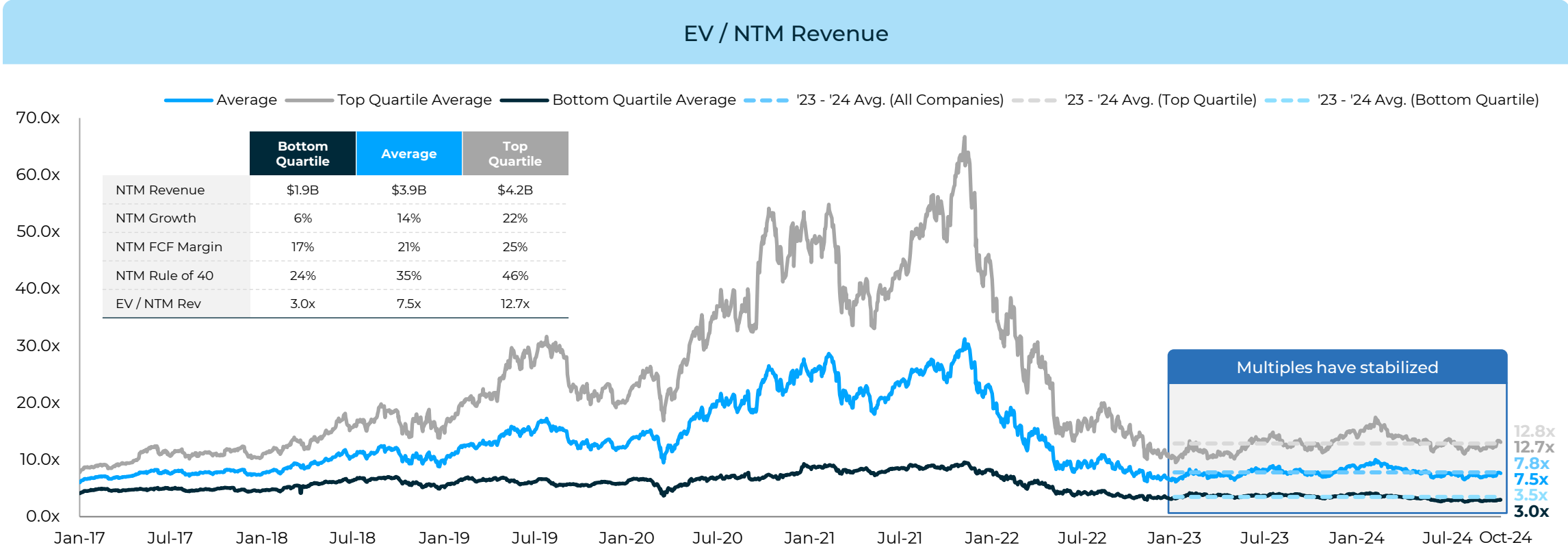
... but maturing use cases are driving value creation for AI-native application and infrastructure companies.



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](#).

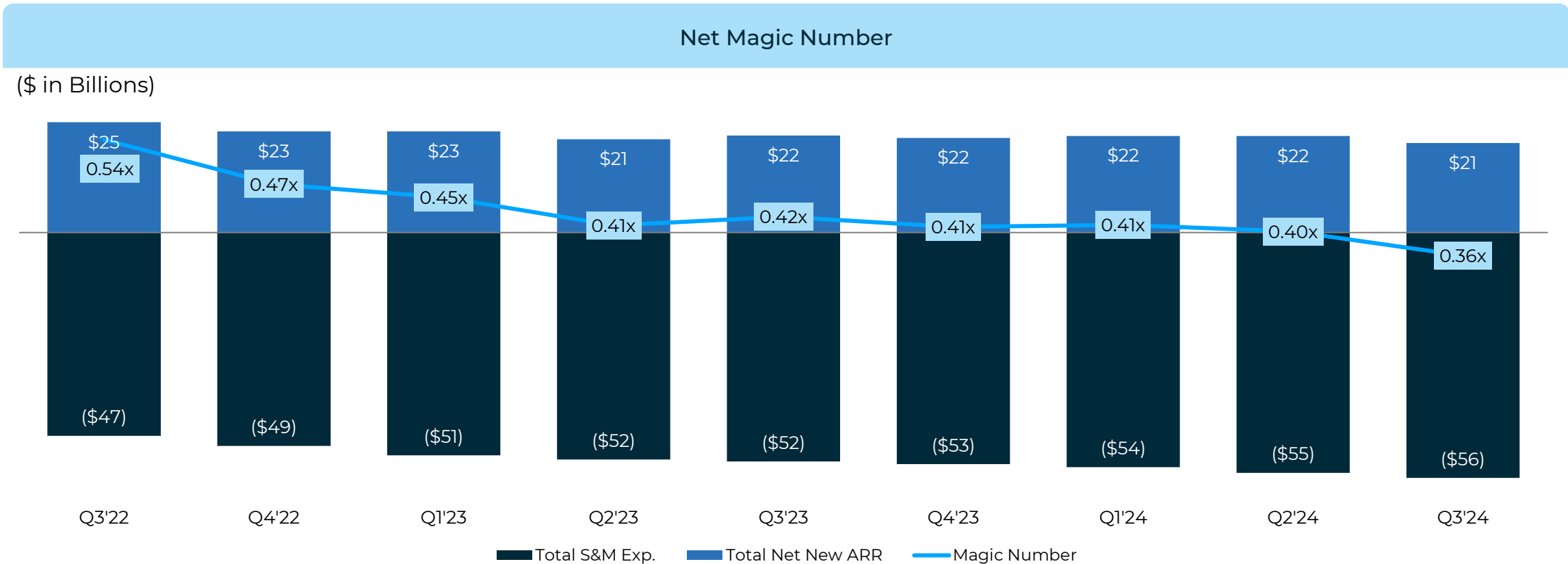
SaaS multiples have begun to stabilize . . .



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.



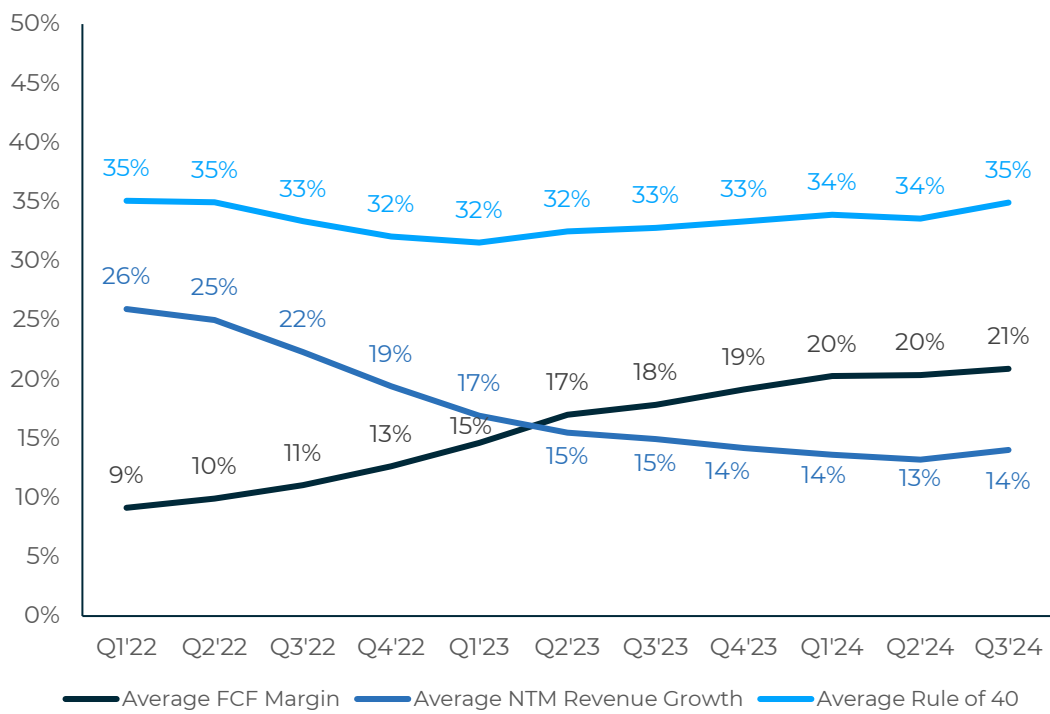
Despite a continued acceleration in sales and marketing spending, net new ARR has not inflected.

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

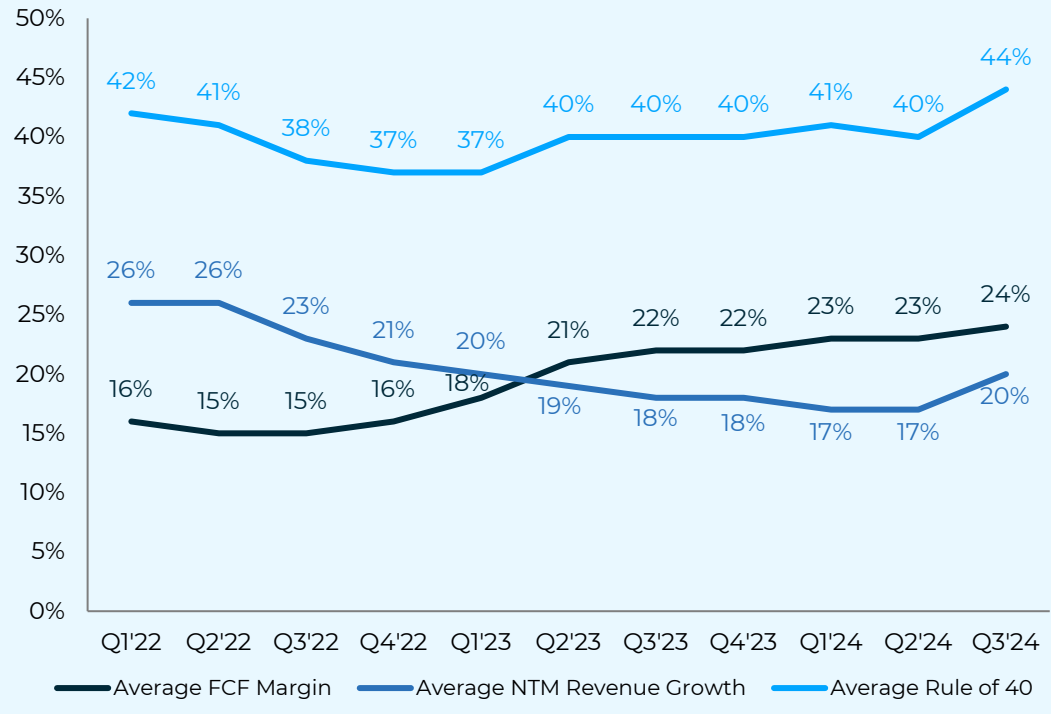


Macro uncertainty has catalyzed a push toward efficiency, which has come in different forms . . .

Average Software Company



Top Quartile Software Companies

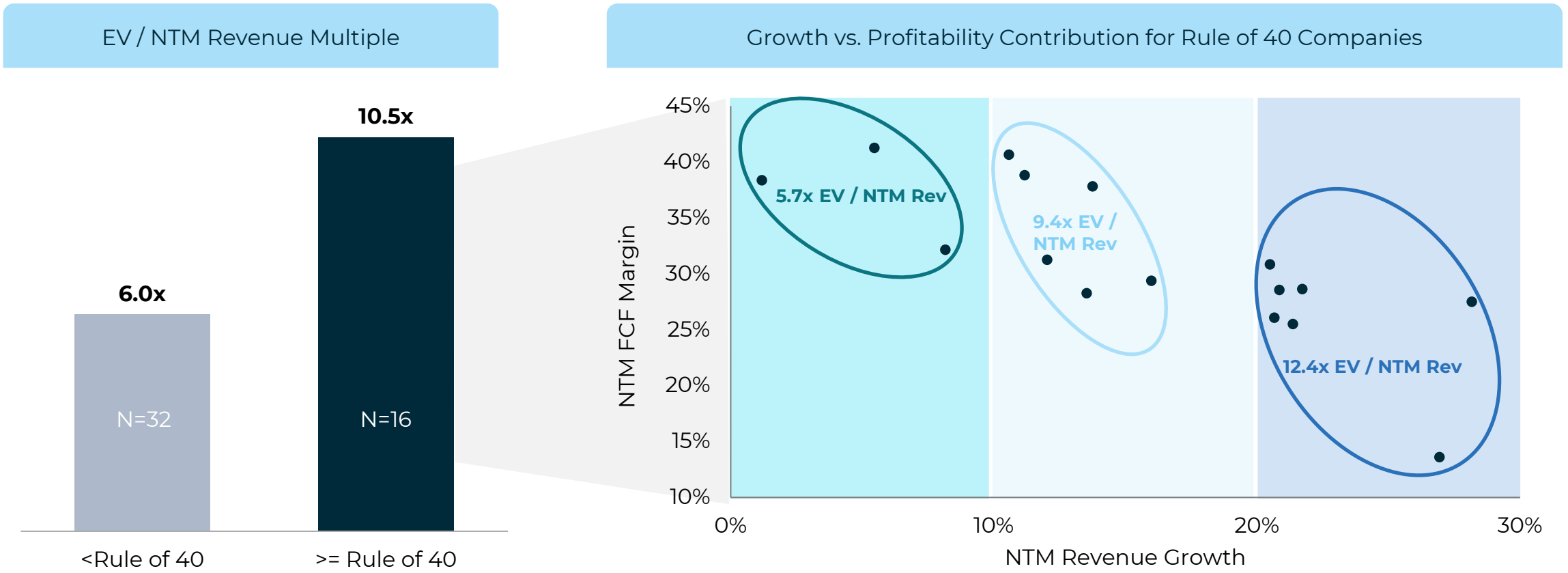


Top-quartile software companies have expanded profitability margins while reaccelerating growth to maintain Rule of 40 status.

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.

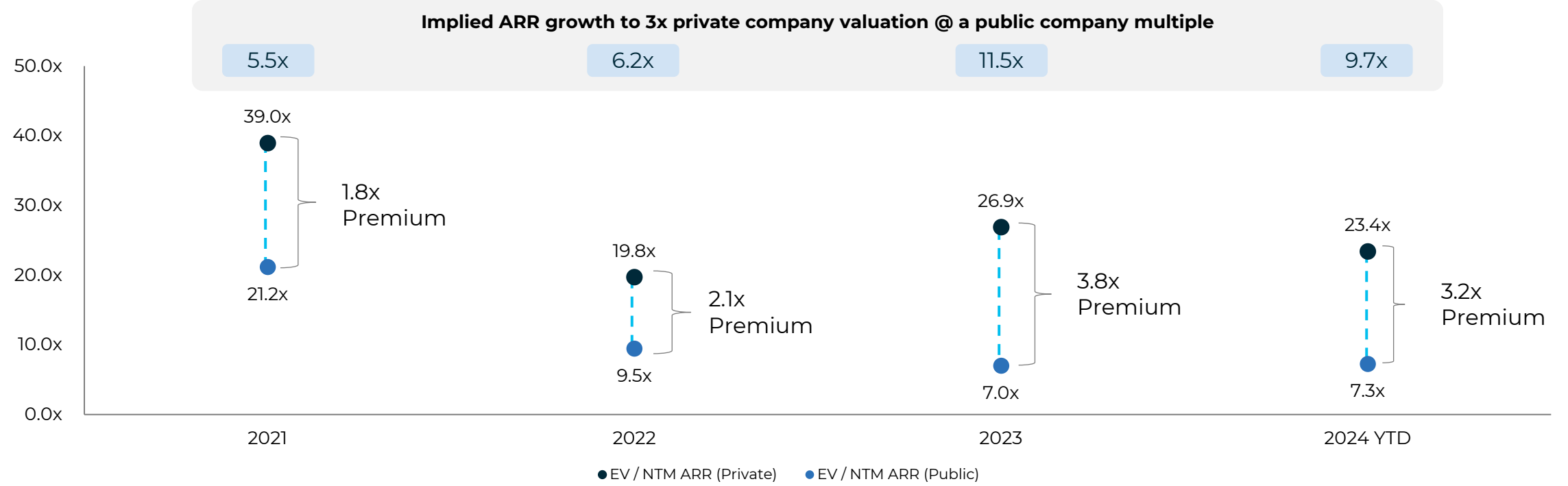


Within the Rule of 40 bucket, companies growing >20% trade at a premium compared to their slower-growth but more-profitable peers.

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

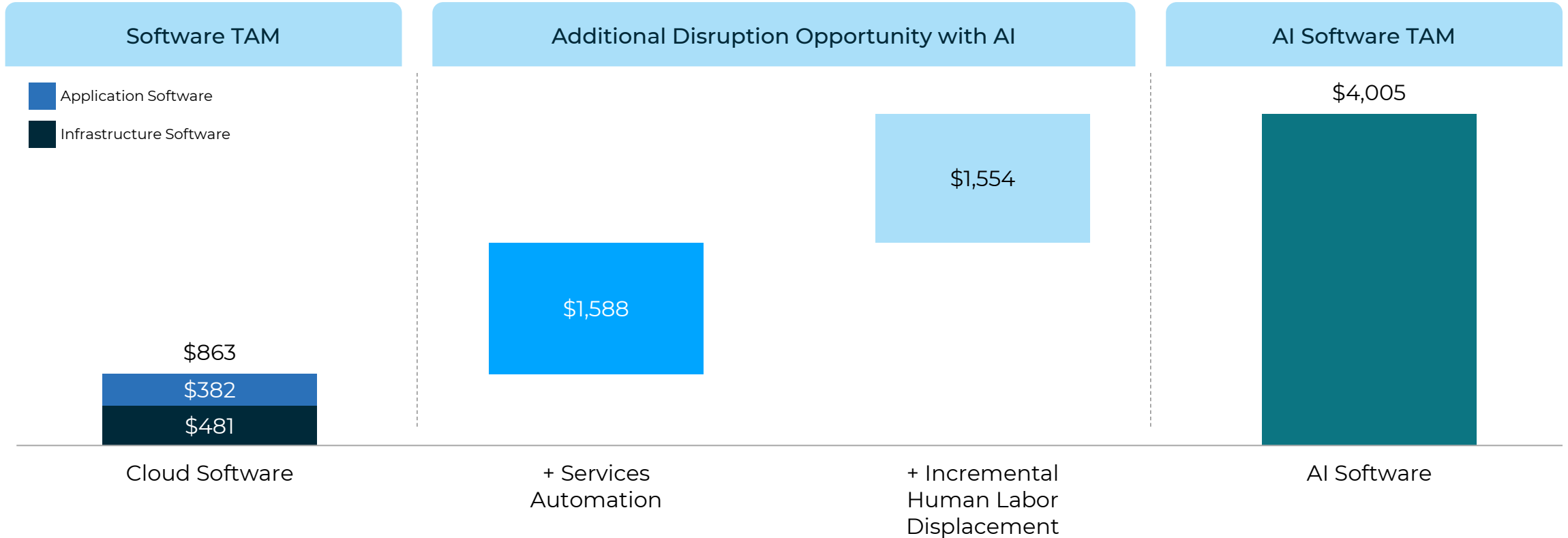
Inflection / 		Adept / 		character.ai / 	
\$ Raised	\$1.6B	\$ Raised	\$414M	\$ Raised	\$193M
Last Round Valuation	\$4.0B	Last Round Valuation	\$1.0B	Last Round Valuation	\$1.0B
Date of Last Round	Jun 2023	Date of Last Round	Feb 2023	Date of Last Round	Mar 2023
Date of Acquisition	Mar 2024	Date of Acquisition	Jun 2024	Date of Acquisition	Aug 2024
Time Since Last Round	~8 Months	Time Since Last Round	~1.5 Years	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.

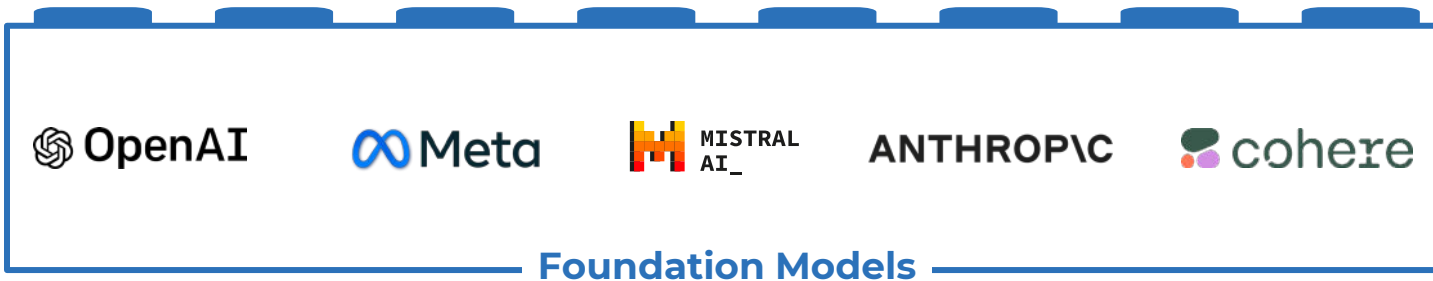
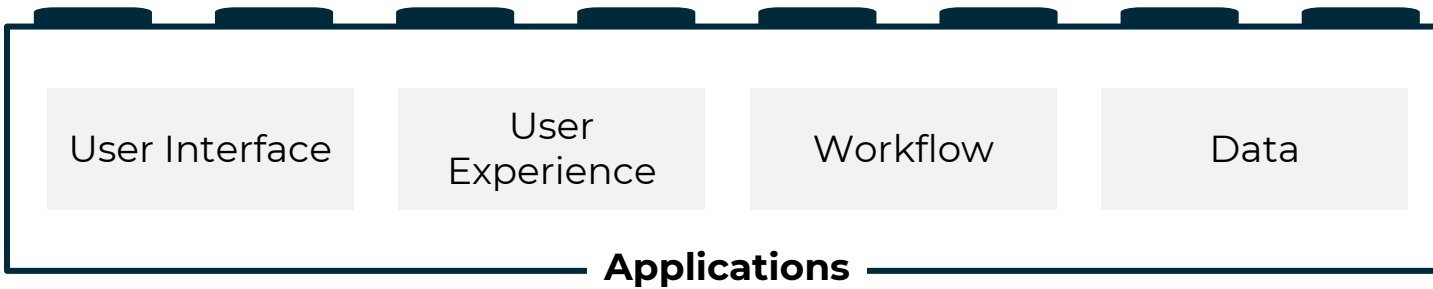
Source: Gartner.

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.

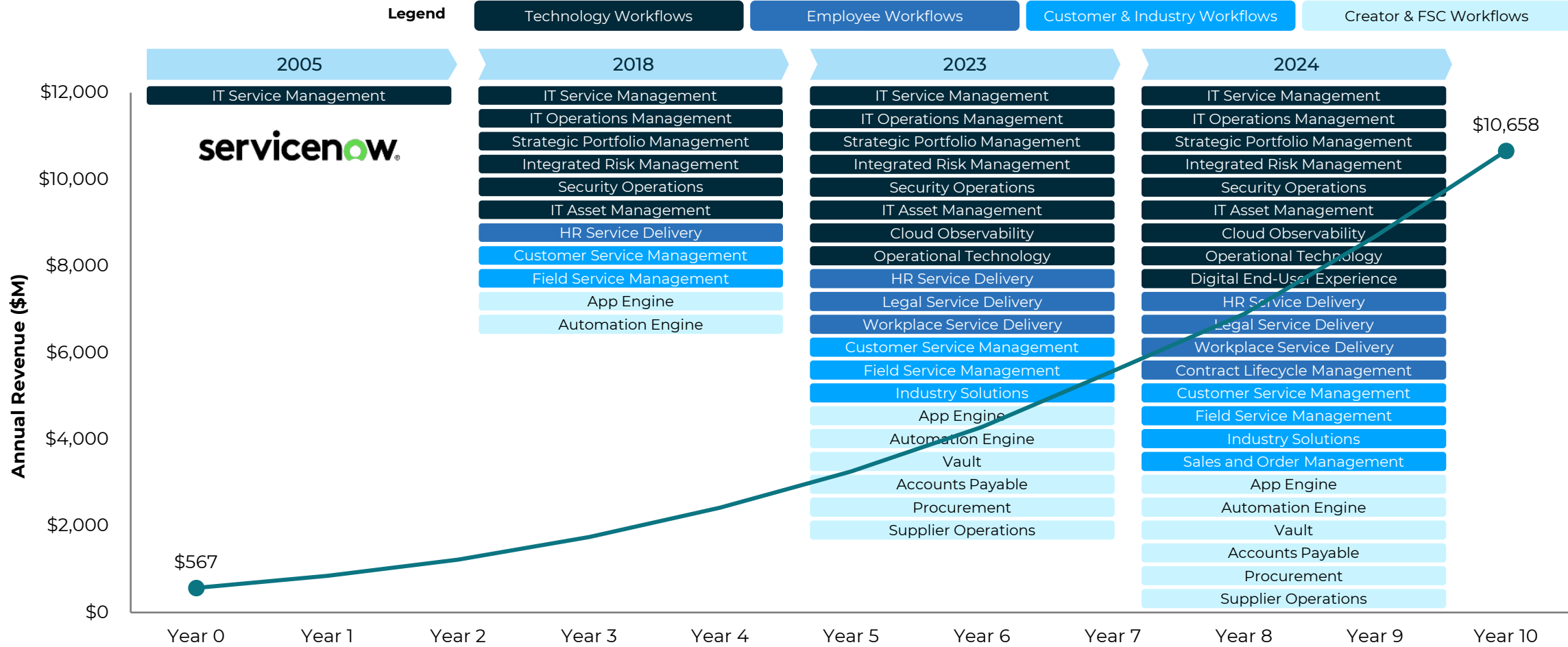
As technology moats erode and competition rises, product design and user experience become core differentiators for software companies.

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

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



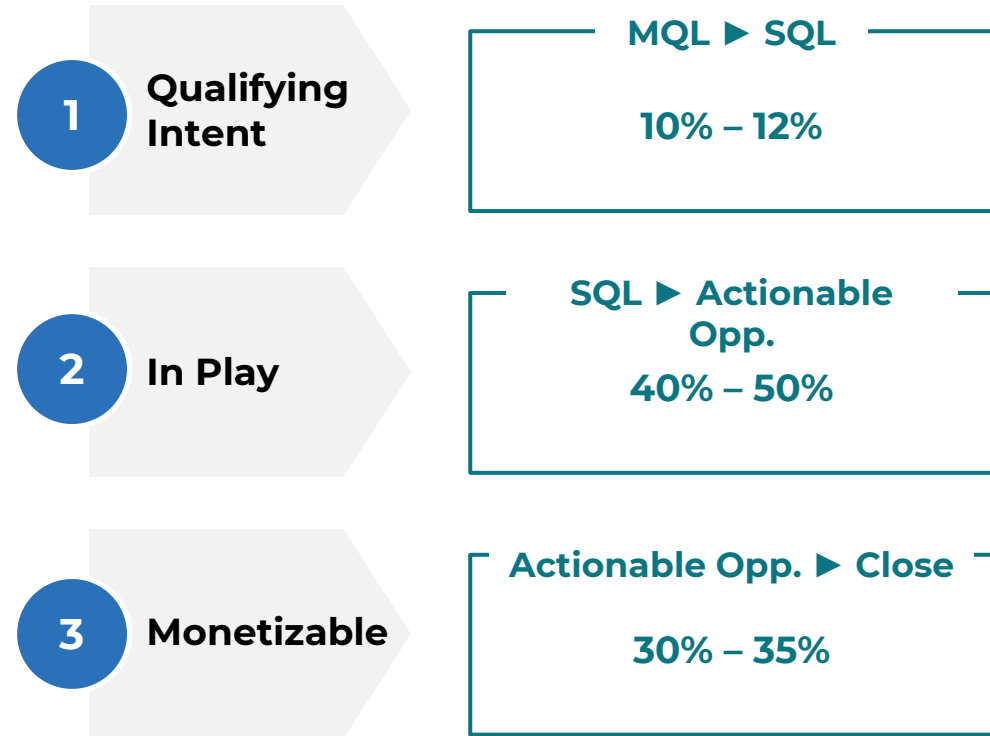
- + Pricing is directly tied to the cost of displaced human labor, making ROI clear by linking the cost of the product to the headcount savings achieved.
- Does not fit every AI use case and may ignore long-term value while focusing on near-term headcount cost savings.

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

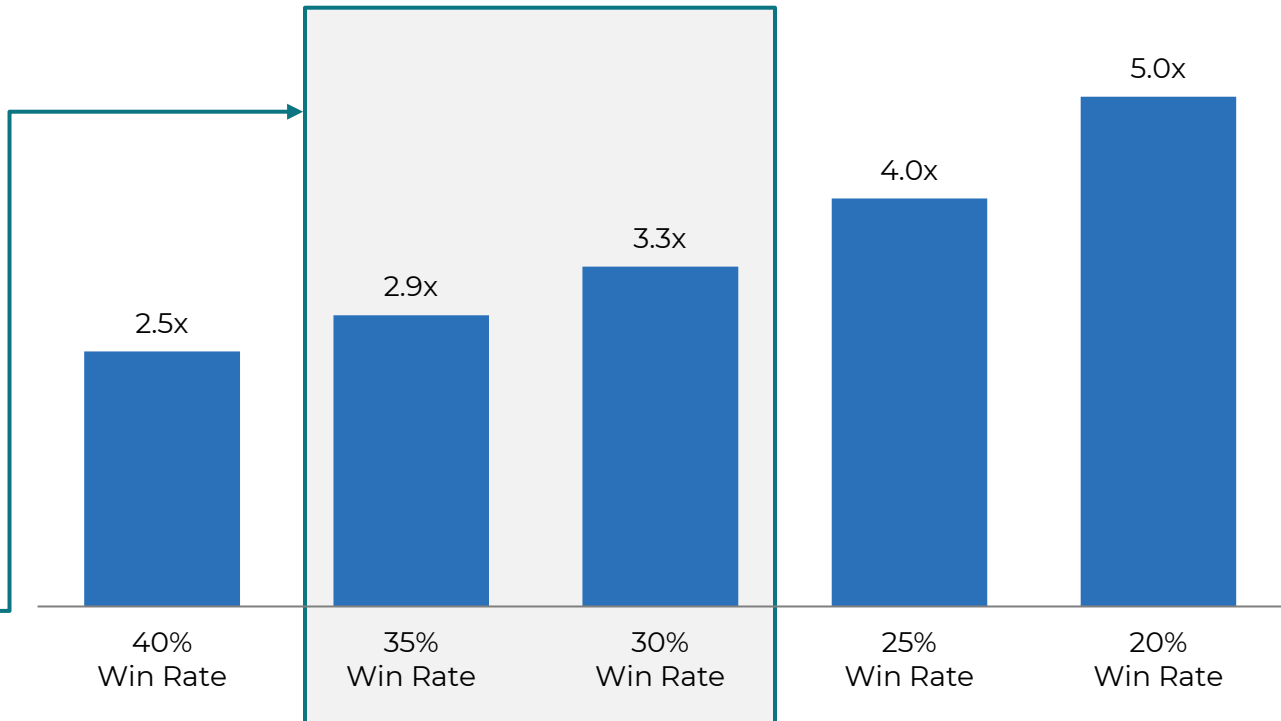
Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

5 Pipeline is an output of your sales funnel

Sales Funnel Breakdown

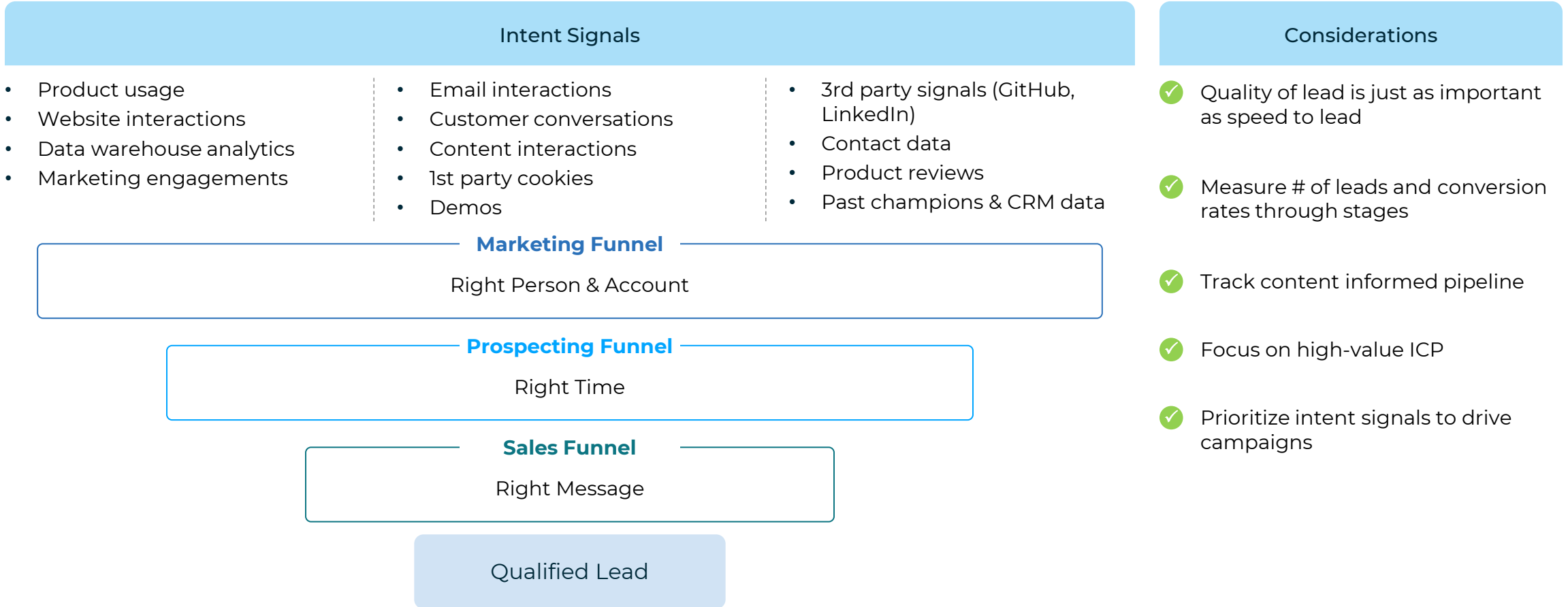


Opportunity Coverage



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

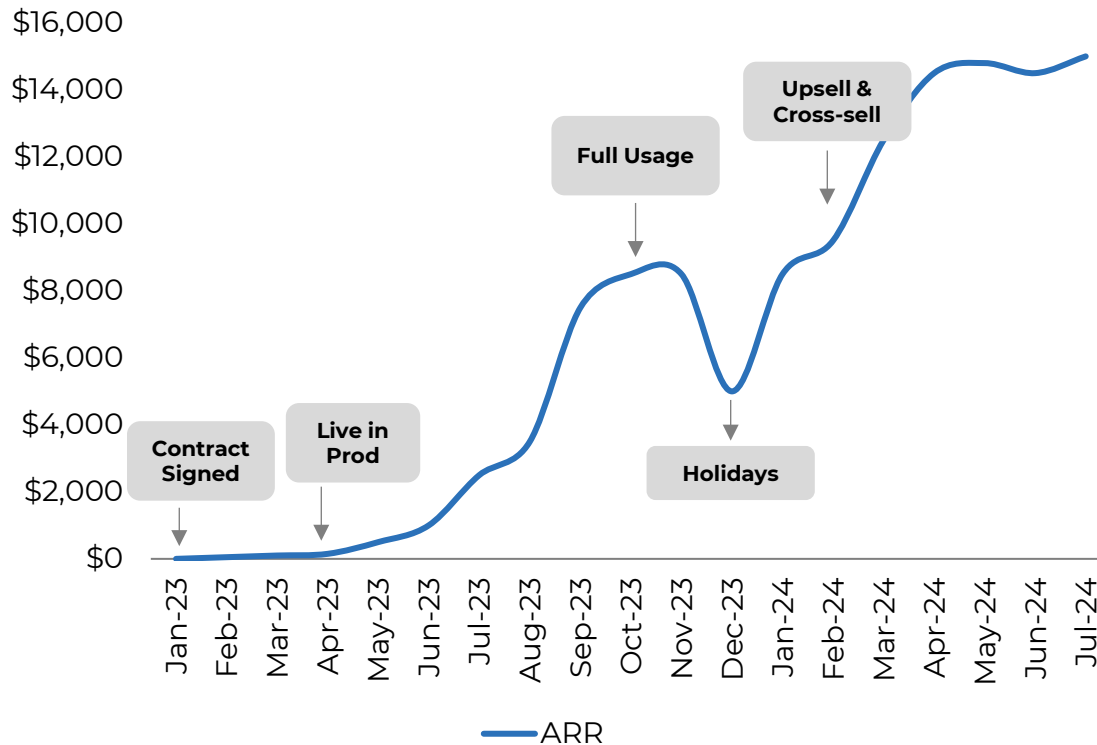
- ✓ Expands TAM through complimentary products.
- ✓ Increases stickiness through bundled offerings and multi-product adoption.

- ✗ 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

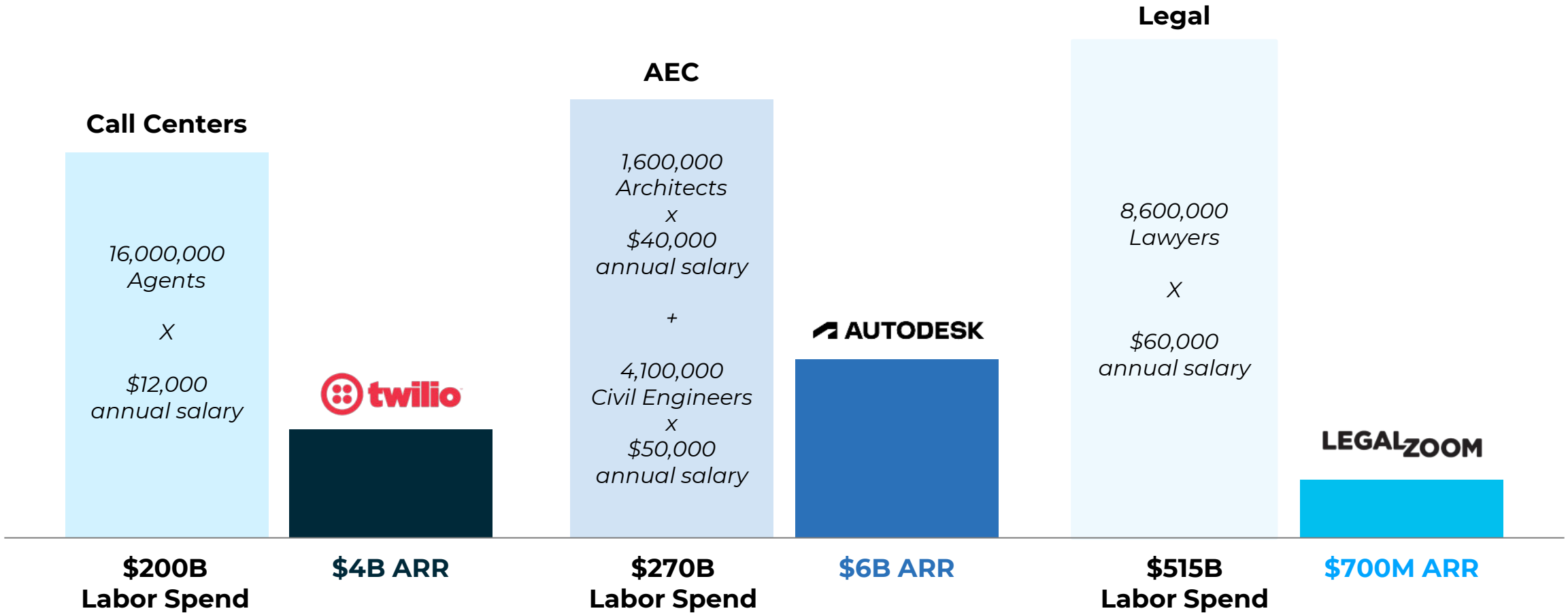
- Initial booking compensation (30-40% of total commission)
- Usage milestone bonuses (60-70% tied to consumption)
- Accelerators for exceeding usage forecasts

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

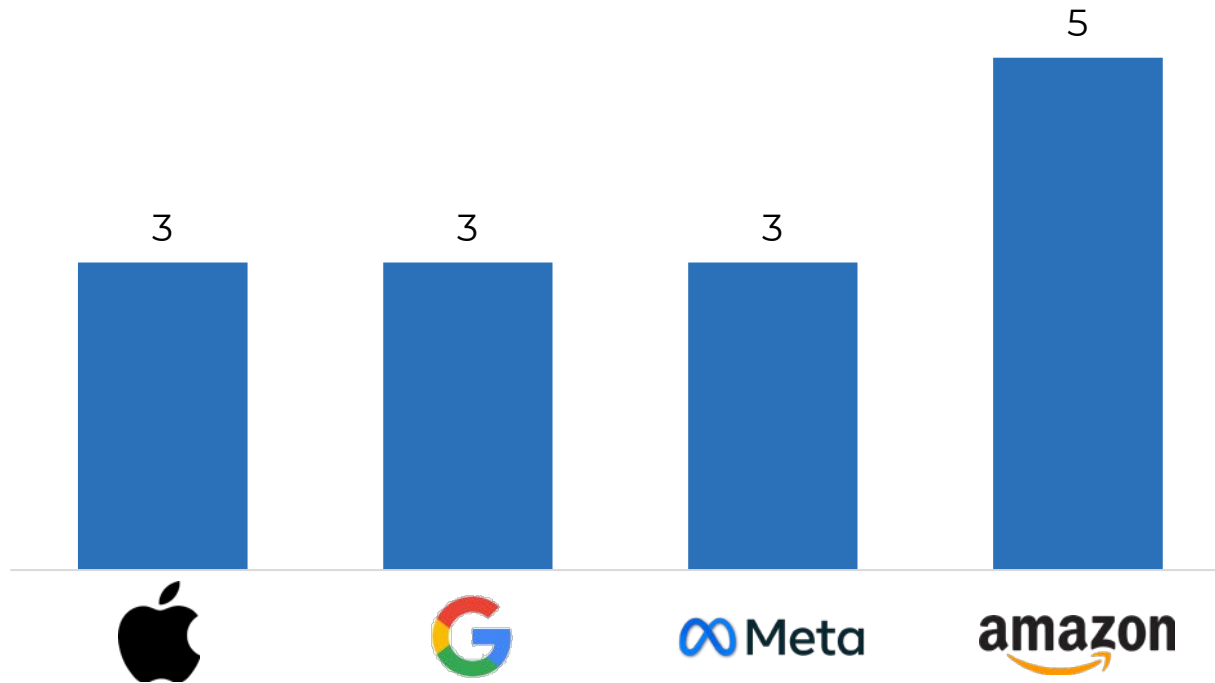


By automating high-value professional work in areas such as these, AI agents can convert salary budgets into software revenue, driving TAM growth.

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.”

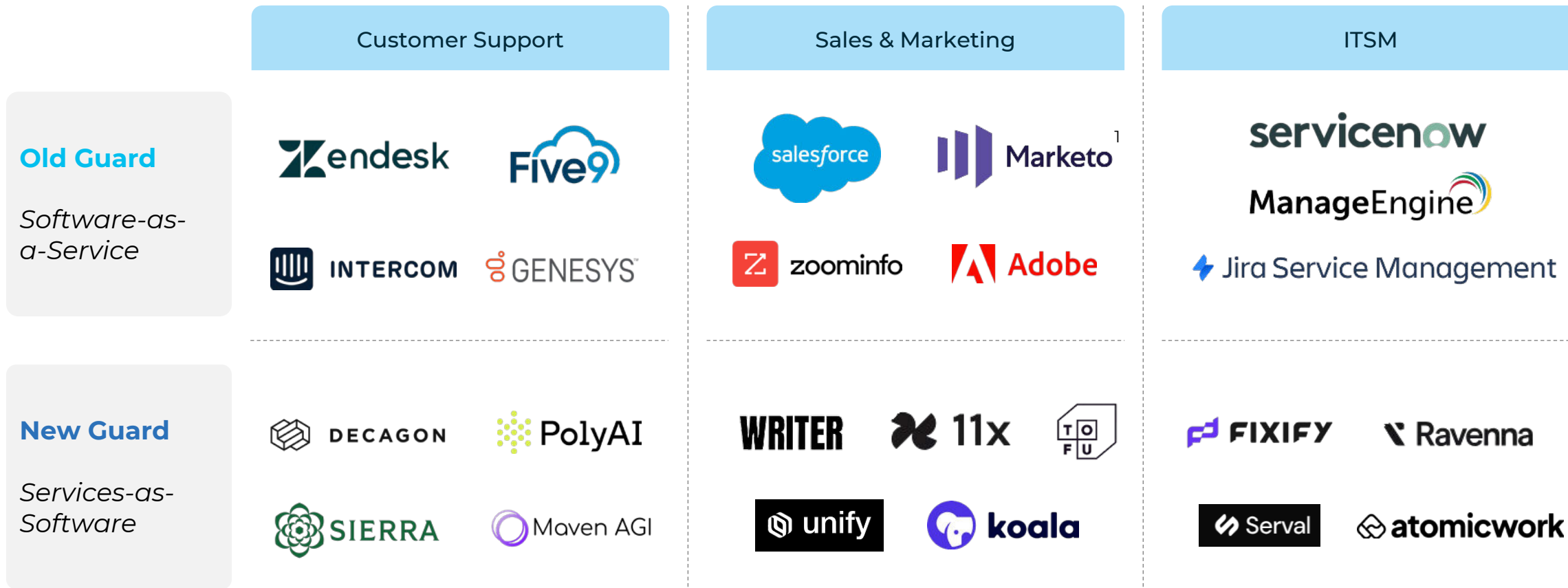
- Mark Zuckerberg, CEO of Meta

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

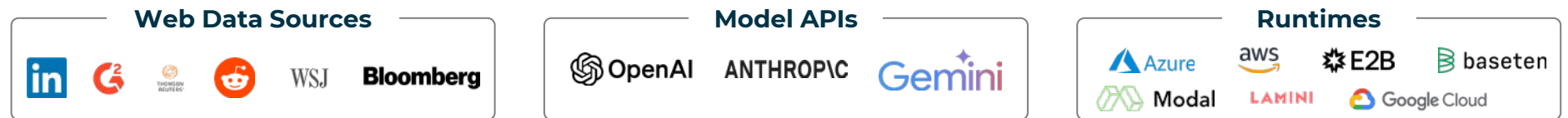
Applications



Developer Tools & Orchestration



Infrastructure

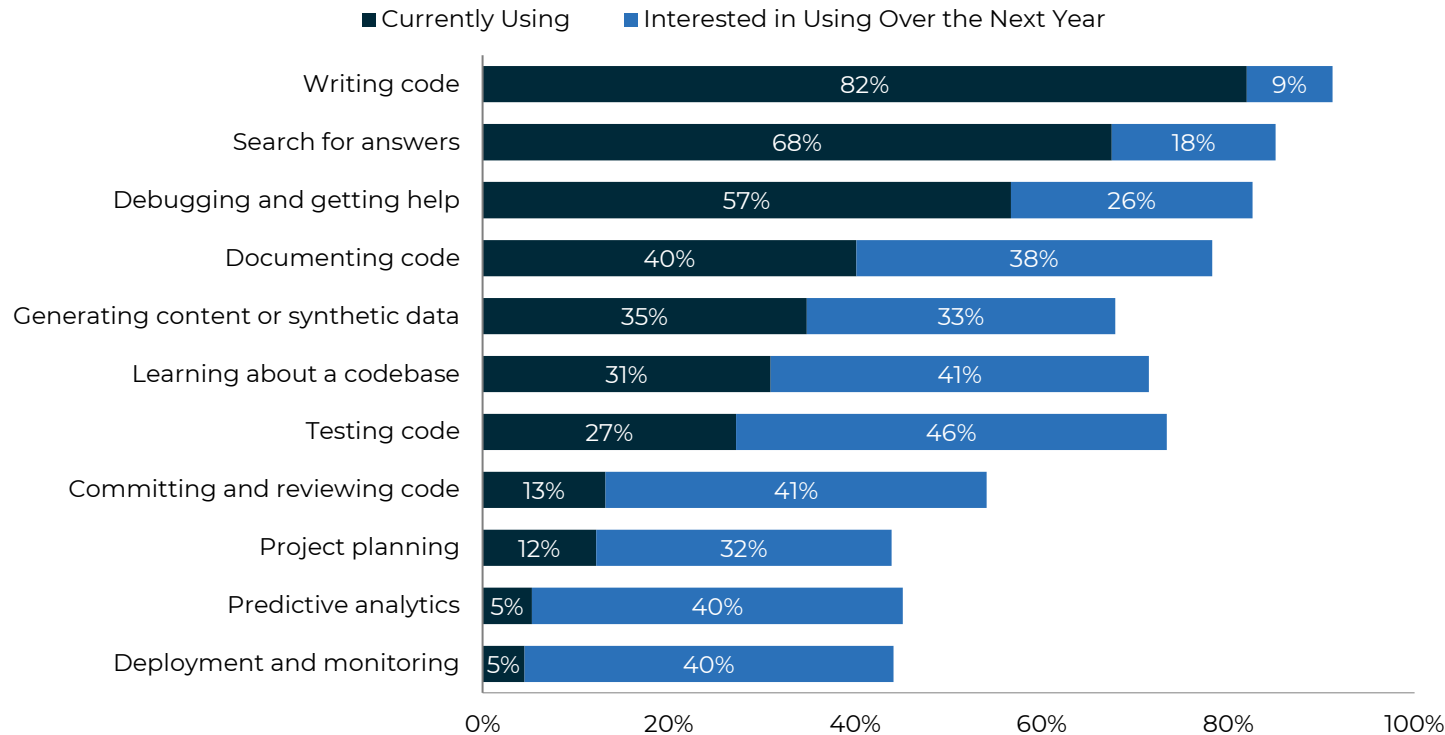


A new agent-native layer for internet information retrieval and automation is emerging.

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

Code Review

Documentation

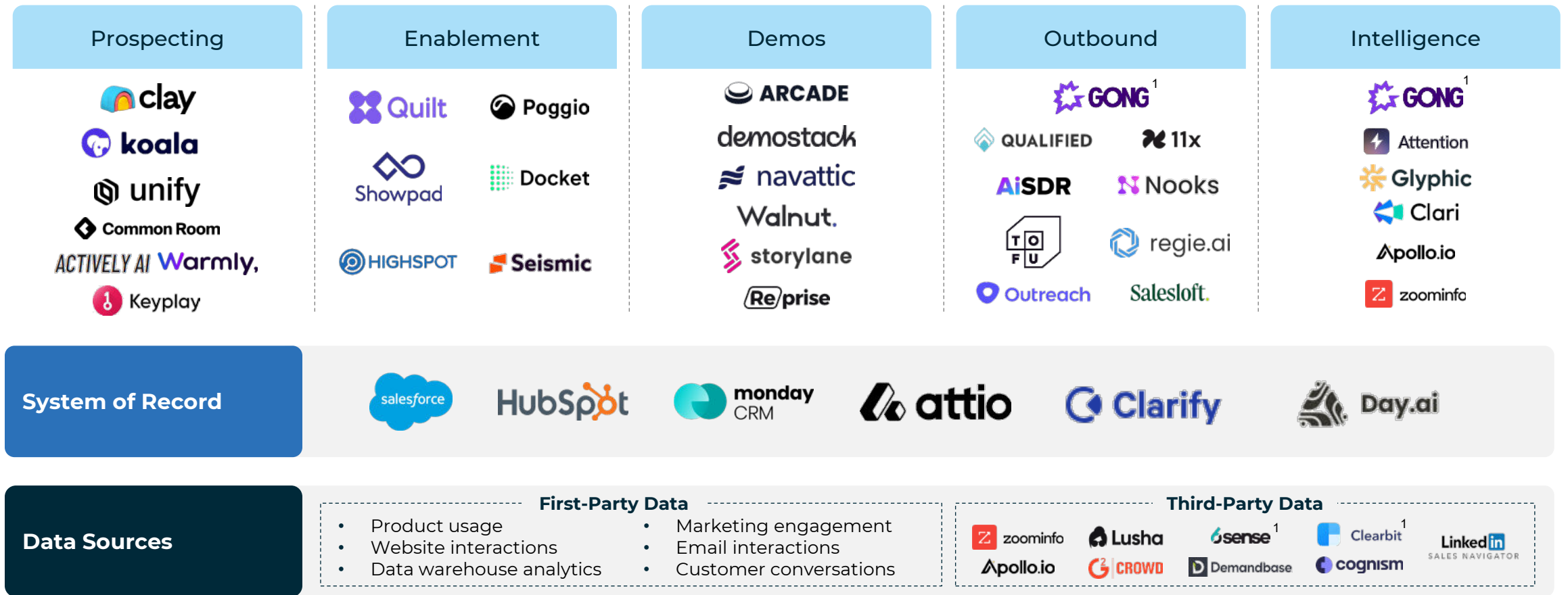
Testing

Deploys

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.

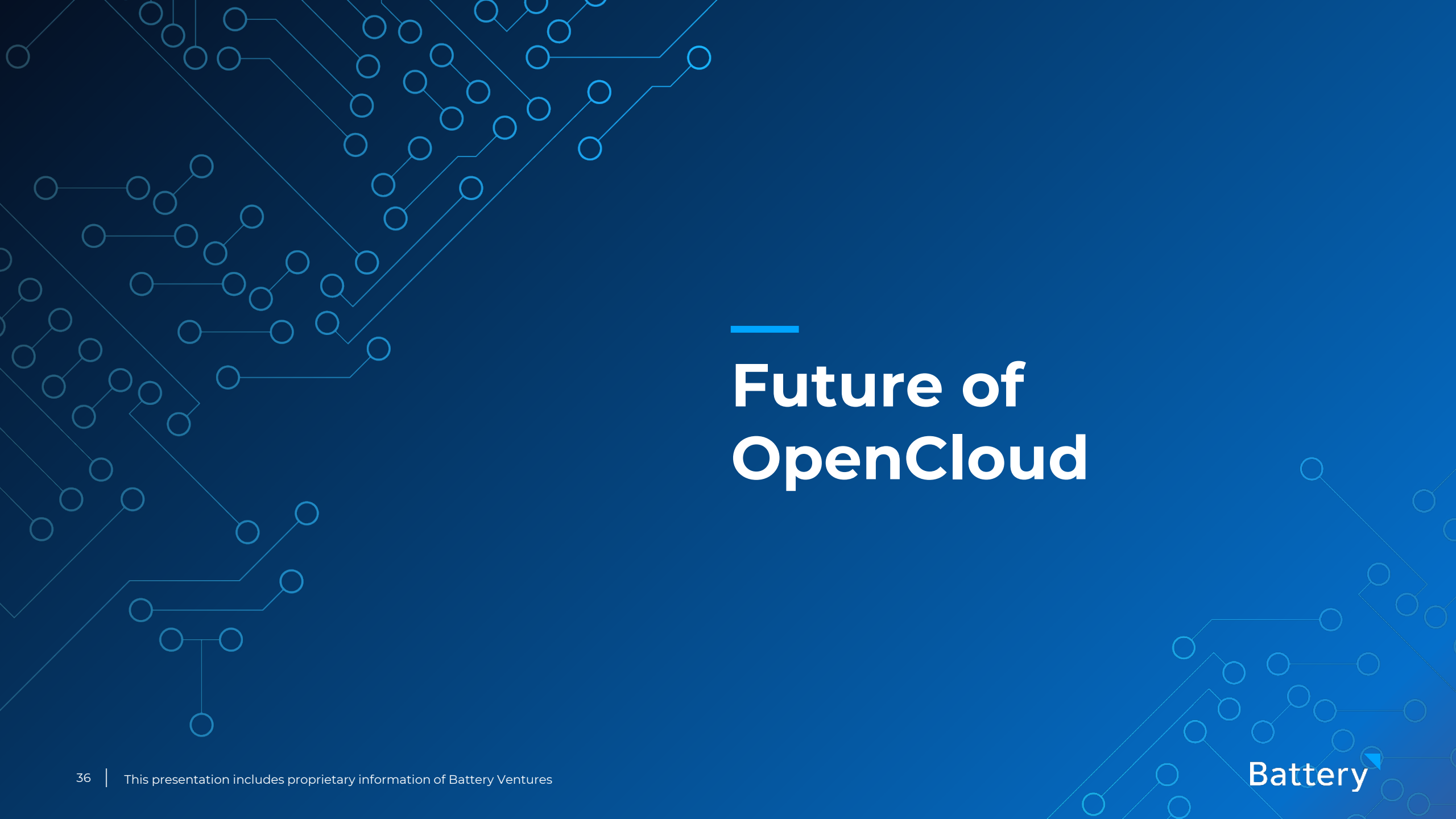
Note: 1. Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

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
Users	Data Teams	Data Teams + Business Users
Applications	<ol style="list-style-type: none"> 1 Visualization 2 Exploratory analysis 	<ol style="list-style-type: none"> 1 Visualization 2 Exploratory analysis 3 Self-serve analytics 4 Multi-language support (Python, SQL, NLP)
Data modalities	Structured	Structured, Semi-Structured, Unstructured
Data Sources	Google BigQuery amazon REDSHIFT snowflake databricks ¹	Google BigQuery amazon REDSHIFT snowflake databricks ¹ salesforce Adobe slack box

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

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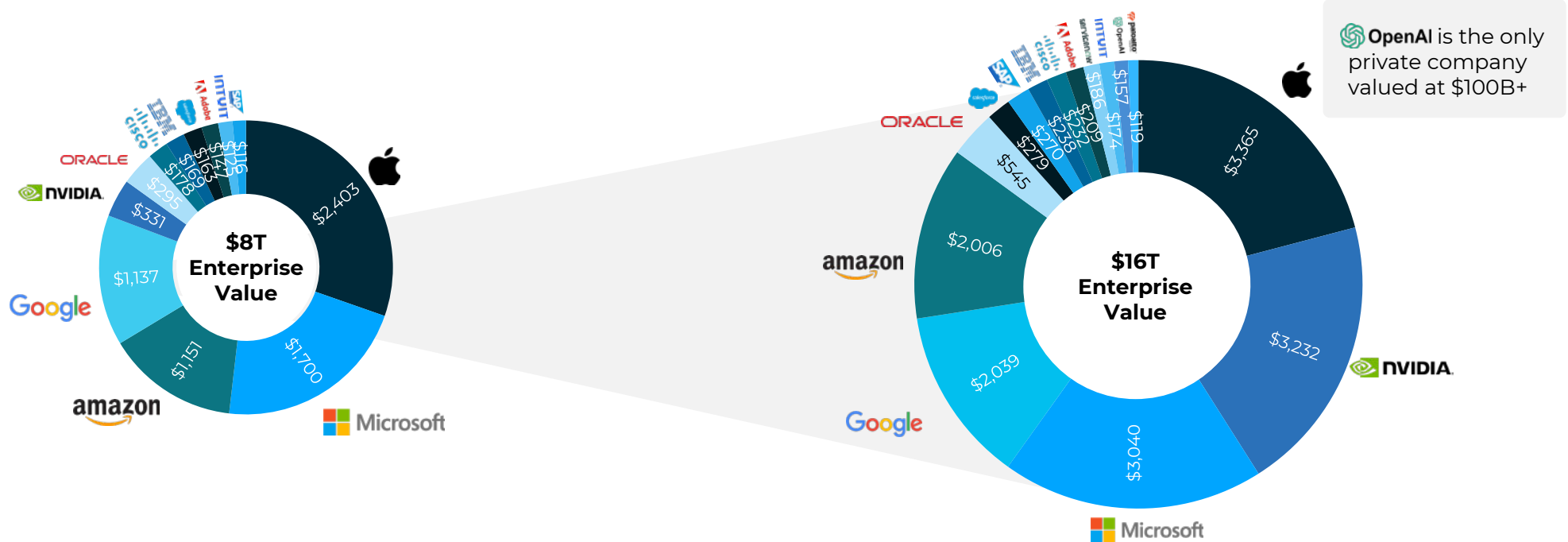
Future of OpenCloud

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

Hundred-Billion Dollar Club (\$B)

Pre-ChatGPT

Today



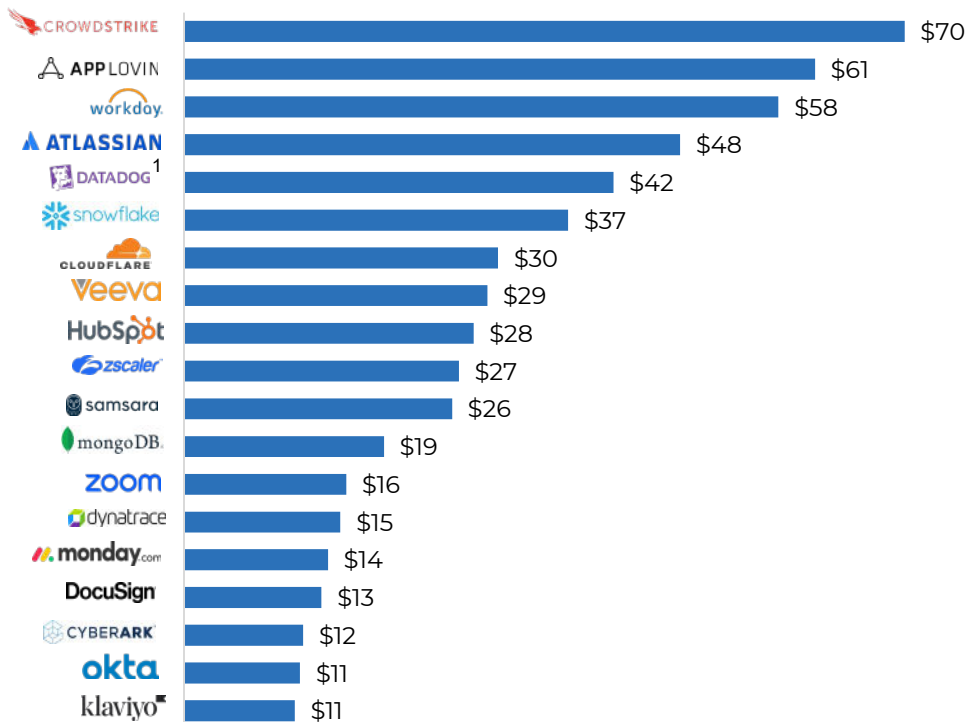
Cloud infrastructure and AI growth has created a new generation of trillion-dollar giants, with an unprecedented number of high-quality companies rapidly scaling.

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

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

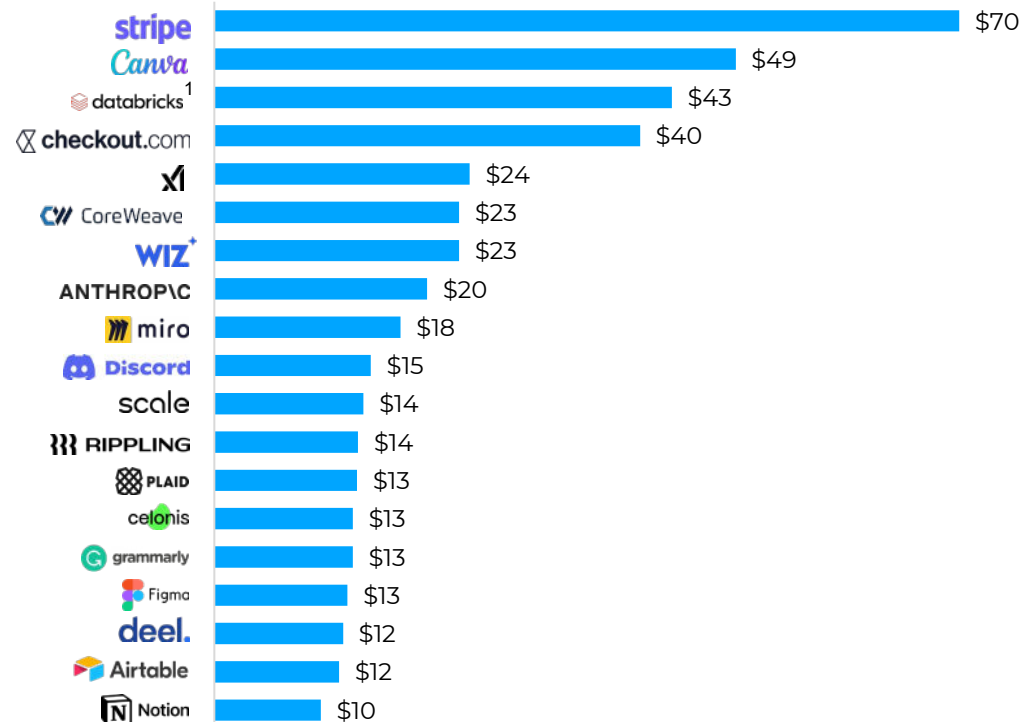
Public Company Ten Billion Dollar Club

(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		700	820	1,064	87%
2021		233	730	929	55%
2021		150	796	1,029	74%
2021		308	940	1,163	46%
2021		832	1,265	1,583	19%
2020		146	412	501	34%
2020		533	3,475	4,356	64%
2019		270	1,604	2,109	48%
2019		384	3,855	4,779	58%

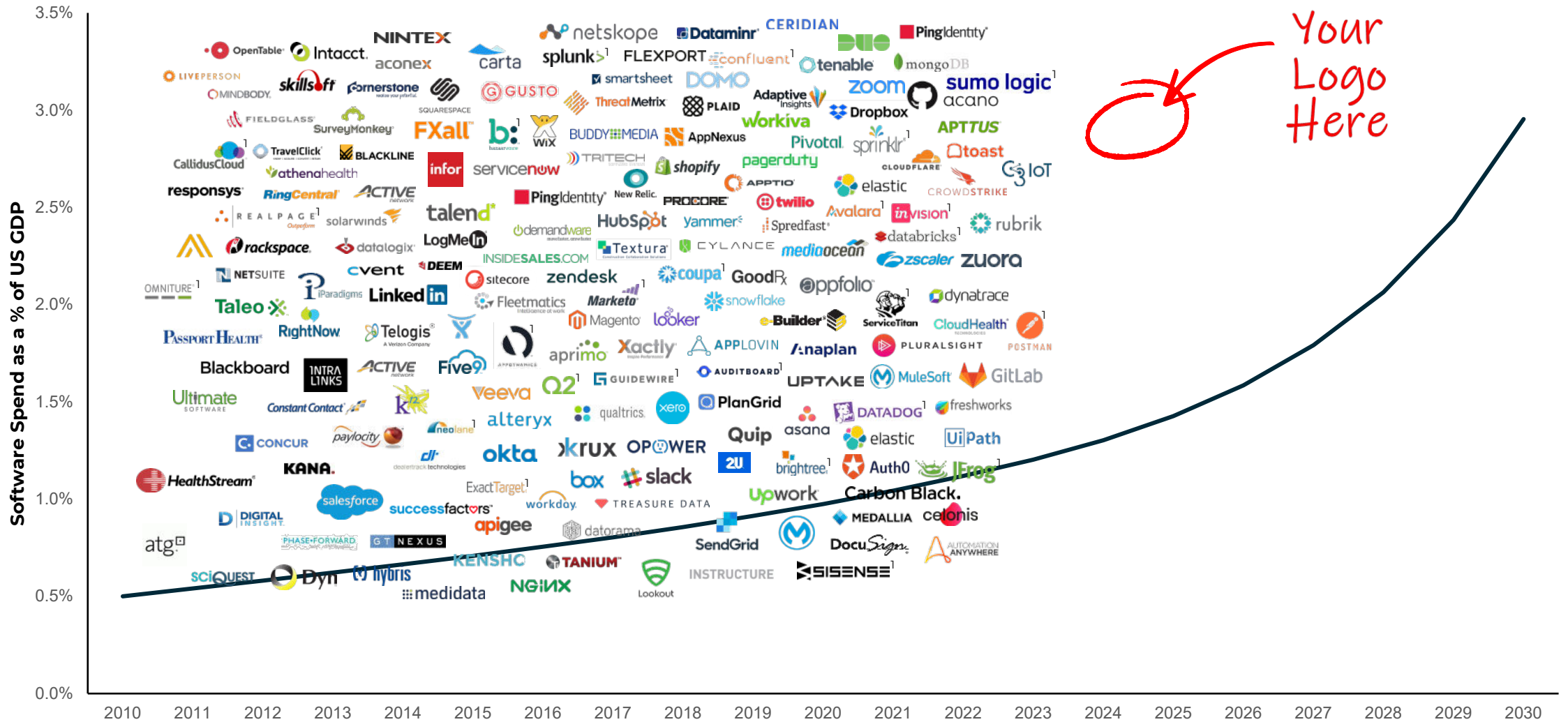
		Run-Rate Revenue (\$M)			
		IPO	Current	CY '25E	IPO to CY '25E CAGR
2019		333	2,581	3,224	54%
2018		227	1,390	1,586	37%
2018		180	2,371	2,872	51%
2017		142	1,912	2,270	47%
2017		195	2,584	2,828	42%
2016		237	4,330	4,740	42%
2015		385	4,526	5,541	34%
2012		263	8,758	9,782	34%
2012		190	10,508	13,242	40%

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



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Source: Gartner Research

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Appendix: Public Comp Set

01 Adobe	11 Crowdstrike	21 Guidewire ¹	31 Procore	41 Twilio
02 Amplitude ¹	12 CyberArk	22 Rubrik	32 RingCentral	42 UiPath
03 Asana	13 Datadog ¹	23 Hubspot	33 Salesforce	43 Wix
04 Atlassian	14 Docusign	24 Jfrog ¹	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 ¹	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 ¹	
10 Confluent ¹	20 Gitlab	30 Palo Alto Networks	40 Tenable	

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