



November 2022

State of the OpenCloud 2022

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Battery

STILL
↓

We're Long
Cloud-Infrastructure
& Open-Source Software



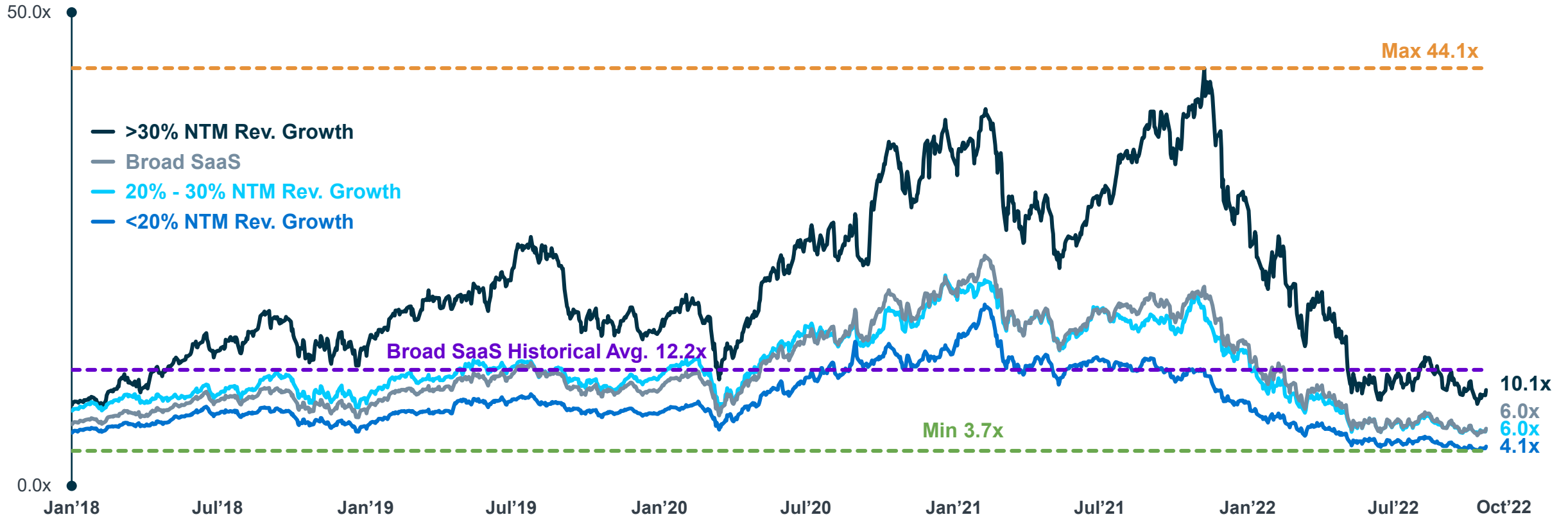
We are long cloud-infrastructure & open-source software

- 1 Infrastructure-software fundamentals remain resilient despite macro outlook
- 2 Measured growth is being rewarded over growth at all cost
- 3 Cloud providers continue to exhibit growth durability and profitability
- 4 Public cloud-native companies are reaching scale and the private backlog is promising
- 5 Cloud software is the deflationary force enabling productivity in a high inflation environment
- 6 Cloud-native is not an option, it's a necessity

Software revenue multiples are down across the board



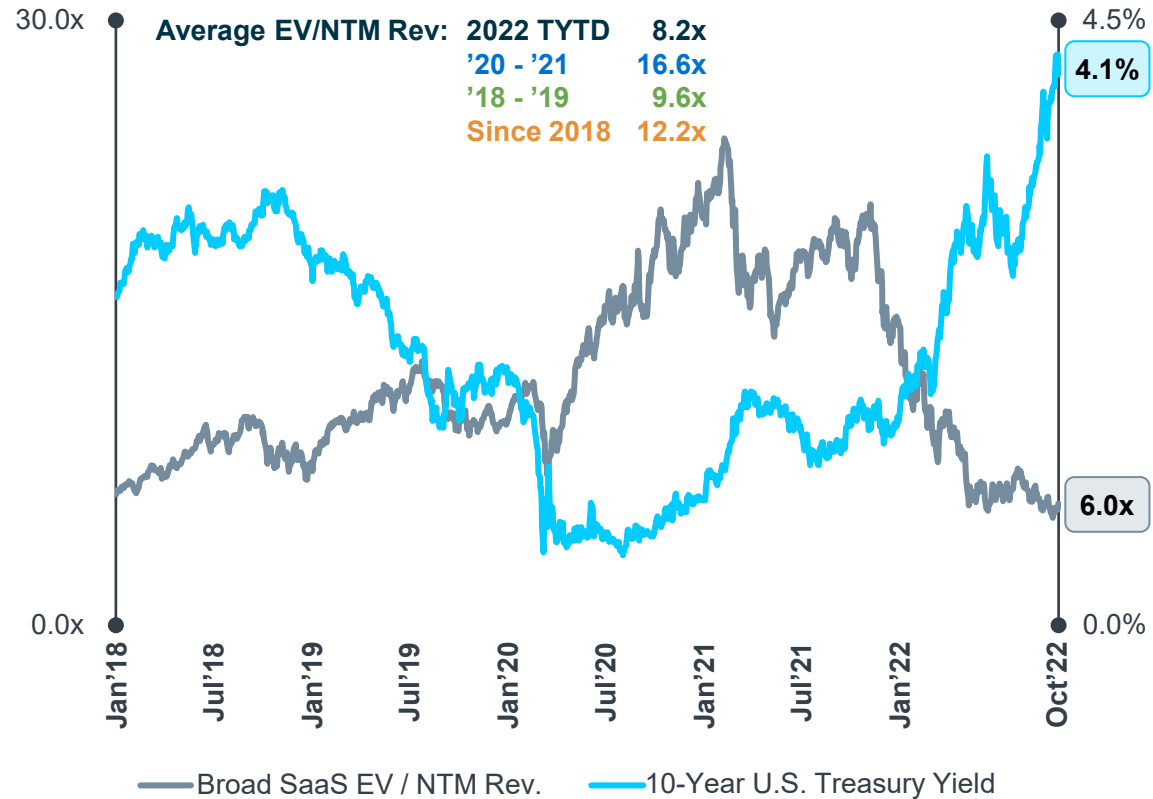
Enterprise Value / NTM Revenue



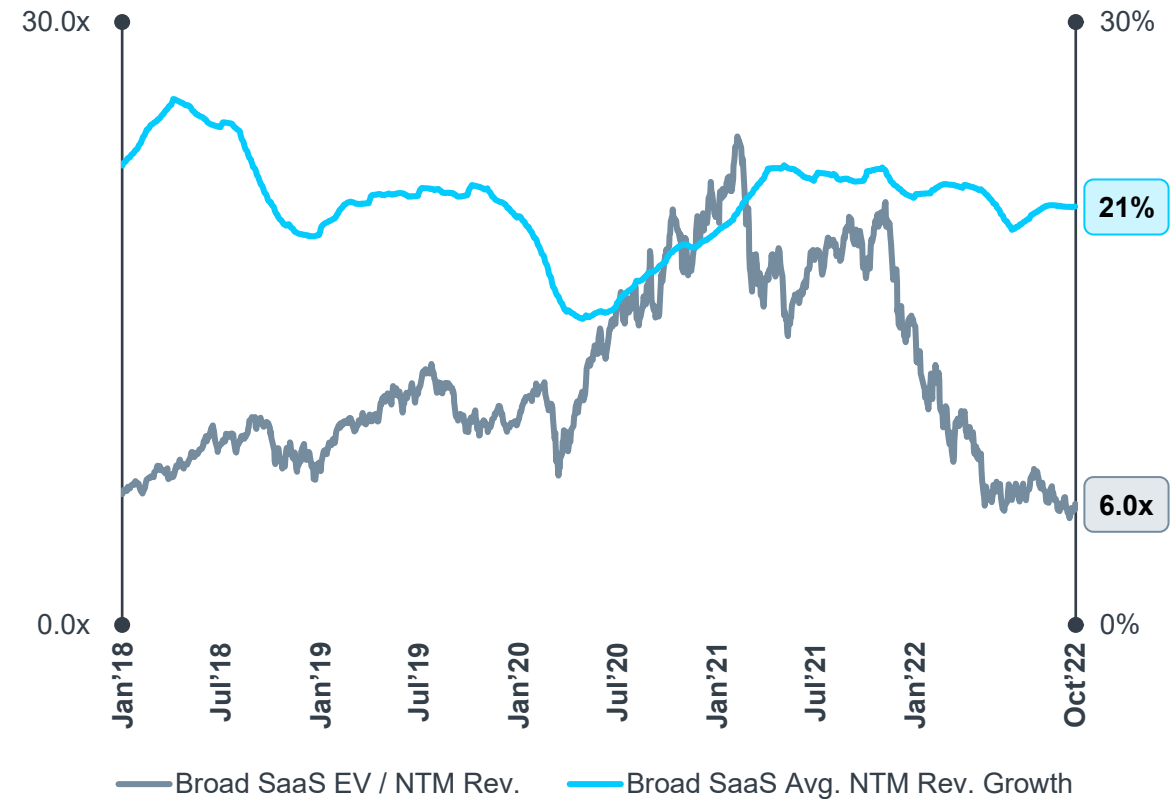
Software revenue multiples have compressed from 2021 highs to below the historical average since 2018.

Interest rates and macro sentiment are driving the correction despite stable revenue growth

Rising interest rates have resulted in multiple compression



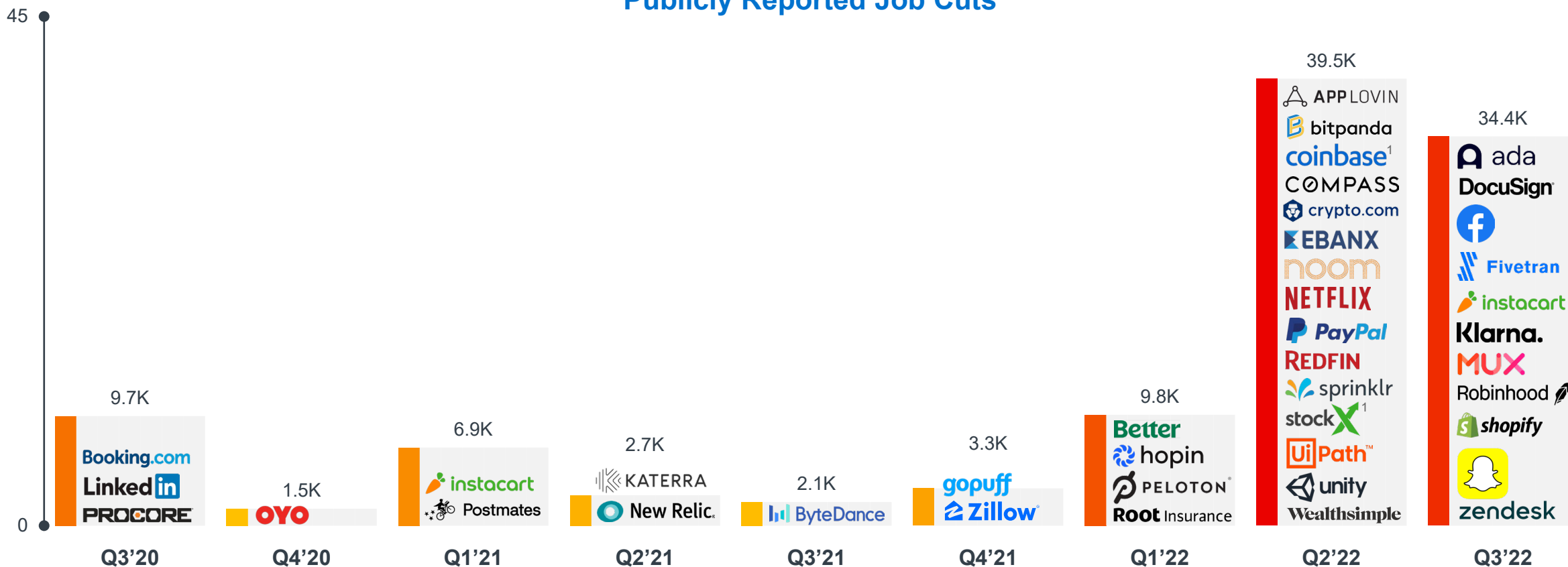
Company growth forecasts remain healthy



While company fundamentals remain strong, software multiples have compressed as a result of ongoing macro pressures, including rising interest rates.

The tightening of the economy is causing companies to reevaluate their cost structure

Publicly Reported Job Cuts



More than 70K positions were eliminated across 400+ companies globally in the last two quarters as companies reevaluate their cost structure in light of macro headwinds.

There is pain ahead for private companies

Private Software Companies

1,000+
Global unicorns
in the last 10 years

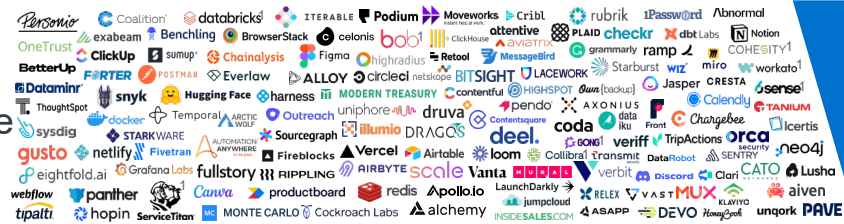


Public Software Companies



200
Public software companies
in the last 10 years

400
\$3B average
valuation



70
\$1B+ NTM
revenue

50
Valuation
of \$5B+



60
Valuation
of \$5B+

15
Valuation
of \$10B+



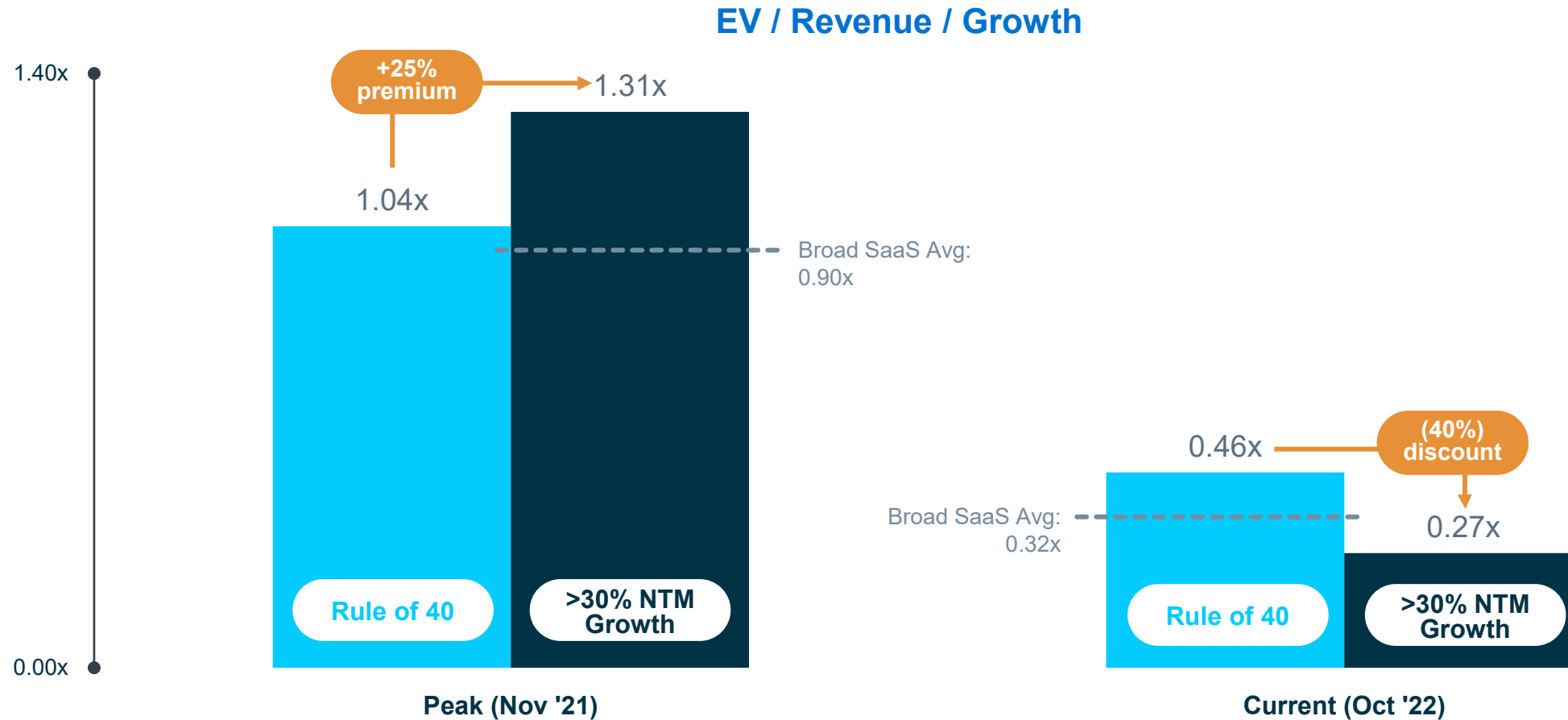
40
Valuation
of \$10B+

Highly-valued software unicorns have a high bar to meet to transition to successful public companies, often requiring a 10x+ revenue ramp and being mindful about margins early on.

Sources: Pitchbook, CapIQ

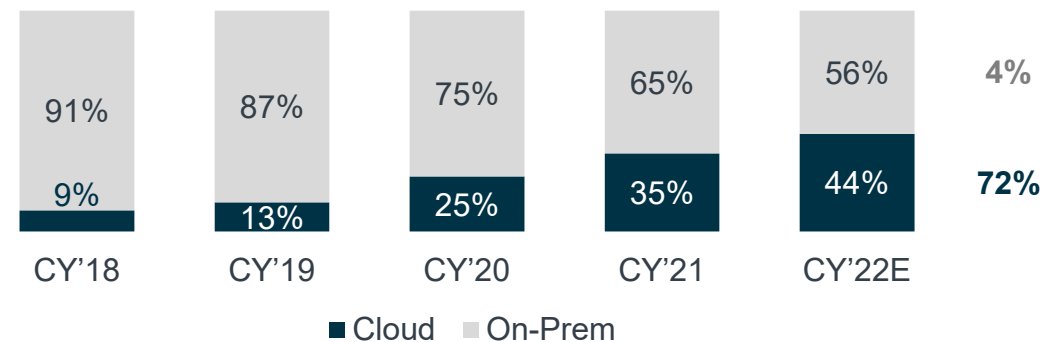
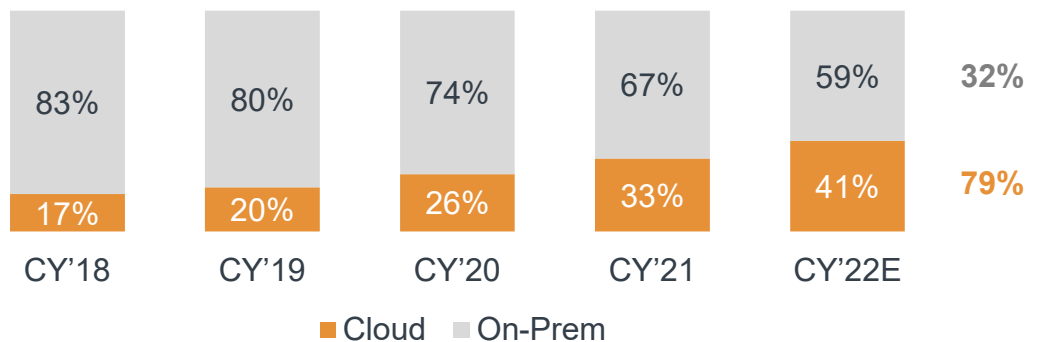
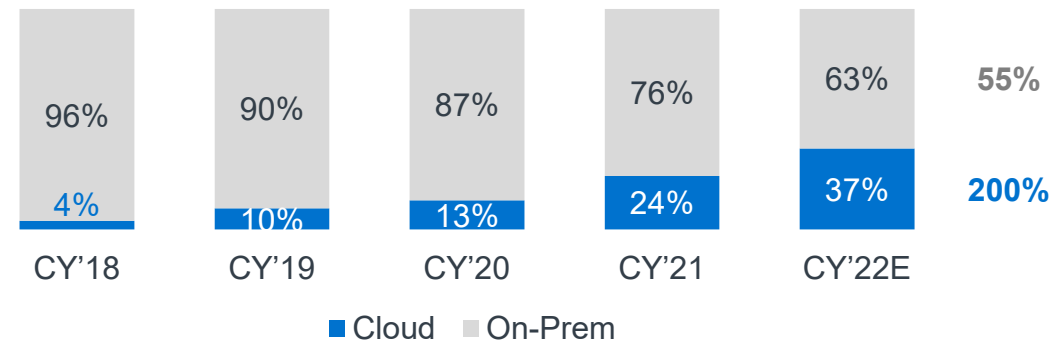
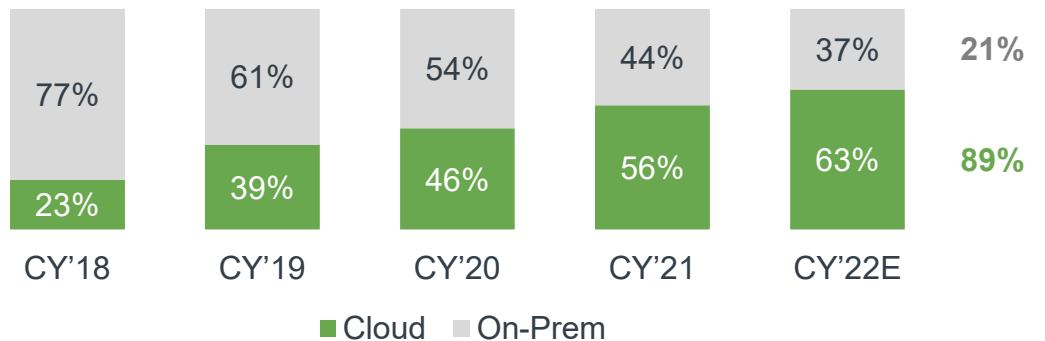
Note: ¹ Affirm, Akamai, Bob, Cohesity, Collibra, Confluent, Databricks, DataDog, Gong, Nutanix, Pendo, Postman, Sabre, ServiceTitan, Splunk, Workato and 6sense are current or past Battery portfolio companies. For a full list of all Battery investments, please click [here](#). Unicorn indicates a valuation of \$1B or more. Public companies considered with a minimum market cap of \$500M+. Excludes Figma due to announced Adobe acquisition.

The market is shifting from “growth at all cost” to “measured growth”



On a growth-adjusted basis, some of the fastest-growing software companies have been disproportionately penalized as the market rewards profitability and measured growth.

Cloud businesses are core to driving market value



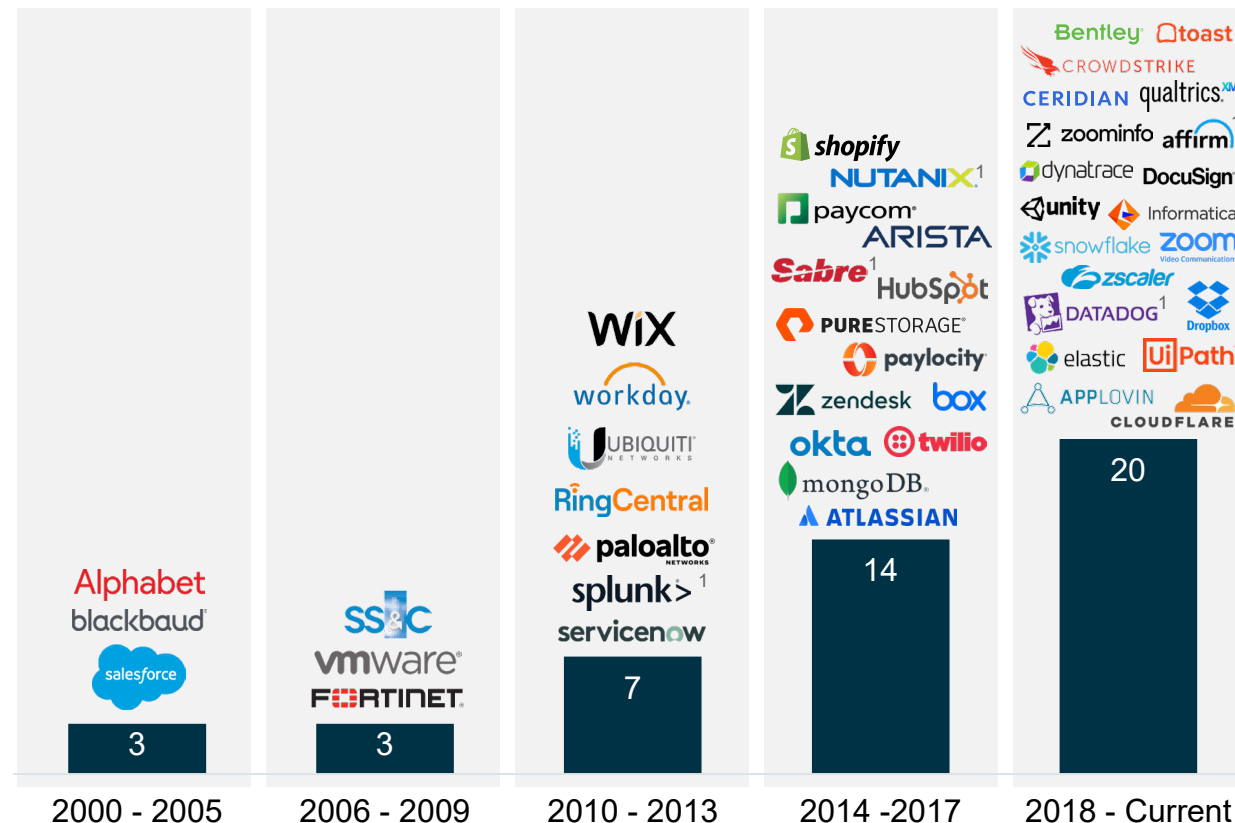
Across infrastructure-software companies, cloud revenue growth far outpaces that of on-prem, and cloud serves as the foundation for long-term sustainable growth.

Cloud-infrastructure fundamentals remain healthy

Top 10 Highest-Valued Software Companies by Multiple

| Company | Cloud Infra? | Market Cap | NTM Rev. | NTM Growth | FCF Margin | Rule of 40 | EV / NTM Rev |
|-------------------------|--------------|------------|----------|------------|------------|------------|--------------|
| snowflake | ✓ | \$64,411 | \$2,517 | 54% | 15% | 69 | 22.5x |
| CLOUDFLARE | ✓ | \$18,914 | \$1,136 | 40% | 2% | 42 | 16.1x |
| zscaler | ✓ | \$22,701 | \$1,502 | 38% | 23% | 61 | 15.9x |
| DATADOG ¹ | ✓ | \$29,636 | \$1,899 | 39% | 21% | 60 | 15.6x |
| ATlassian | ✓ | \$52,533 | \$3,599 | 28% | 22% | 50 | 15.3x |
| zoominfo | ✗ | \$18,841 | \$1,241 | 34% | 36% | 70 | 15.0x |
| GitLab | ✓ | \$8,189 | \$495 | 49% | (8%) | 41 | 14.9x |
| CROWDSTRIKE | ✓ | \$38,323 | \$2,640 | 44% | 29% | 73 | 14.6x |
| bill.com | ✗ | \$14,445 | \$968 | 51% | 2% | 53 | 14.6x |
| SentinelOne | ✓ | \$7,355 | \$542 | 79% | (15%) | 64 | 12.9x |
| Top 10 SaaS Avg. | | | | 45% | 13% | 58 | 15.7x |
| Broad SaaS Avg. | | | | 21% | 5% | 26 | 6.0x |

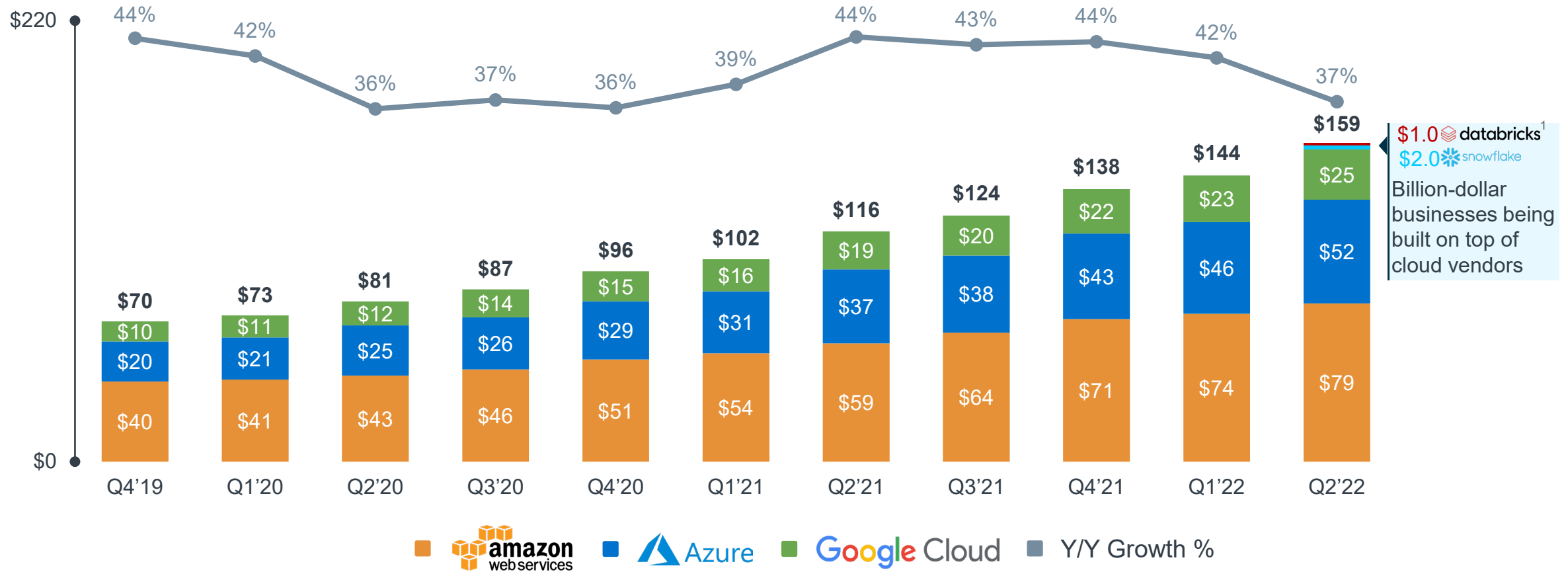
of \$1B+ NTM Revenue Software Companies by IPO Date



The number of \$1B+ revenue software companies continues to expand rapidly, and cloud-infrastructure companies, which exhibit healthy growth and profitability at scale, represent 8 of the top 10 most valuable software companies.

Cloud vendors continue to show growth durability at massive scale despite the current macro environment

Cloud Vendor Annualized Run-Rate Revenue (US\$B)



Cloud giants have continued to benefit as digital transformation accelerates and more workloads shift to the cloud.

Cloud leaders are demonstrating growth with attractive margin profiles



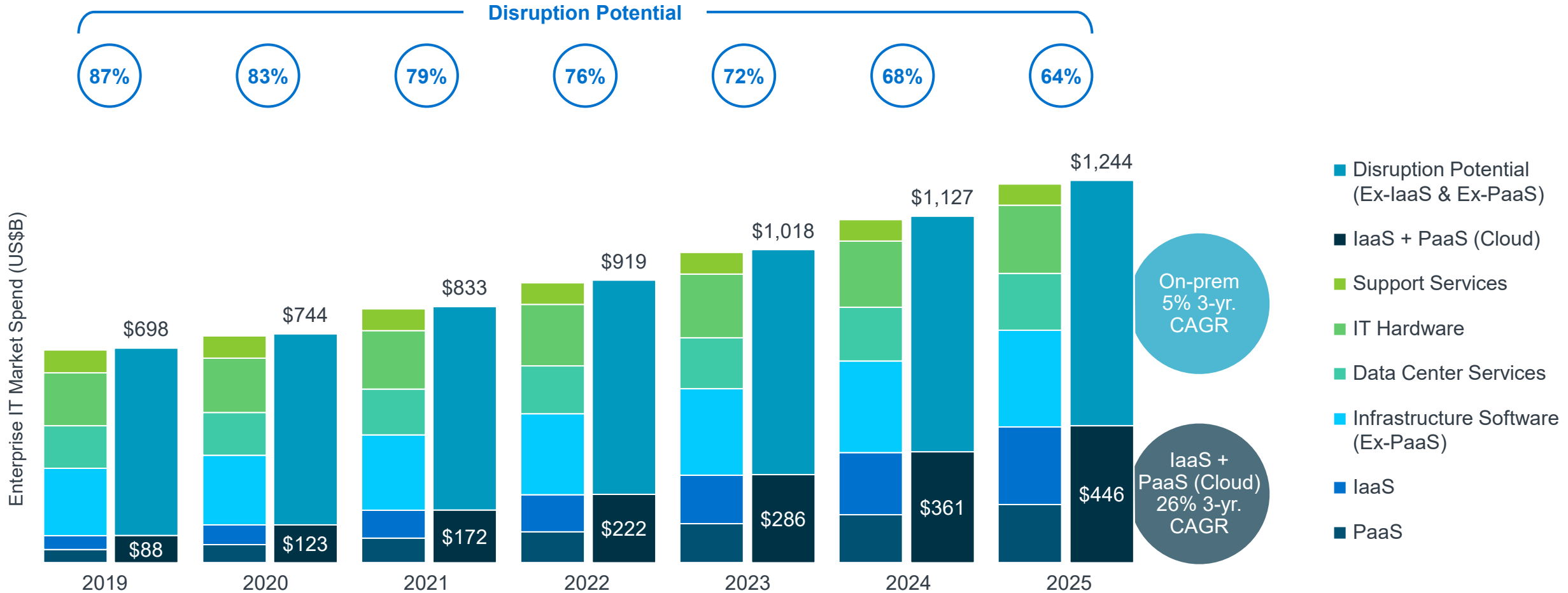
| | amazon webservices™ | | | Microsoft Azure | | | Google Cloud | | |
|---|------------------------|------|--------|--------------------|------|--------|--------------|------|--------|
| | Q2'21 | | Q2'22 | Q2'21 | | Q2'22 | Q2'21 | | Q2'22 |
| Annualized Cloud Revenue | \$59B | 1.3x | \$79B | \$37B | 1.4x | \$52B | \$19B | 1.4x | \$25B |
| Illustrative Multiple | 8.0x | | 8.0x | 8.0x | | 8.0x | 8.0x | | 8.0x |
| Implied Cloud Valuation | \$474B | 1.3x | \$632B | \$296B | 1.4x | \$414B | \$148B | 1.4x | \$201B |
| Cloud Contribution to Enterprise Value | 27% | 1.8x | 48% | 15% | 1.5x | 23% | 10% | 1.7x | 16% |
| Cloud GAAP Operating Margin | 28% | 1% | 29% | 45% | (3%) | 42% | (13%) | (1%) | (14%) |

On a combined basis, cloud represents 28% of Amazon, Microsoft and Google's enterprise value, up from 17% in the year prior.

Source: Company filings and Wall Street Research

Note: Market data as of 10/25/22. MSFT cloud revenue represents Azure estimates while cloud GAAP operating margin represents Intelligent Cloud as reported

We're in the early innings of cloud adoption

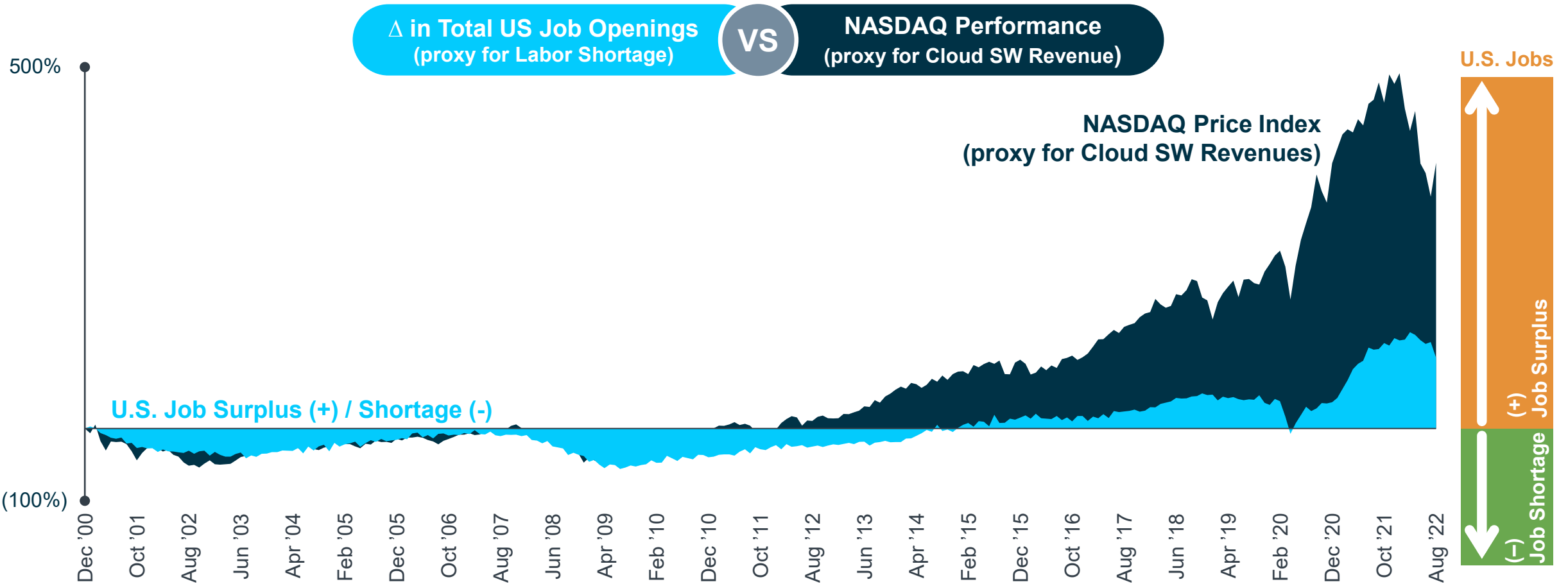


Cloud penetration is rapidly expanding with ample room to grow. In 2022, cloud spend is expected to represent ~25% of the \$919B overall infrastructure spend.

Source: Gartner

Note: IaaS + PaaS includes revenue from AWS, Azure, Google Cloud, AliCloud, Salesforce/Heroku, Tencent, Oracle, Digital Ocean, and other cloud companies.

Cloud software is the deflationary force enabling productivity in a high inflation environment



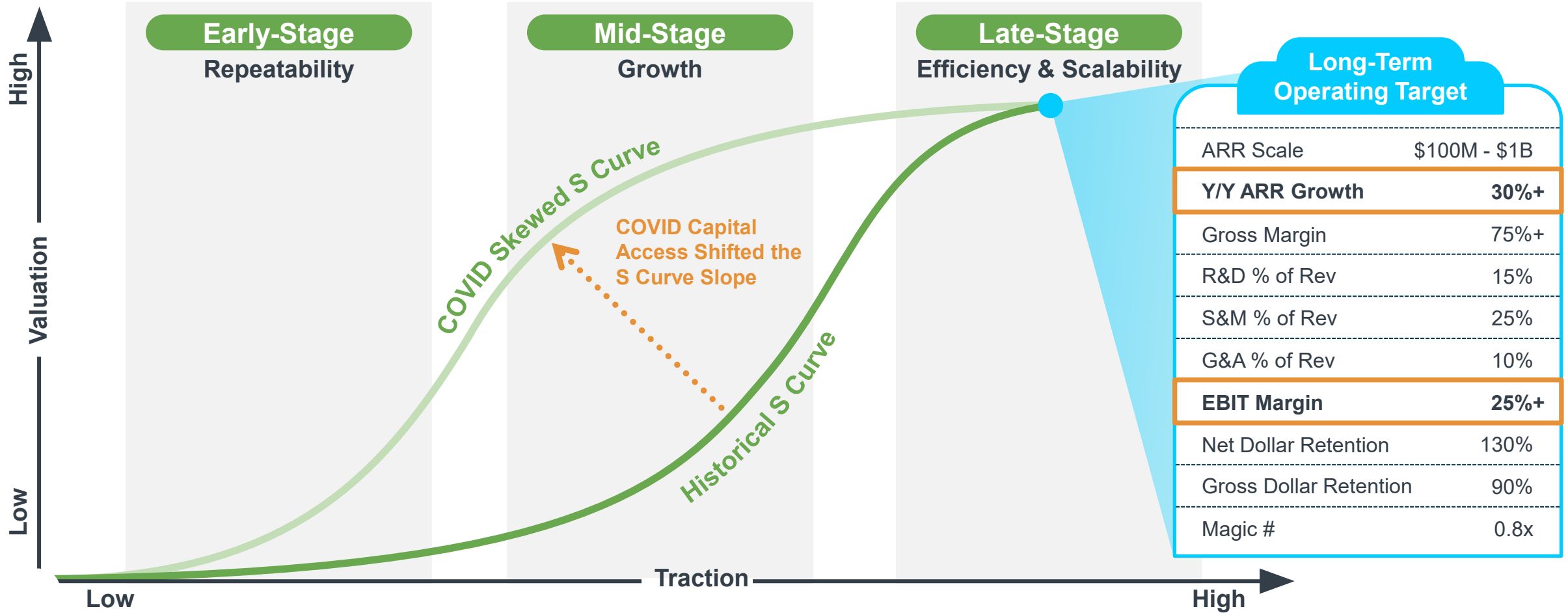
Cloud software is the counterbalance to periods of labor shortages, driving increased productivity from existing resources and acting a source of deflationary pressure.



Operational Best Practices for OpenCloud Companies











1 COVID-19 shifted the valuation slope, but the end state for healthy companies remains the same



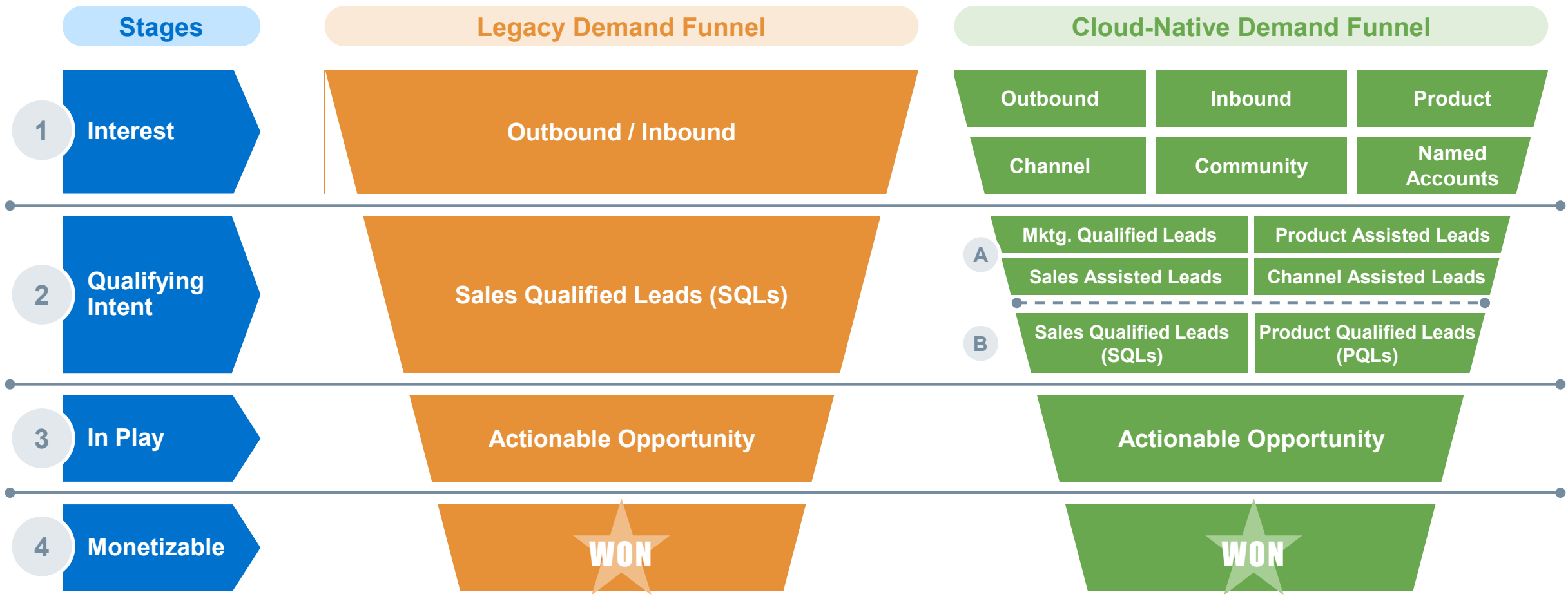
COVID-19 and the cheap capital environment shifted the slope of the s-curve and resulting valuations, but the path to a lasting business remains the same.

2 Product is playing an outsized role in the buyer journey, but there's no one size fits all

| | Product-Led Growth | Product-Assisted Growth | Sales-Influenced Growth |
|--------------------------|---|--|--|
| Customer Profile | Individuals | Teams | Organizations |
| User / Champion | Buyer | Influencer | POC / Limited Role |
| Customer Acquisition | Organic / Growth-led | Marketing-led | Sales-led |
| Lead Generation | PQL | PQL / MQL | Named Accounts |
| Sales Team Involvement | Self-Serve | Inside Sales | Enterprise Rep |
| Sales Cycle | Days | Months | Quarters |
| Success Metrics to Track | New Customer Lands | ARR & Expansion | ACV & Contract Duration |
| Example Companies |  ATLIASSIAN  POSTMAN ¹  snyk  1PasswOrd |  snowflake  databricks ¹  GitLab  MATILLION ¹ |  Collibra ¹  servicenow  CROWDSTRIKE  paloalto [®] NETWORKS |

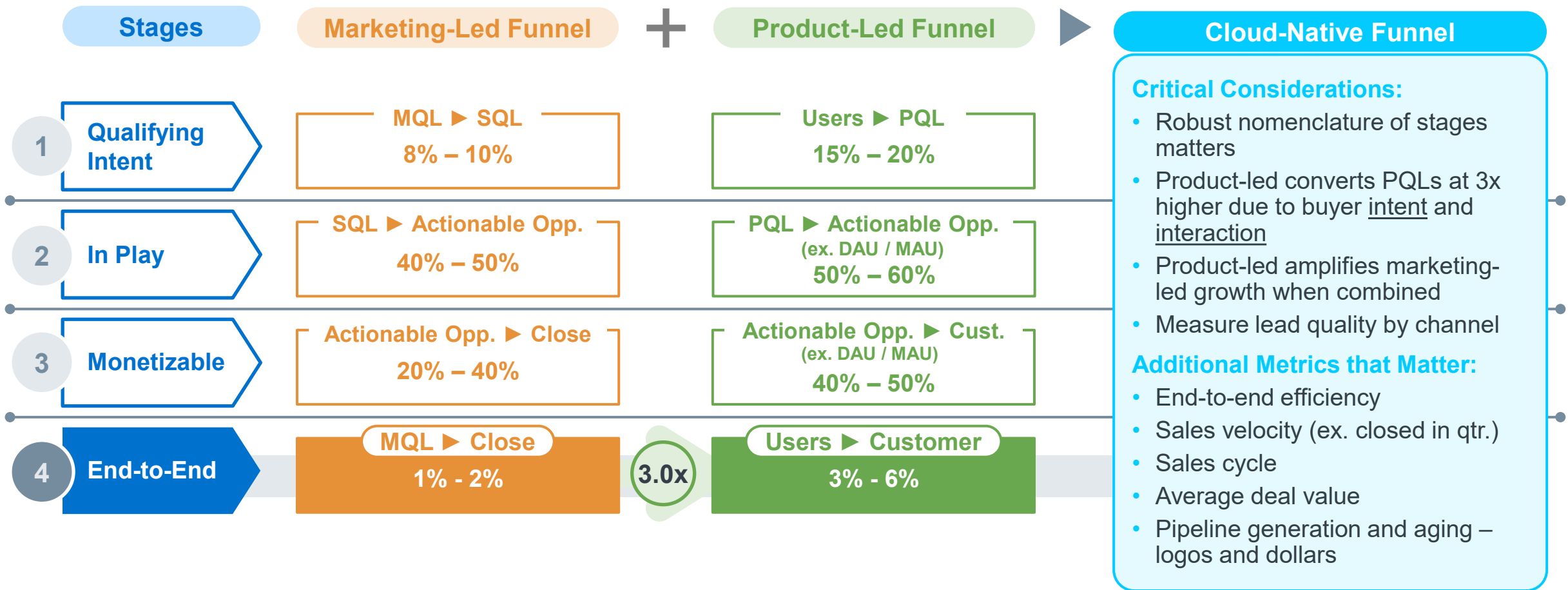
There are different paths to optimizing the first \$100M; beyond that, product-assisted and sales-influenced growth can go hand-in-hand.

3 Rise of go-to-market strategies based on buyer preference



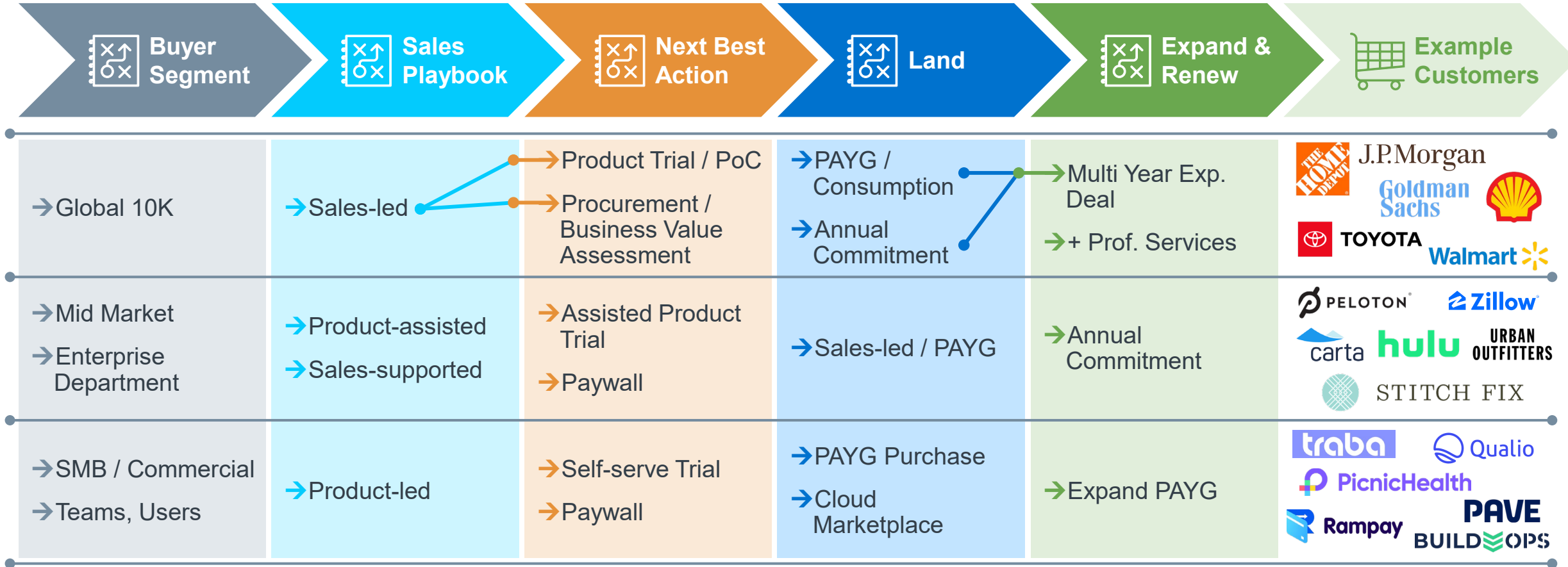
The demand-gen funnel is increasing in complexity with more customer engagement touchpoints than ever before; with complexity comes opportunity.

4 Cloud-native demand funnel can be both marketing & product driven



Combining marketing-led and product-led growth is a powerful force multiplier to your GTM engine with the product-led funnel converting 3x faster while being more efficient.

5 Product marketing playbooks to match sales qualification and customer LTV



Align product marketing with sales playbooks to engage customers through the right product marketing channels.

6 Align sales comp plans with customers purchase patterns

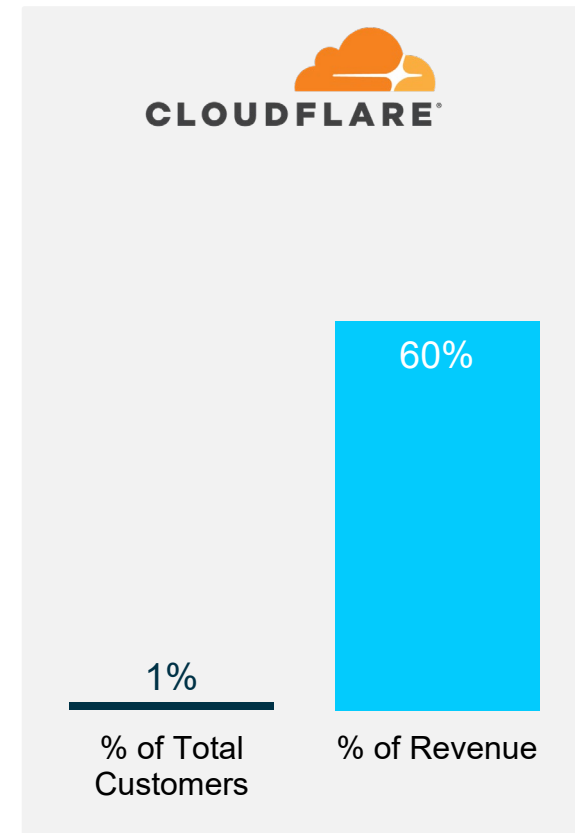
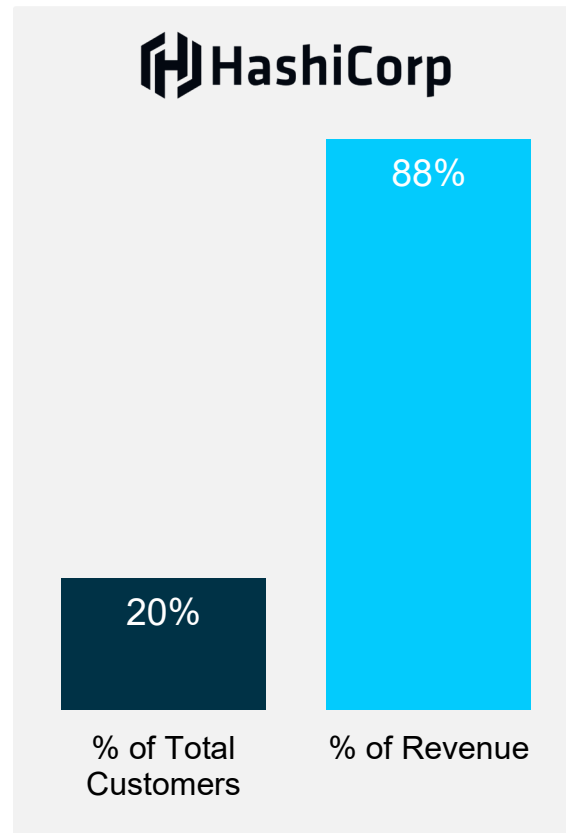
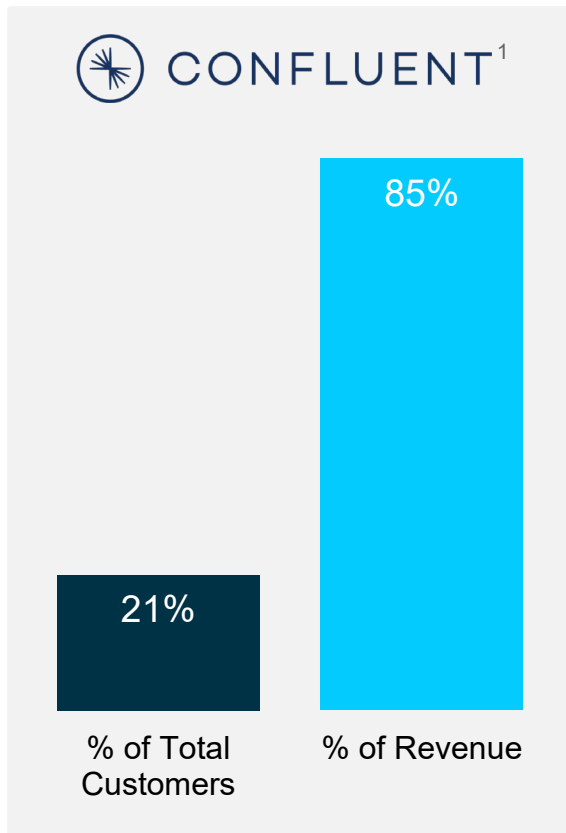
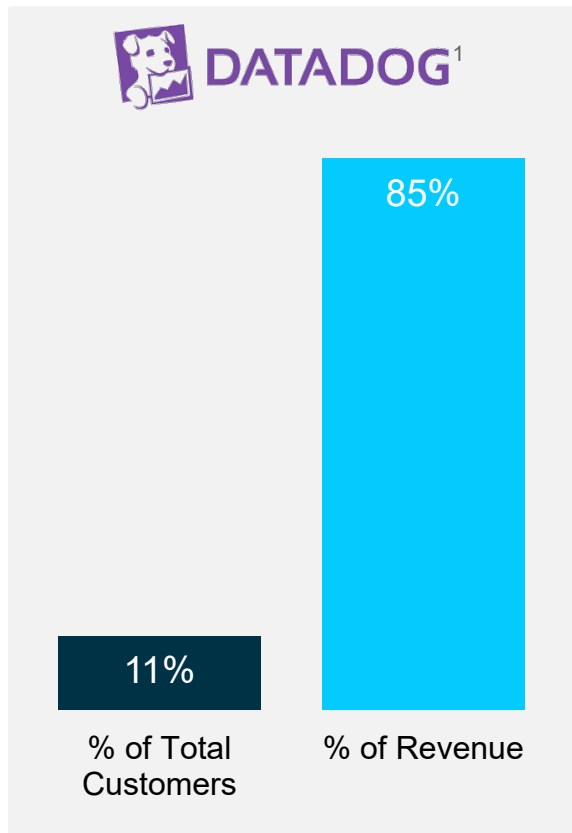
Cloud-Native Sales Comp Maturity

| | SaaS 1.0: Named Accounts | SaaS 2.0: Land & Expand | Cloud-Native: PAYG / Consumption |
|-------------|----------------------------|----------------------------------|--|
| Target | \$1.2M ARR | \$1.2M ARR | # of logos (ex. New, Ent., Workloads) |
| Attainment | 80% (\$1.0M) | 80% (\$1.0M) | Logo acquisition + ARR |
| Ramp | 9 – 12 Months | 9 Months (0%, 50%, 100%) | 9 Months (0%, 50%, 100%) |
| Quota Terms | 1 Year (lumpy Q4 loaded) | Quarterly (AE) or Monthly (ISR) | Quarterly or Monthly (AR and ISR) |
| Focus | Gross New ARR | Net New ARR (i.e., net of churn) | Land deals + Exp. within 1 st yr. |
| Structure | Multi-year TCV commitments | Hunter / farmer sales separation | PAYG + kicker for commit deals |
| LTV:CAC: | 0.5 – 2.0x | 2.0 – 3.0x | 5.0x+ |

Incentivize your sales team to focus on landing and acquiring new customers with flexible deal structures. Product hooks will naturally expand usage with quick time to value.

7 Highly-qualified product lands can drive 10x – 50x expansions over time

\$100K+ Customer Contribution



Customer quality matters, even PAYG deals with large customers will compound over time with efficiency.

8 Expansion is critical to compounding ARR growth

Tier 1 (130%+ NDR)



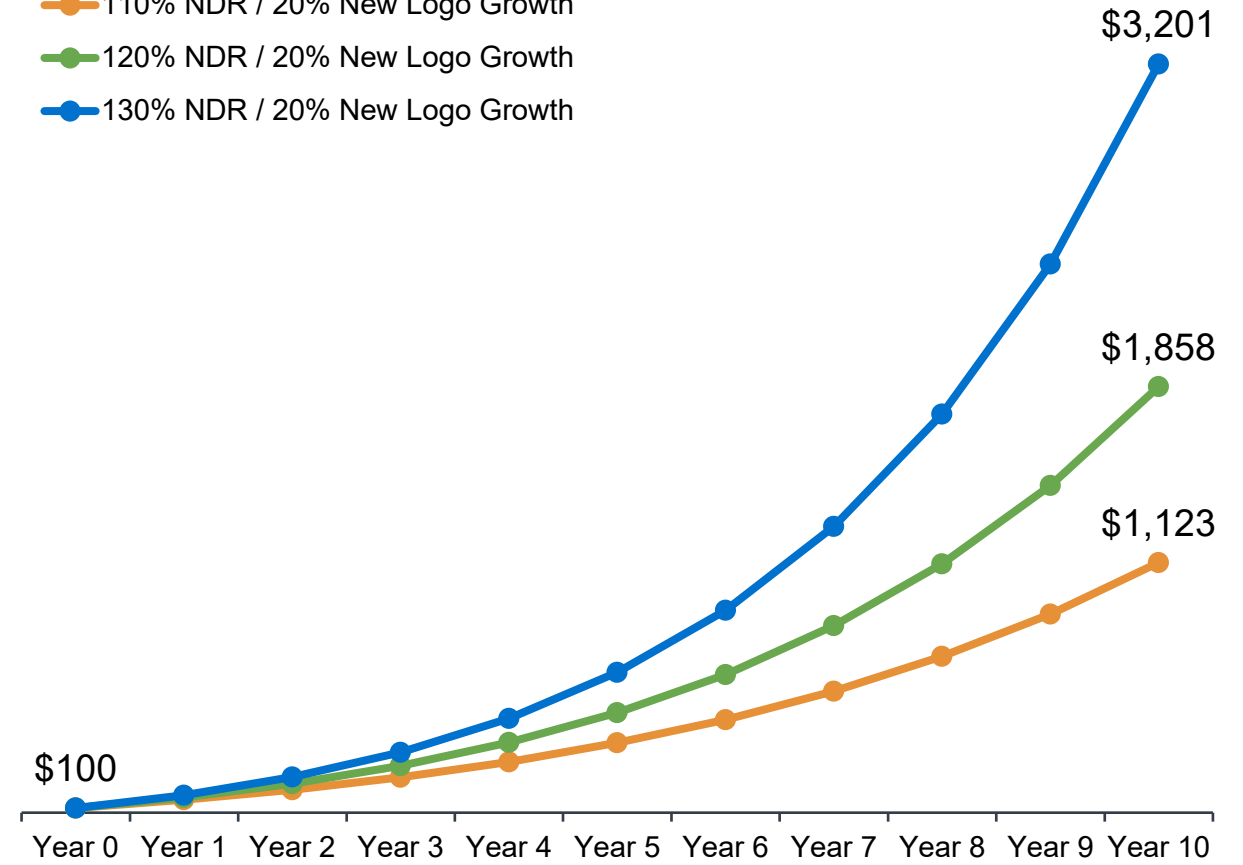
Tier 2 (120% - 130% NDR)



Tier 3 (110% - 120% NDR)



- 110% NDR / 20% New Logo Growth
- 120% NDR / 20% New Logo Growth
- 130% NDR / 20% New Logo Growth






High NDR is the cornerstone of efficiency and profitability.

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

9

Align pricing “unit” with customer “perceived” value



| |  |  |  |
|----------------------------|--|---|---|
| Pricing model | Consumption-based | Per endpoint | Per host |
| Perceived ROI | High-quality, data-driven insights / predictions | Enhanced endpoint visibility and breach prevention | Greater visibility into application / infrastructure performance |
| Net-dollar retention | 171% | 120%+ | 130%+ |
| LTM revenue scale / growth | \$1,638M / 92% | \$1,834M / 61% | \$1,366M / 79% |
| LTM non-GAAP gross margin | 71% | 77% | 80% |
| ACV | \$292K | \$103K | \$77K |

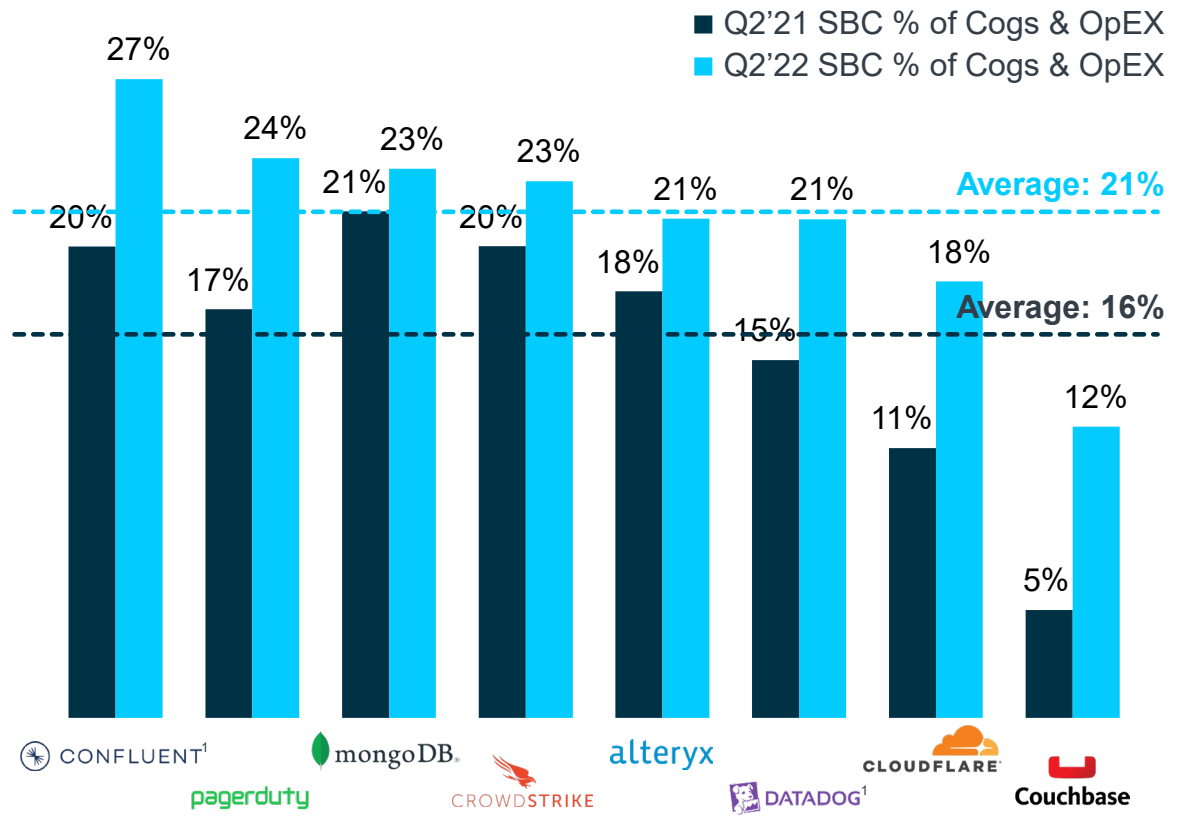
Value-based pricing lowers the barriers to adoption and drives natural expansion.

Source: Company filings.

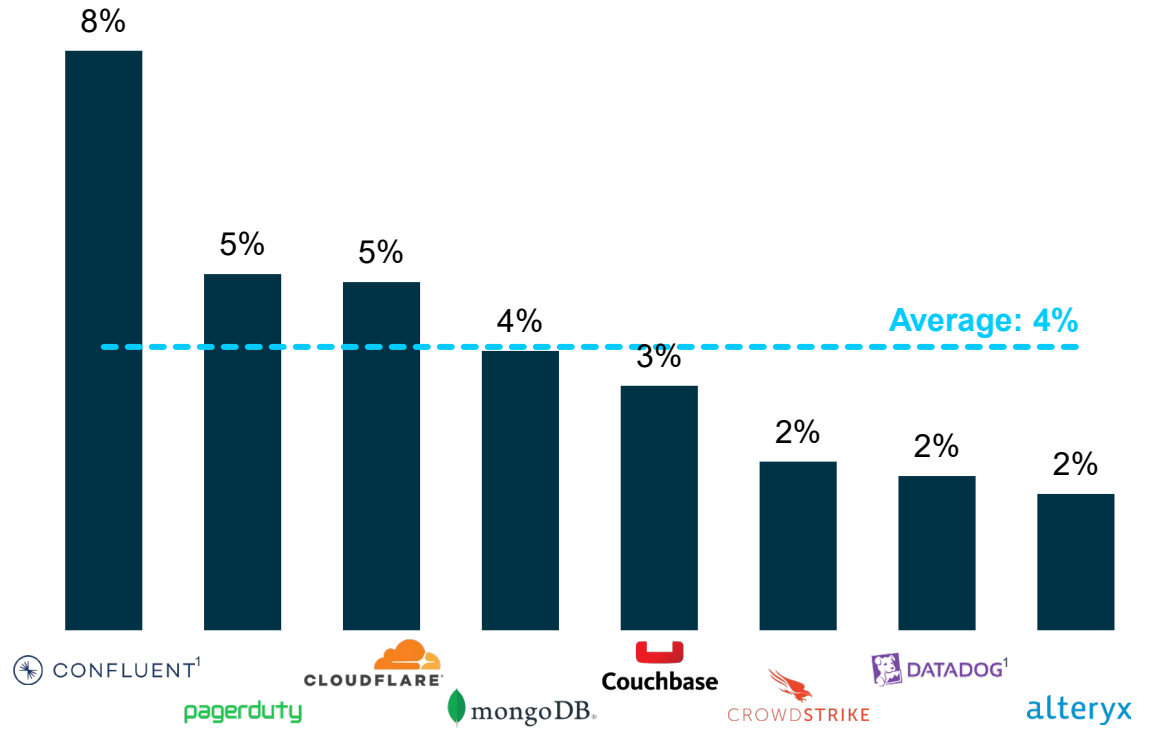
Note: ACV calculated as annualized revenue / # of customers. CRWD ACV represents subscription ACV. ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

10 SBC is a real business expense

SBC % of Cogs & OpEx



Annual Dilution



While stock-based compensation is not a cash expense, it is not free and should be managed closely to limit the dilution to existing shareholders

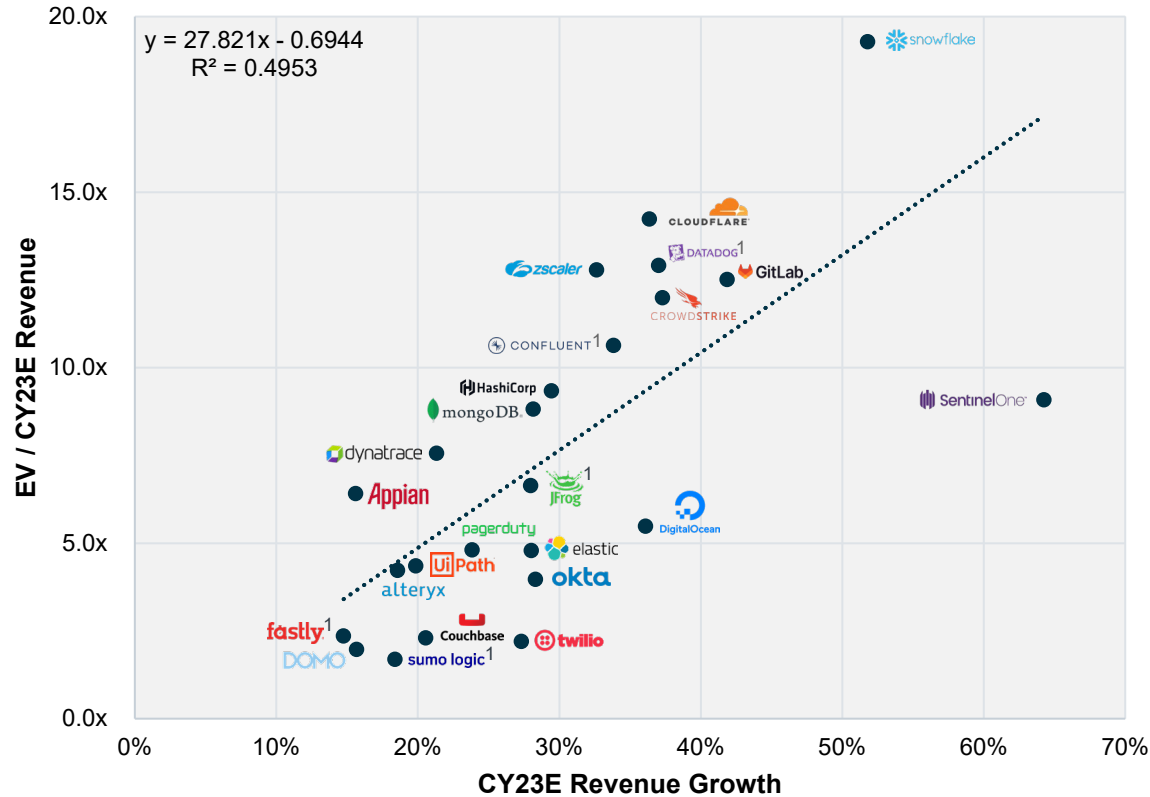
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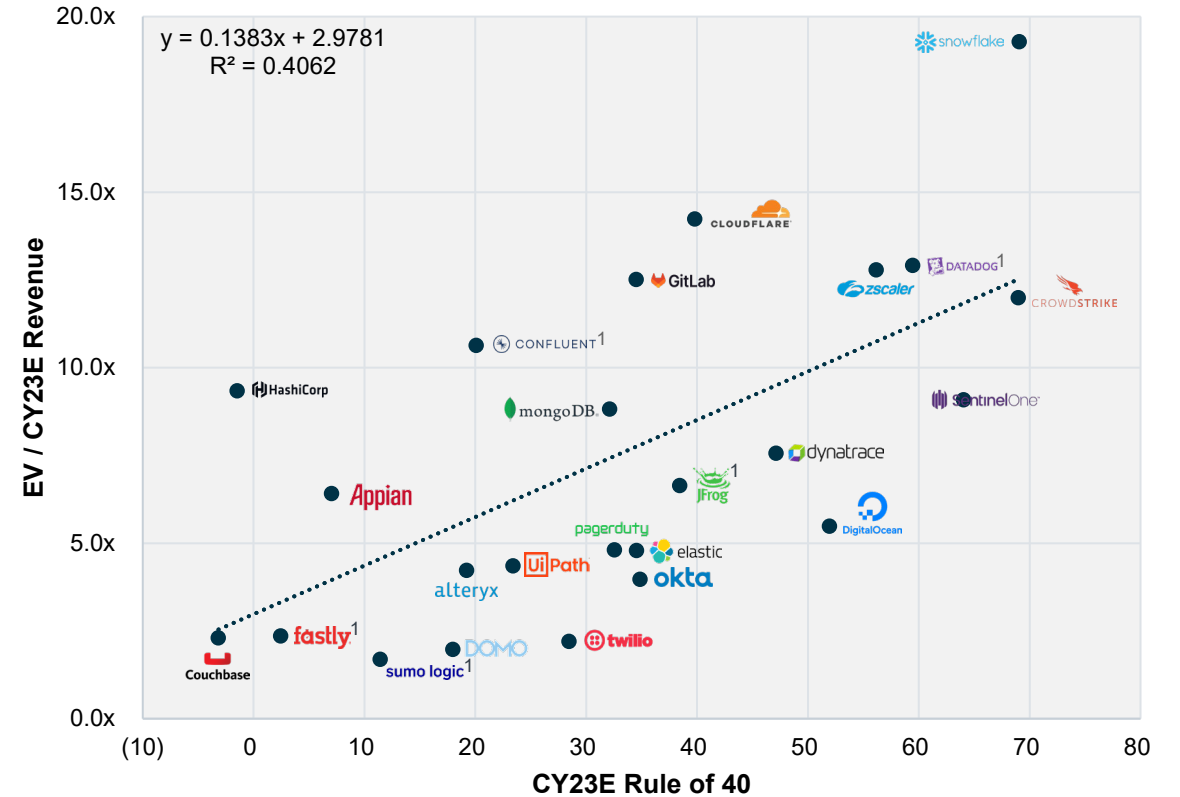
Building a Lasting Public Company: Focus on KPIs that Matter

Index to the cloud and know your cloud metrics fundamentals

EV / CY23E Revenue vs. CY23E Revenue Growth



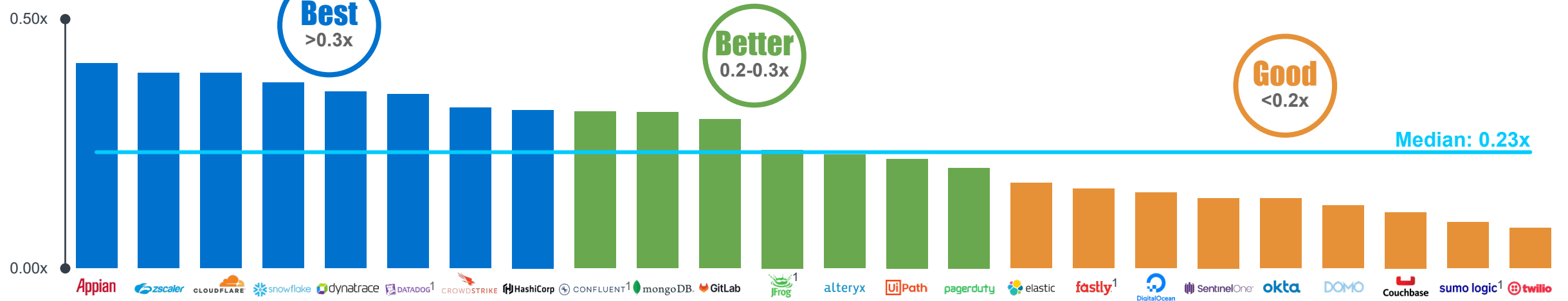
EV / CY23E Revenue vs. CY23E Rule of 40



Software valuations are driven by sustainable growth with a path to profitability.

EV / revenue / growth levels the playing field

CY'23E EV / Rev / Growth

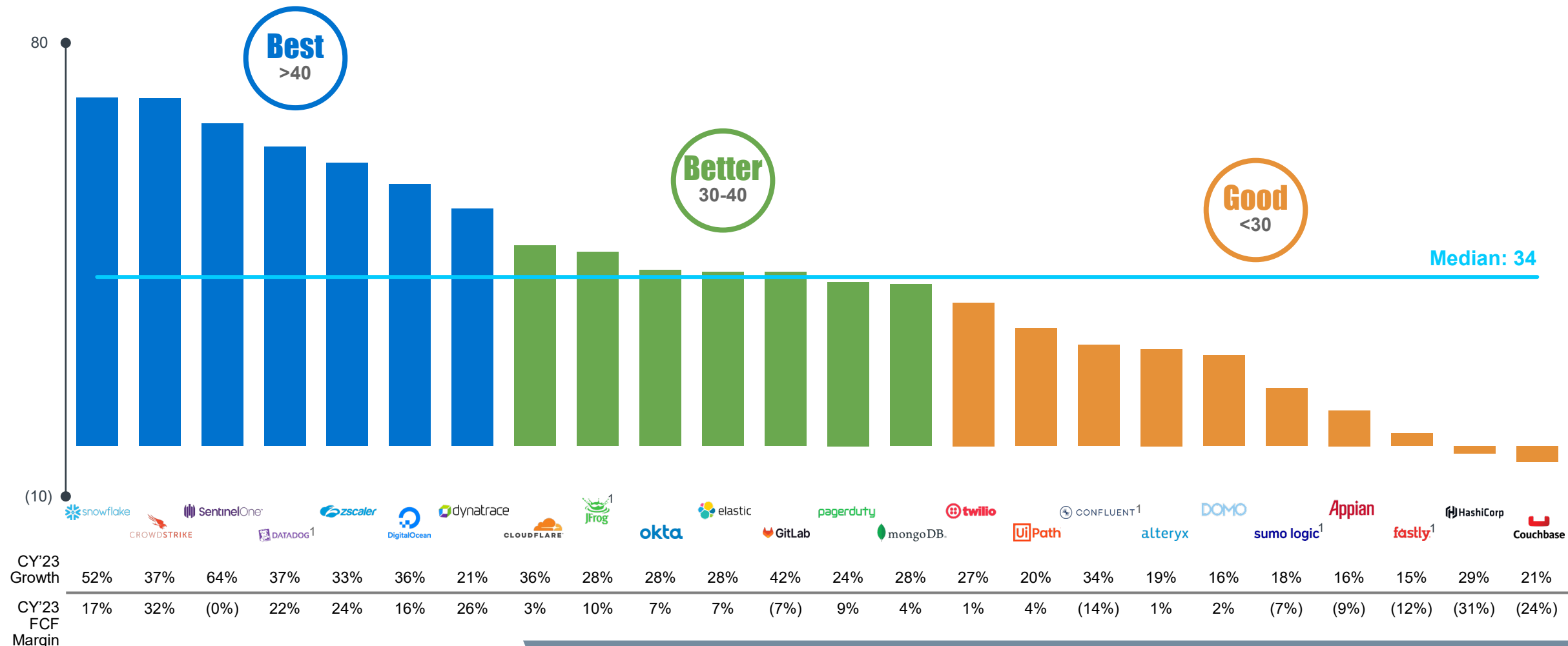


CY'23E Rev Growth



Adjusting the revenue multiple for growth provides insight into the relative value; however, analysts continue to underestimate the growth potential of cloud-infrastructure businesses.

Rule of 40 measures efficiency



As software businesses mature and growth naturally slows, improving profit margins is integral to driving free-cashflow generation and sustaining the rule of 40 over time.

Last twelve months revenue growth at IPO

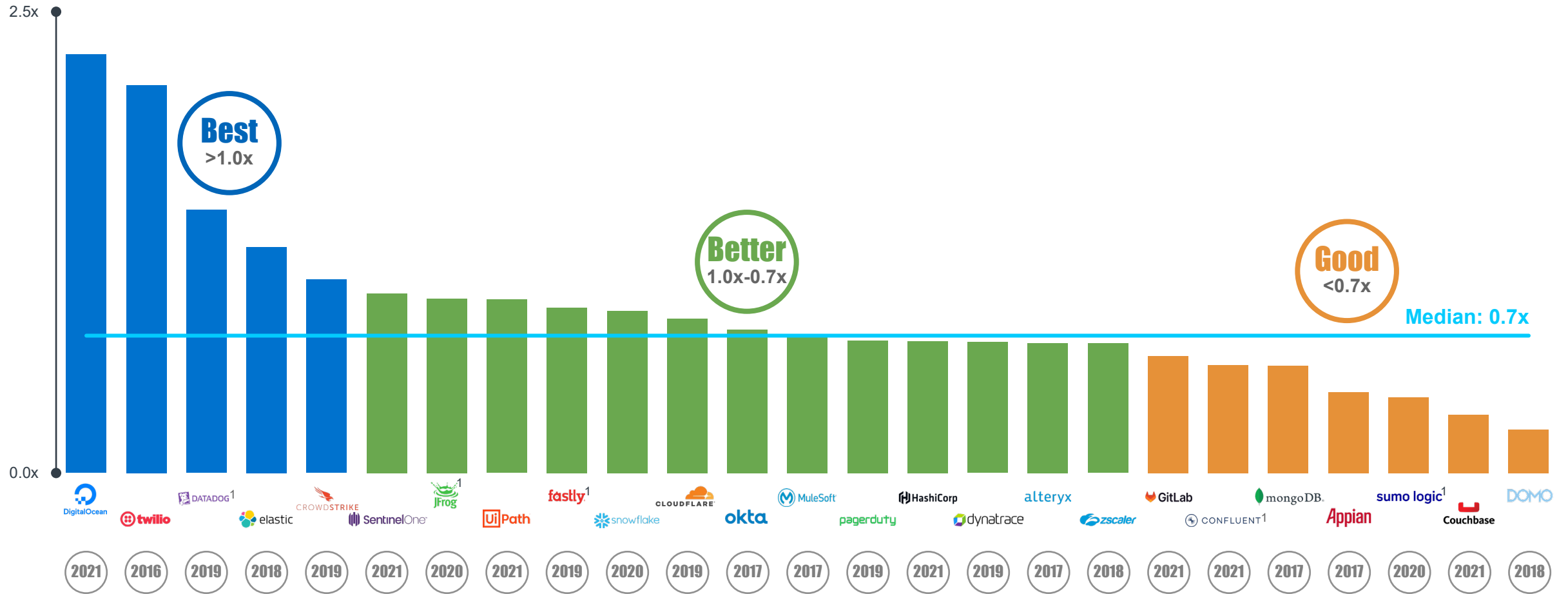


○ Date of IPO

Cloud-infrastructure markets are large and growing; companies attached to these mega trends are experiencing the benefits of these tailwinds.

¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#). Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix¹ due to lack of disclosed metrics. Talend financials based on constant currency.

Average magic number over the last twelve months at IPO



○ Date of IPO

Product-led growth and bottoms-up are enabling companies to be more efficient in customer acquisition.

¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#). Note: Magic number calculated as ((Q(t) - Q(t-1)) subscription revenue * 4) / S&M Q(t-1). ARR used instead of subscription revenue if disclosed. Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix¹ due to lack of disclosed metrics. Ping Identity, Dynatrace, and SolarWinds exclude amortization/depreciation of acquired assets and restructuring costs. Talend financials based on constant currency.

Dollar-based net retention at IPO



○ Date of IPO

Bottoms-up and transaction-based revenue streams have far more consistency and expansion potential than we all anticipated.

¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#). Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix¹ and C3 due to lack of disclosed metrics.

LTV:CAC at IPO



Efficient customer acquisition while focusing on enterprise-grade customers results in higher expansion potential.

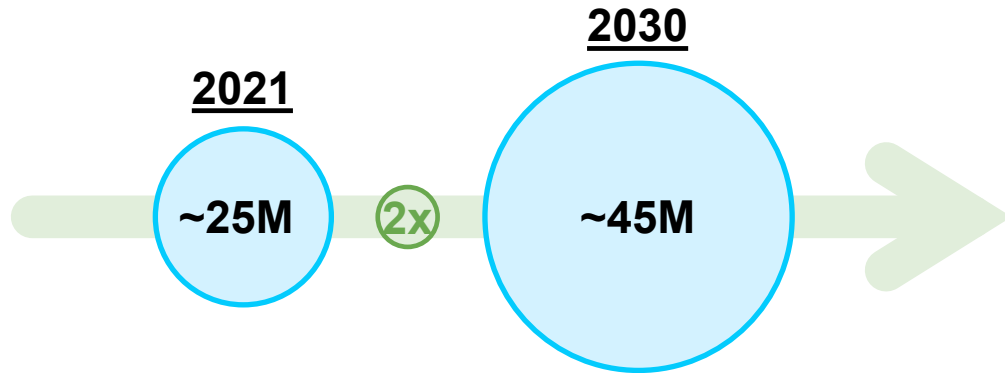
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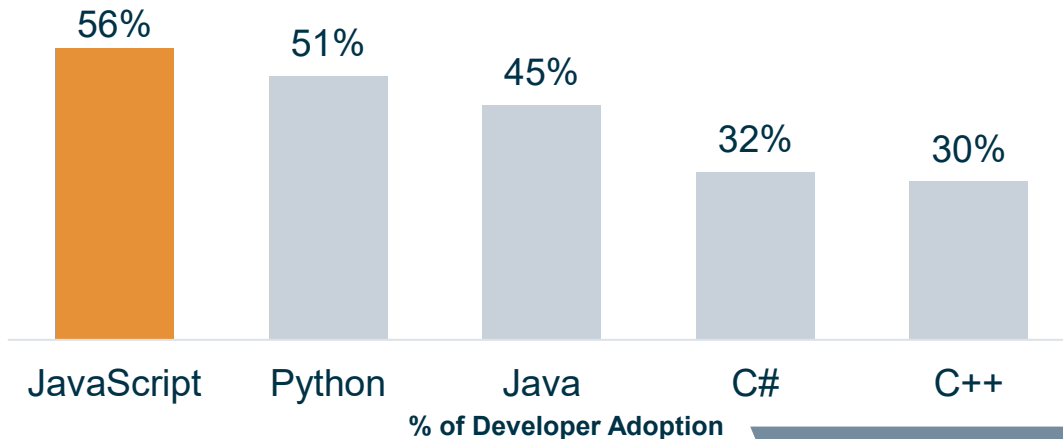
Themes of Interest

A modern web-development ecosystem is emerging to deliver a better developer and end-user experience, shifting the back end to the front end

Global Professional Developer Population



JavaScript is the Most Widely Adopted Language

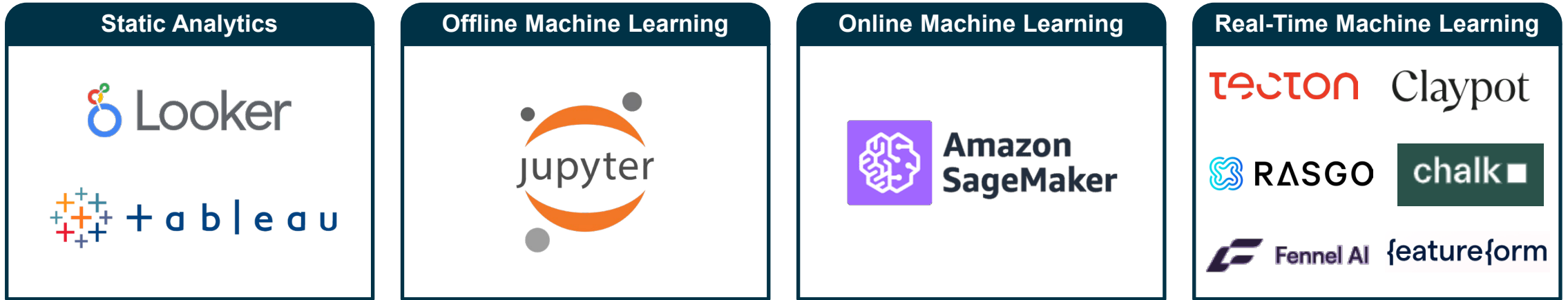


Web-Development Ecosystem

| | |
|-------------------------------|---|
| Front End Framework | SVELTE, SOLIDJS, Vue.js, ANGULAR, React, Preact |
| Static Site Generation | astro, SVELTEKIT, HUGO, Gatsby, NuxtJS, HEXO, NEXT.js |
| Run-Time | node, Bun, Deno |
| Headless CMS | strapi, ghost, directus, Payload, SANITY, contentful |
| Managed Deployment | Vercel, netlify, fastly, Fly.io, Gatsby, CLOUDFLARE |
| Database Abstraction | convex, appwrite, CHISELSTRIKE, fauna, Prisma, supabase, xata, HASURA, APOLLO |

Higher levels of abstraction are allowing web developers to own more of the end-to-end workflow, enabling front end developers to own more of the development process.

Machine learning is going real time



As ML adoption continues to mature, more companies are deploying models to power mission-critical operational use cases, driving the need for real-time capabilities for greater accuracy / reliability and a shorter feedback loop.

ML and AI shifting from predictive to generative, disrupting existing application workflows

Infrastructure

Compute / Hardware



GRAPHCORE



Data-Centric AI Tooling



Fundamental Model Layer



BLOOM



OpenAI DALLE-2

AI21 labs



Use Cases

Marketing

Sales

Support

Code & Documentation

Image & Video

Voice & Audio

Select Companies

copy.ai Jasper copysmith **WRITER**

LAVENDER Smartwriter.ai regie.ai

co:here **CRESTA** Typewise Forethought

tabnine GitHub Copilot replit Stenography Mintlify

runway Fliki synthesia TAVUS

boomy descript RESEMBLE.AI coqui

Generative AI is at an inflection point, and advancements across core infrastructure / models have created an opportunity at the application layer to upend existing workflows.

The cloud is upending the security stack



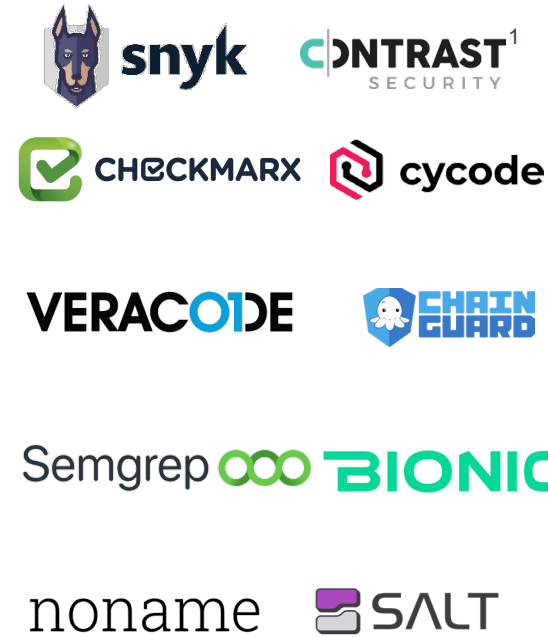
Infrastructure



Identity & Network



Applications



Data



Governance & Compliance



The cloud is shifting security closer to core software development primitives - infrastructure, applications, people, and data.

The new wave of Web3 tooling is shifting from building the network and protocol infrastructure to reading and acting on it

Building networks / protocols

Understanding and acting on insights





















Growing interest and adoption of Web3 has made it critical to continuously monitor and interpret what is happening on the blockchain and act on it in near real time.



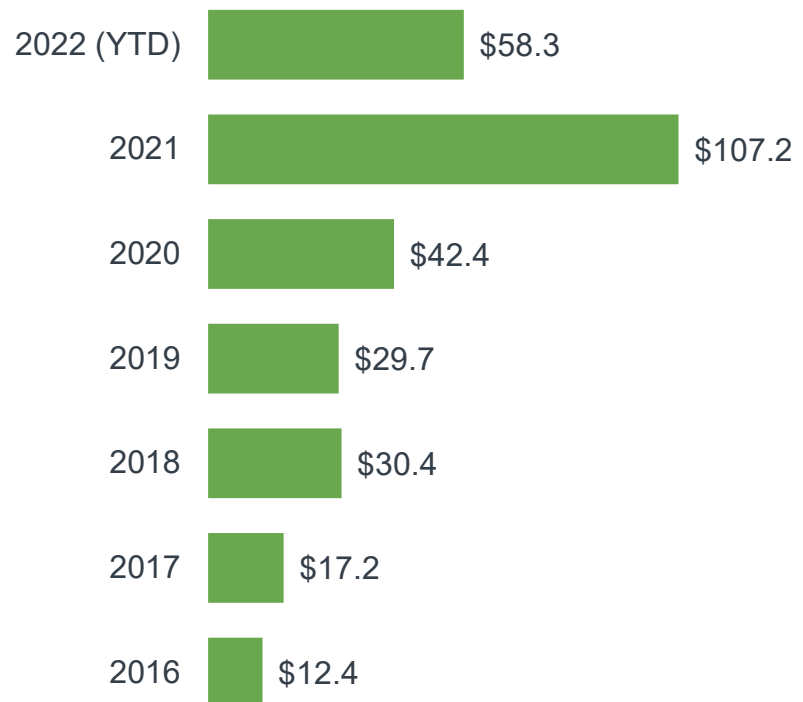
Future of OpenCloud

The emerging set of open-source and cloud-native companies are promising

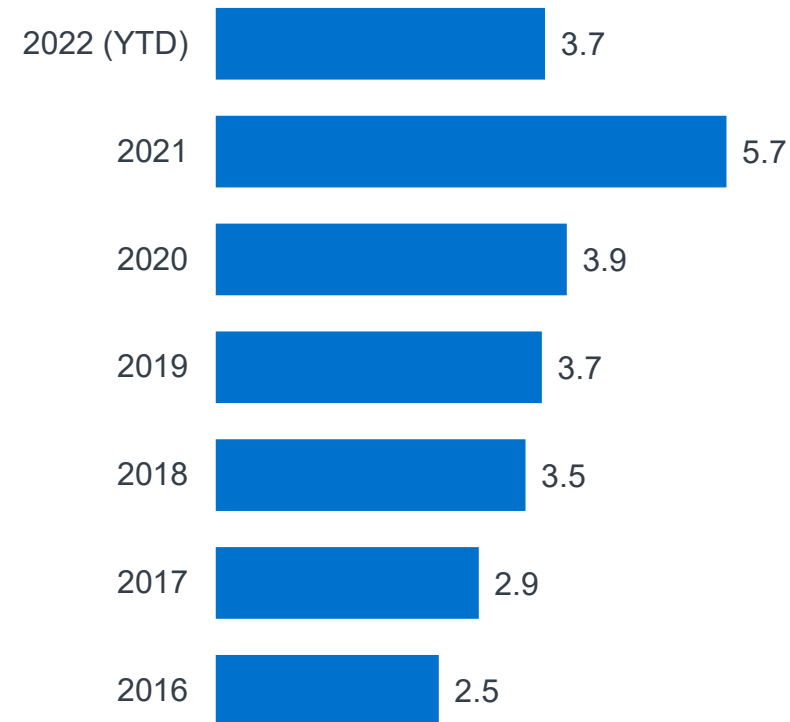
Select Private Unicorns Last Disclosed Valuation

| | |
|---|--------|
|  databricks ¹ | \$38.0 |
|  celonis | \$13.0 |
|  TANIUM™ | \$9.0 |
|  snyk | \$8.6 |
|  Chainalysis | \$8.6 |
|  LACEWORK. | \$8.3 |
|  Fireblocks | \$8.0 |
|  netskope | \$7.5 |
|  scale | \$7.3 |
|  GONG ¹ | \$7.3 |
|  1Password | \$6.8 |
|  WIZ ⁺ | \$6.0 |
|  Grafana | \$6.0 |
|  workato ¹ | \$5.7 |
|  Fivetran | \$5.6 |
|  POSTMAN ¹ | \$5.6 |
|  Collibra ¹ | \$5.3 |
|  dataiku ¹ | \$4.7 |

\$ Financing Deal Value \$ in Billions



Financing Deal Volume Volume in Thousands

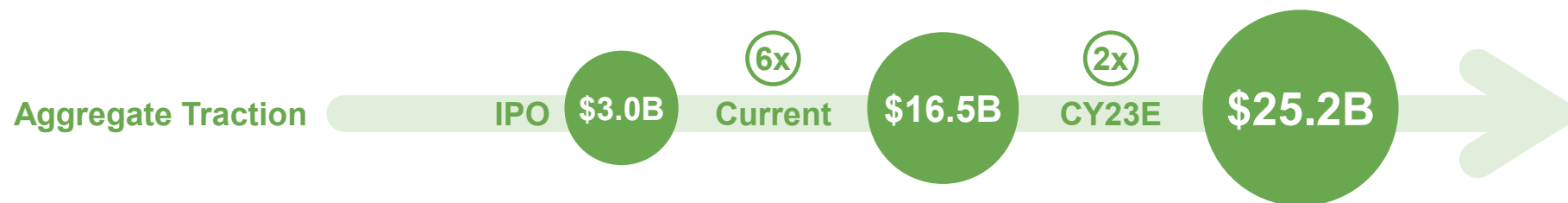


Open-source and cloud financings have continued to accelerate, and there is a healthy backlog of private company unicorns gearing up for IPO.

Source: Pitchbook data as of 10/11/2022. Select Private Unicorns based on private companies that are enterprise infrastructure-focused with valuations of \$4.0B or greater as of October 2022.

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

Open-source and cloud-native companies continue to grow at healthy rates

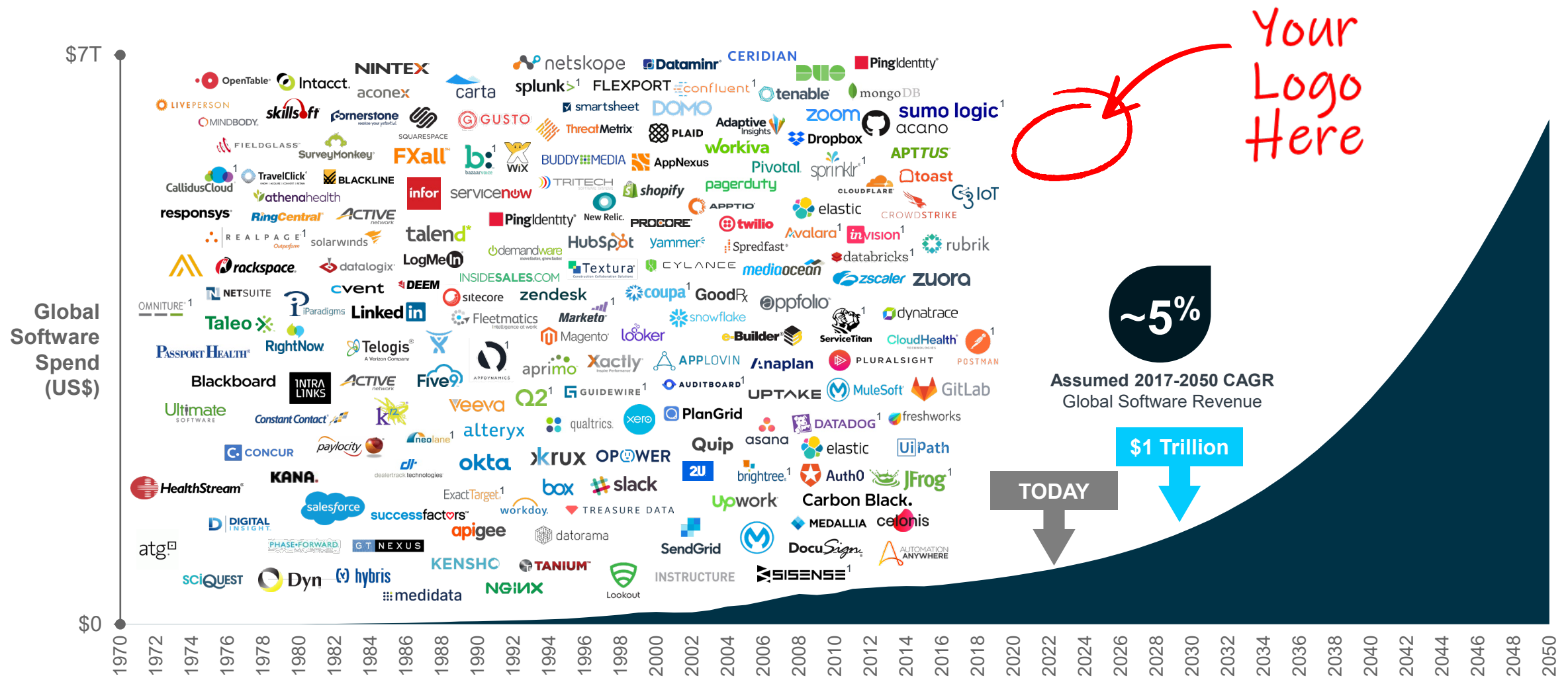


| | | Run-Rate Revenue (\$M) | | | | | | Run-Rate Revenue (\$M) | | | |
|------|----------------------|------------------------|---------|-------|-------------------|------|------------------------|------------------------|---------|-------|-------------------|
| | | IPO | Current | CY23E | IPO to CY23E CAGR | | | IPO | Current | CY23E | IPO to CY23E CAGR |
| 2016 | twilio | 237 | 3,773 | 5,534 | 50% | 2017 | mongoDB. | 142 | 1,215 | 1,697 | 47% |
| 2020 | snowflake | 533 | 1,989 | 3,548 | 74% | 2018 | elastic | 195 | 1,000 | 1,458 | 45% |
| 2019 | CROWDSTRIKE | 322 | 2,141 | 3,414 | 62% | 2021 | CONFLUENT ¹ | 308 | 558 | 863 | 45% |
| 2017 | okta | 195 | 1,807 | 2,506 | 45% | 2021 | SentinelOne™ | 150 | 410 | 793 | 87% |
| 2019 | DATADOG ¹ | 333 | 1,625 | 2,431 | 50% | 2021 | GitLab | 233 | 404 | 664 | 54% |
| 2018 | zscaler™ | 180 | 1,272 | 1,878 | 49% | 2020 | JFrog ¹ | 146 | 271 | 397 | 33% |

○ Date of IPO

The last few years have created multiple open-source and cloud-native companies that have grown rapidly since IPO and are expected to double Y/Y to \$25B in cumulative revenue run rate by 2023.

We're still in the early innings for OpenCloud



Source: Battery Ventures; Forrester; Gartner; the Yankee Group; BEA.gov; Input Research.
Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

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