# Battery Ventures
# State of the OpenCloud

November 2023

Battery

# 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 2023 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 9, 2023 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.

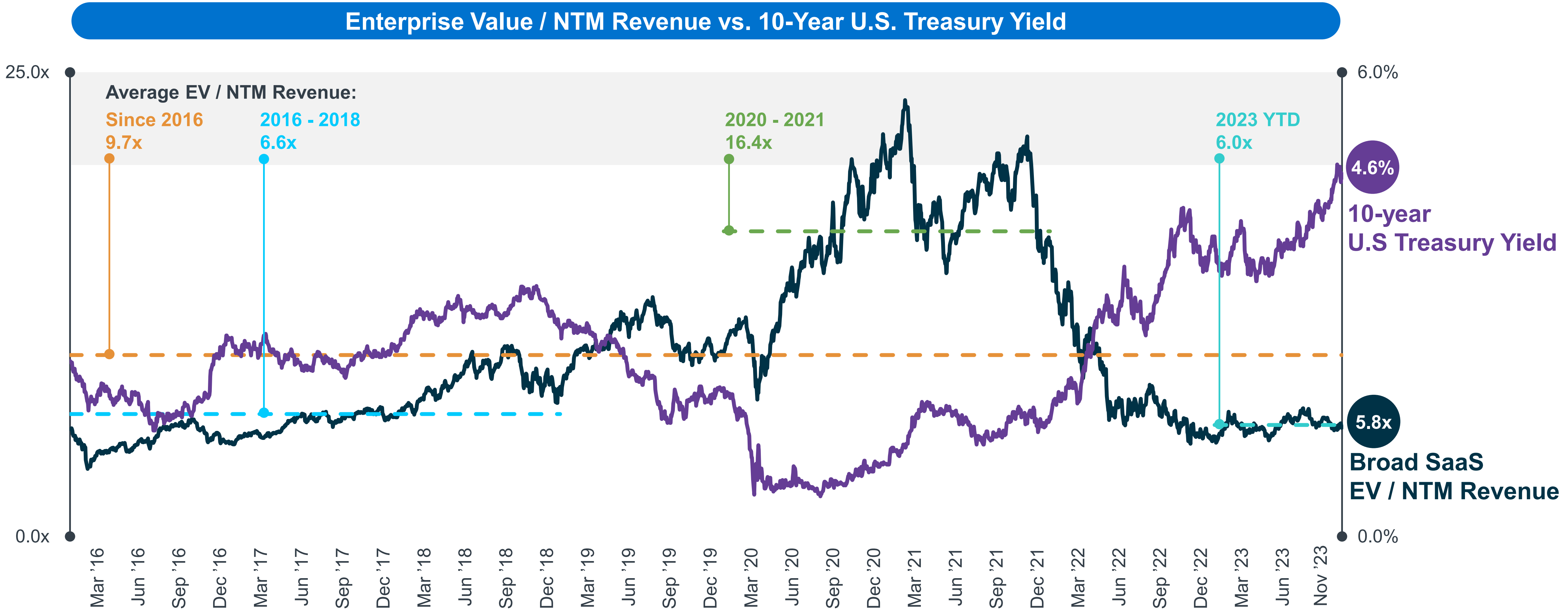
The information contained herein is based solely on the opinions of Dharmesh Thakker, Danel Dayan, Jason Mendel, Sudheendra Chilappagari, Patrick Hsu and Payal Modi and nothing should be construed as investment advice. This presentation and the anecdotal examples throughout are intended for an audience 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.

# AI is Driving the Next Wave of Cloud Growth

# AI is driving the next wave of cloud growth

1. Sustained macro pressures are driving a return to fundamentals for software companies
2. Companies are balancing growth and profitability as they shift from short-term to long-term gratification
3. AI has the potential to upend existing business models and re-define healthy software company metrics
4. Cloud providers are investing ahead of the curve as AI fuels the next generation of compute consumption
5. While the IPO bar is high, the opportunity remains large, and there’s a healthy backlog of private unicorns
6. We’re in the early innings of cloud and AI adoption with a large disruption opportunity ahead

# The current economic environment continues to impact valuation multiples



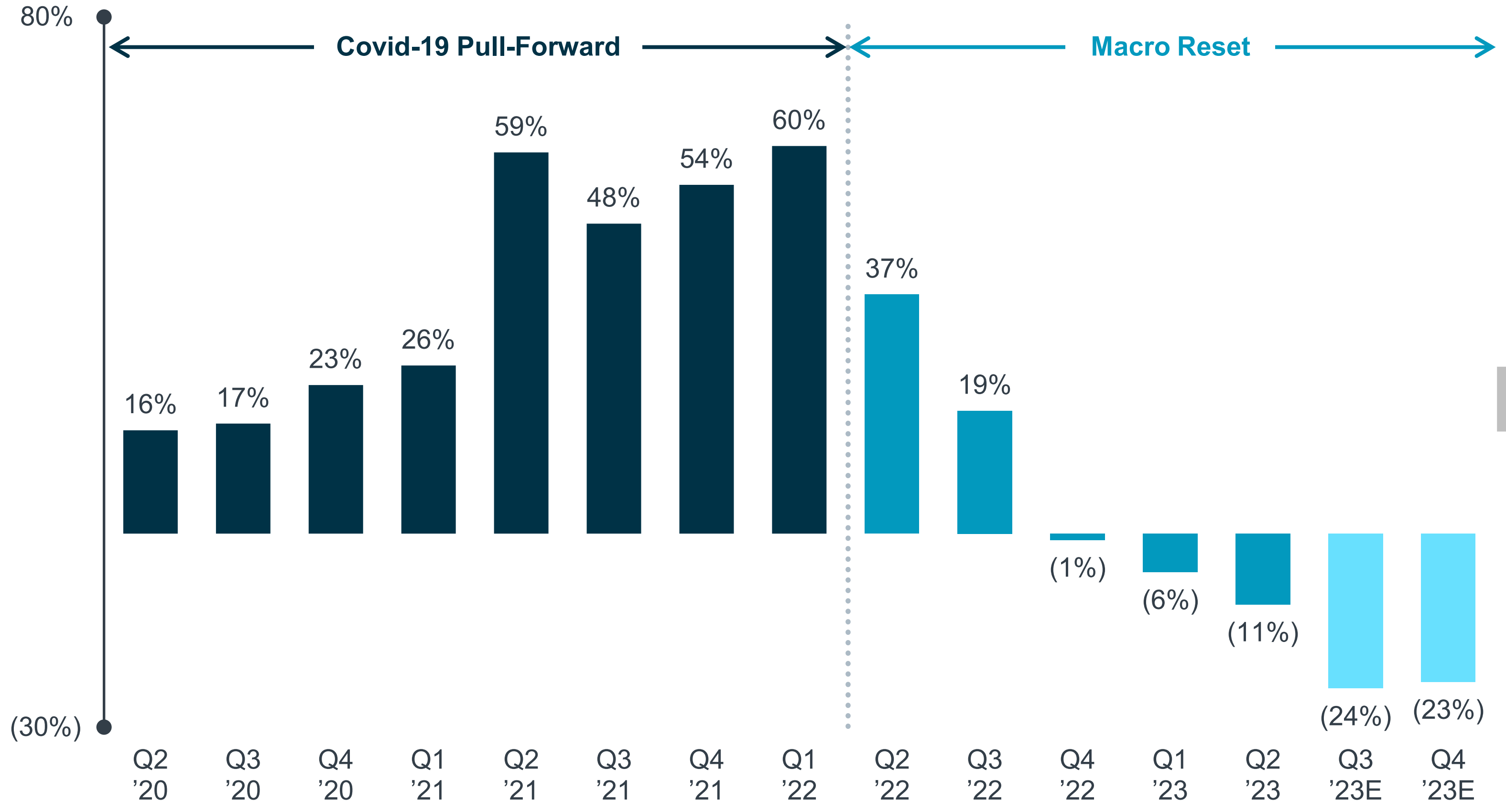

**Rising interest rates and a pullback in software spending have continued to drive valuation multiple compression.**



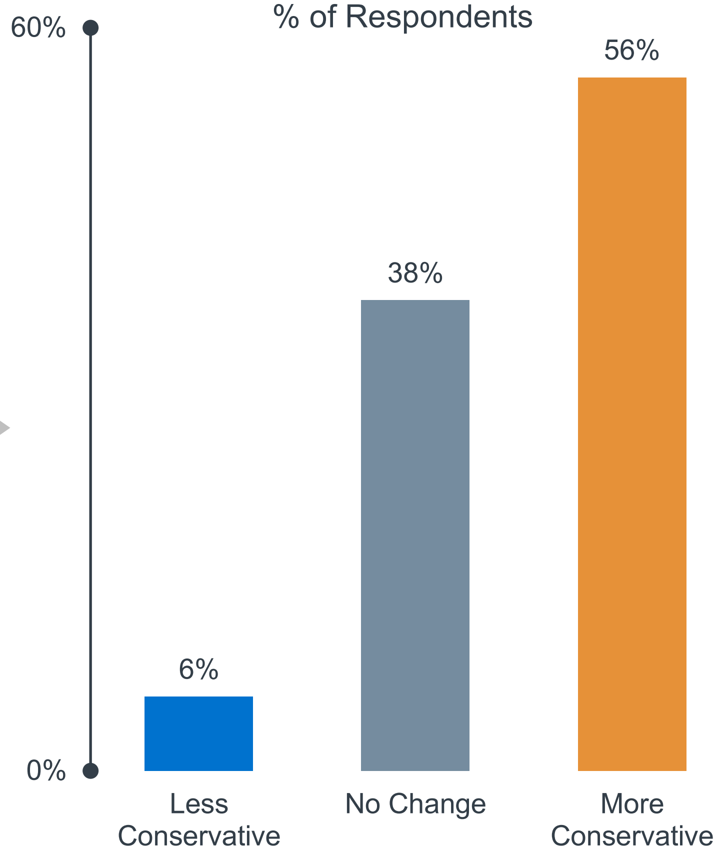

Note: Market data as of November 7, 2023. Source: CapIQ.

# Growth is being reset

## Y/Y Growth in Net New ARR




## Impact of Economic Conditions on Tech Spending Strategy Y/Y



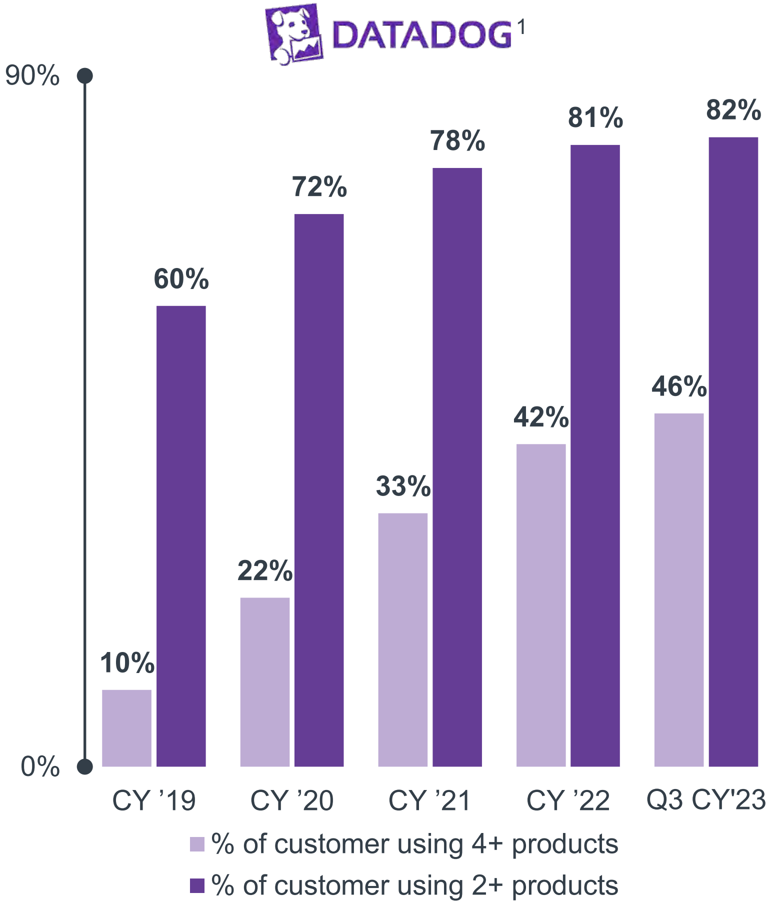

**Growth accelerated through 2021, but budget compression has resulted in a slowdown in IT spend and a growth reset for software companies.**



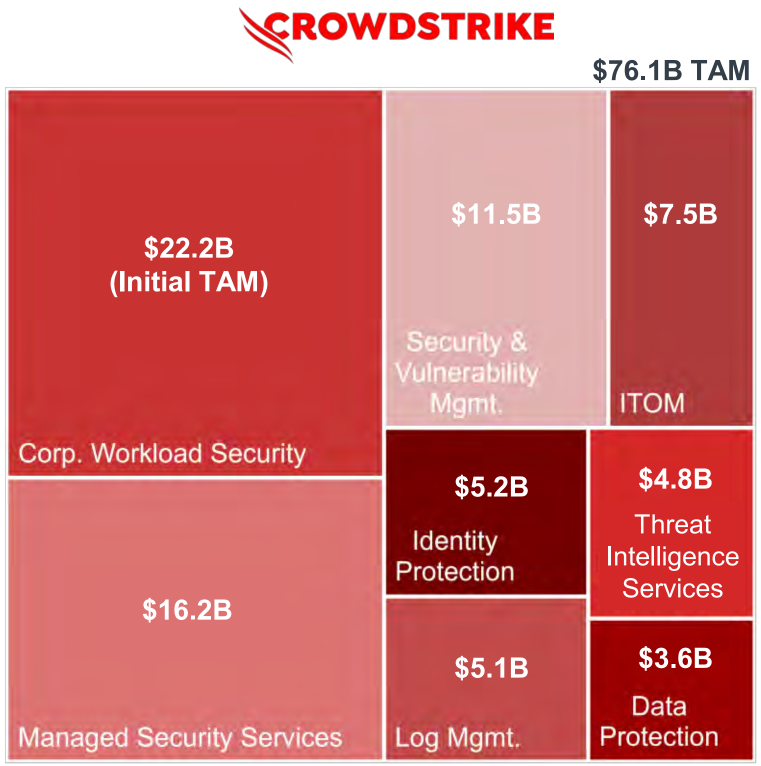

Note: Market data as of October 31, 2023. Source: CapIQ, Battery Q3 2023 Cloud Software Spending Survey.

# The market is shifting from best-of-breed to end-to-end platforms

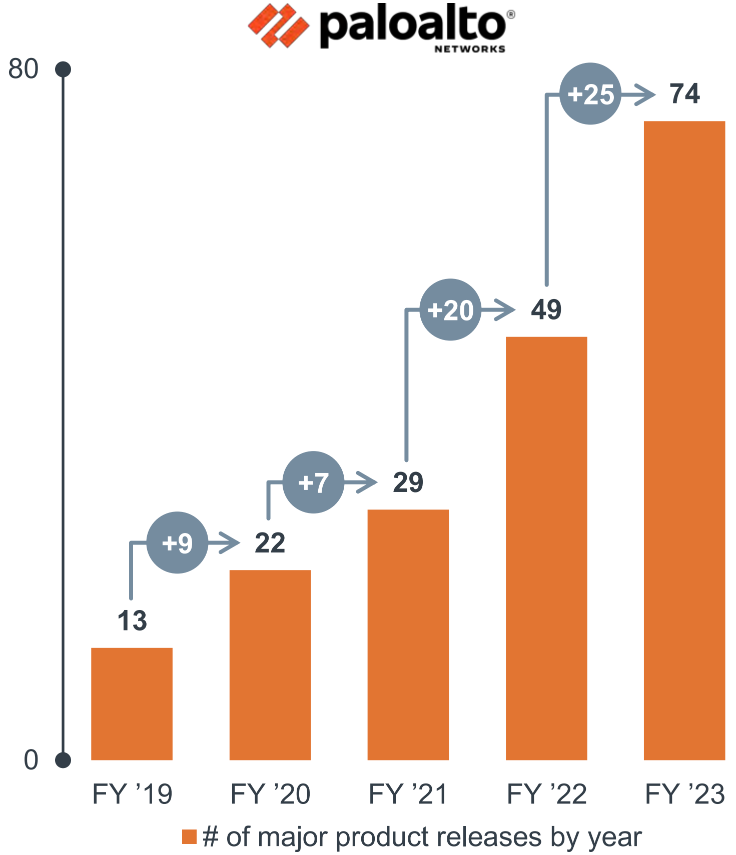
## Multi-Product Adoption




## TAM Expansion & M&A




## Higher New Product Velocity



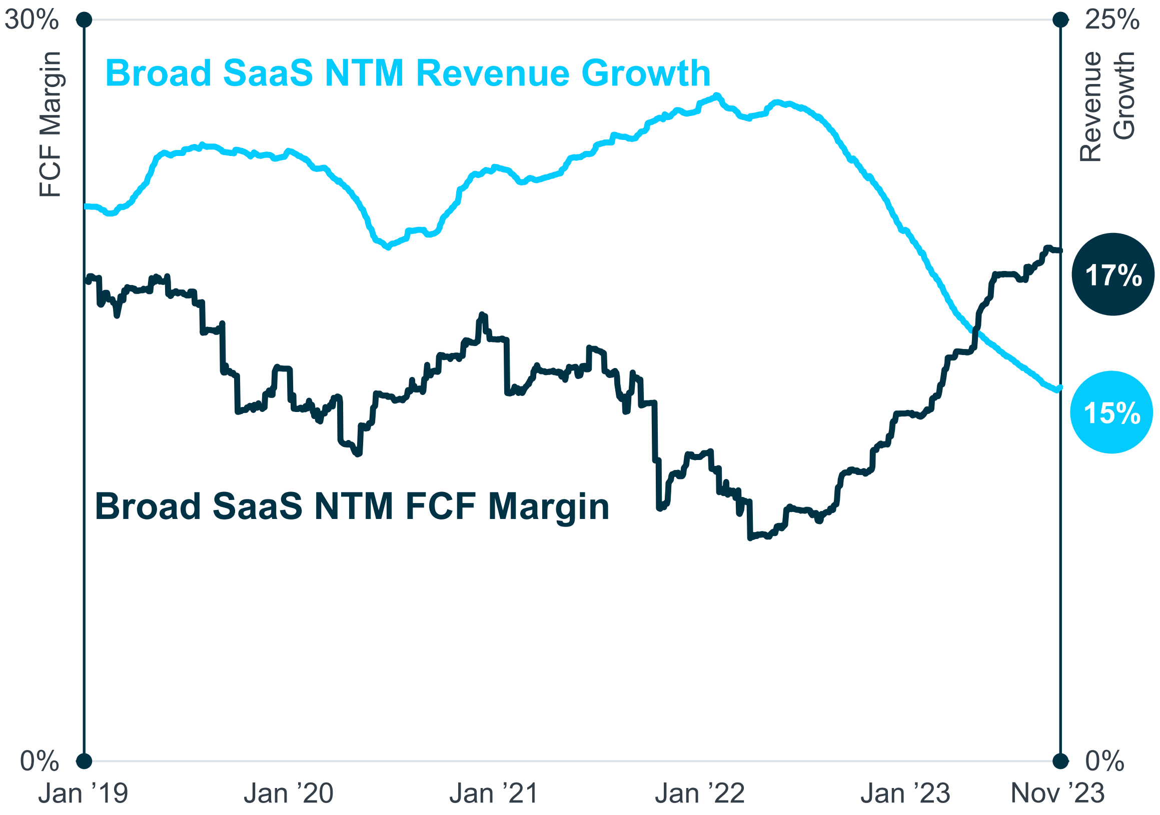

**Vendors are consolidating spend by launching new products and expanding into adjacent markets.**

Note: Represents Palo Alto Networks' FYE of July 31st. [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/.

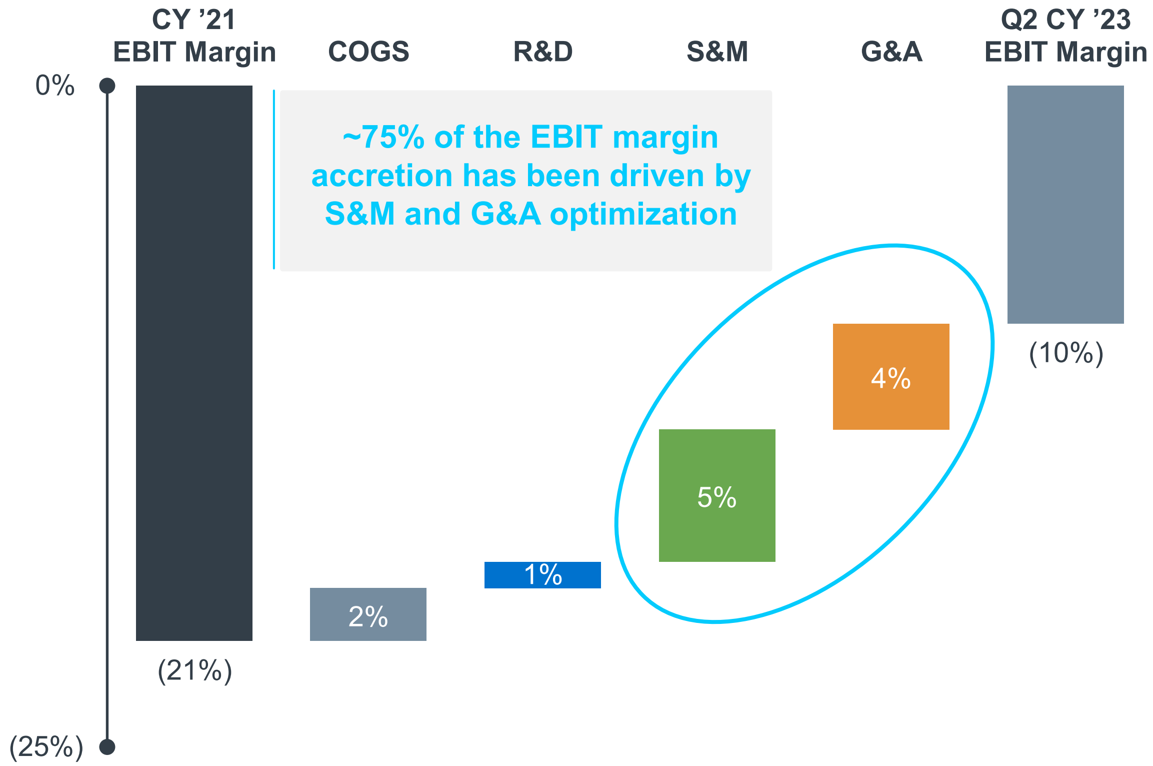
Source: Company presentations and filings

# Growth uncertainty has shifted the focus to improving profitability

NTM Revenue Growth vs. NTM FCF Margin



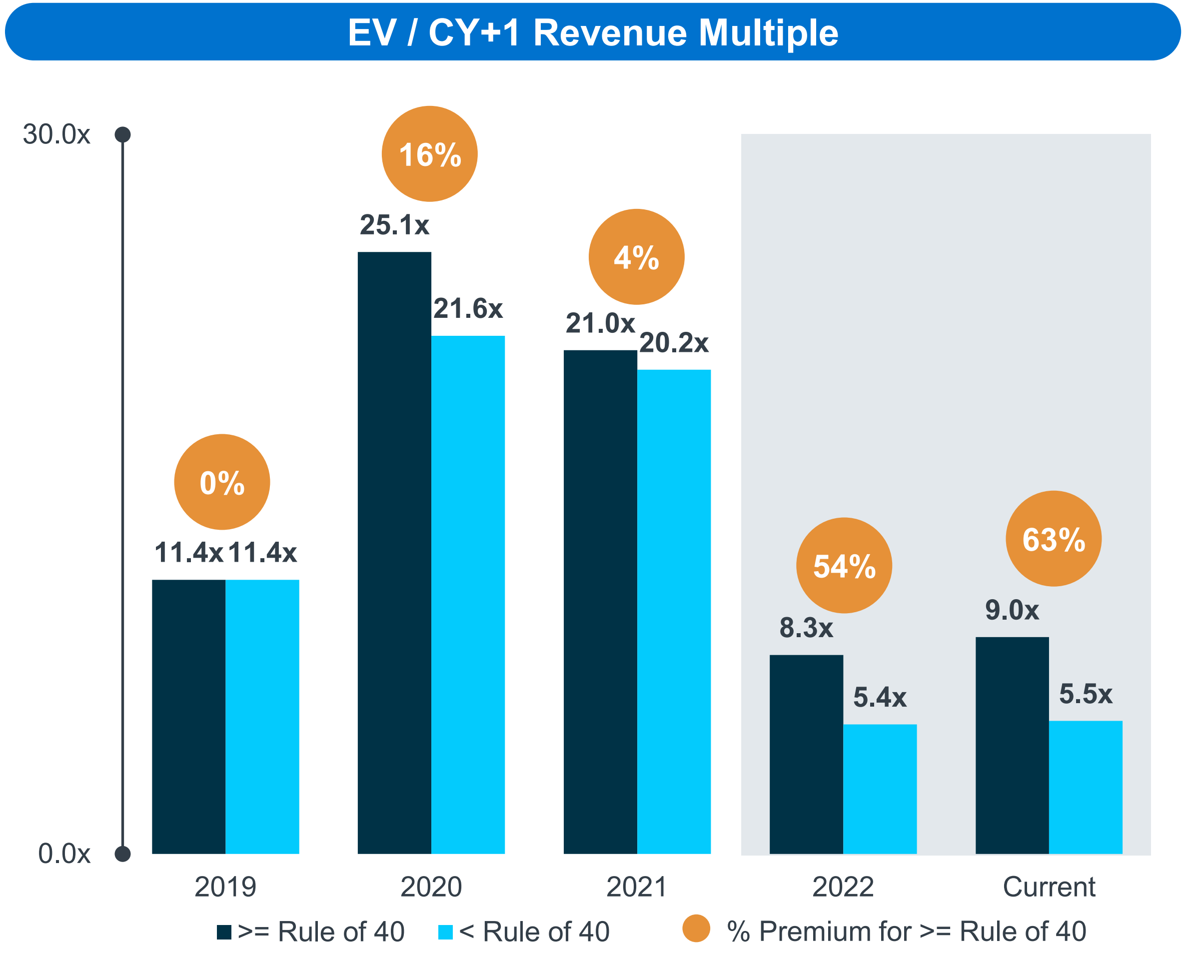

Average GAAP EBIT Margin Expansion

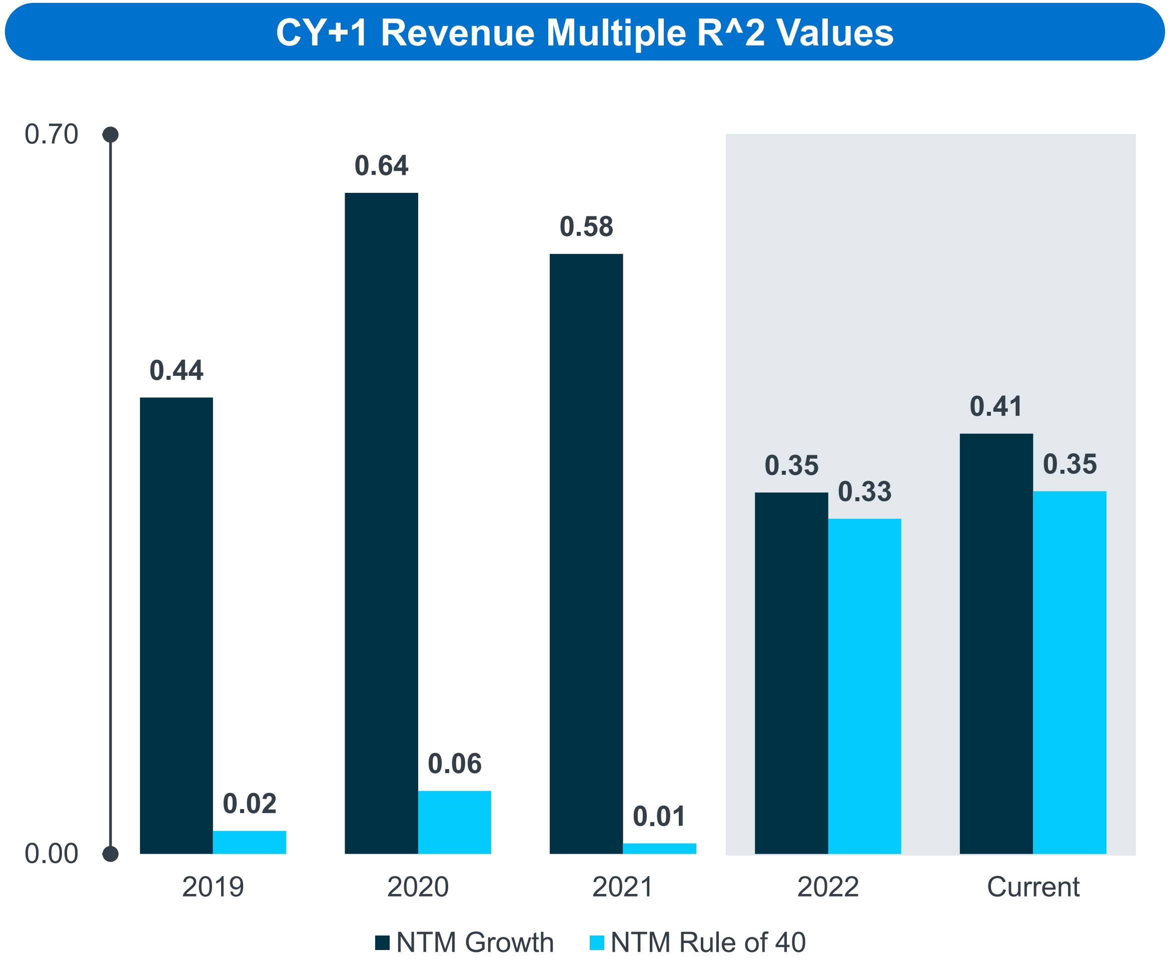



**Companies are adjusting their spend profile to match new growth expectations.**

Note: Market data as of November 7, 2023
Source: CapIQ

# The market is rewarding efficiency




**Companies that show a balance of growth and profitability trade at a ~60% premium to those that don't.**

Note: Market data as of 11/7/23
Source: CapIQ

# You must be a healthier software company to go public

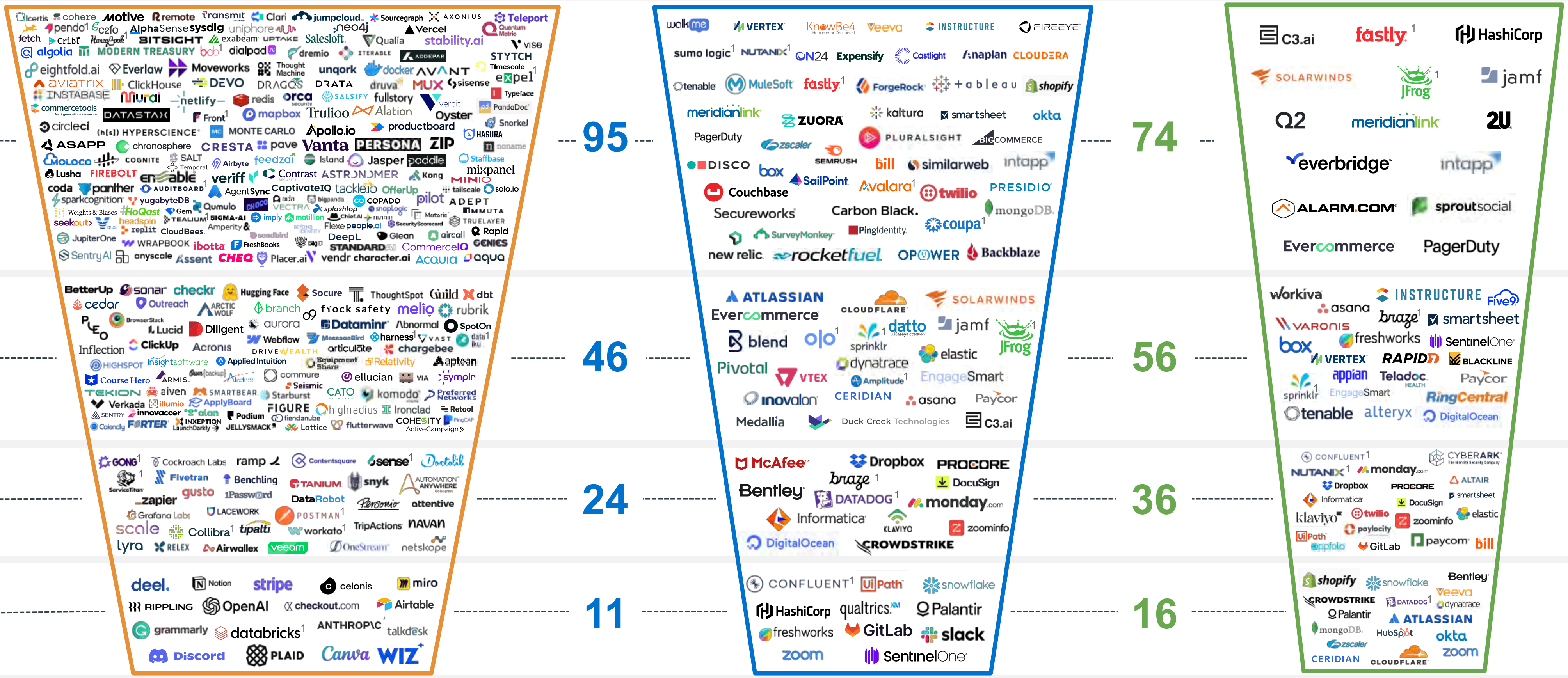
| | IPOs \| 2018 – 2019 | IPOs \| 2020 – 2021 | IPOs \| 2022 – 2023 |
|---|---|---|---|
| **Revenue** | **$381M** | **$436M** | **$788M** |
| **Y/Y Growth** | **29%** | **40%** | **35%** |
| Gross Margin | 74% | 75% | 74% |
| R&D % of Revenue | 25% | 28% | 20% |
| S&M % of Revenue | 40% | 40% | 31% |
| G&A % of Revenue | 19% | 24% | 14% |
| **EBIT Margin** | **(10%)** | **(15%)** | **10%** |
| Net Dollar Retention | 121% | 120% | 119% |
| EV / NTM Revenue - IPO | 9.2x | 17.3x | 10.8x |
| Companies | Dropbox, smartsheet, elastic, PingIdentity, zoom, DocuSign, pagerduty, zscaler, DATADOG[1], CROWDSTRIKE, dynatrace, CLOUDFLARE | bill, JFrog[1], sprinklr[1], snowflake, HashiCorp, freshworks, UiPath, GitLab, asana, SentinelOne, CONFLUENT[1], PROCORE, sumo logic[1], zoominfo, monday.com | klaviyo |

**Software IPOs are now larger while showing growth durability of 30%+ and greater profitability.**

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/ Operating metrics reflected are non-GAAP.
Source: CapIQ

# Unicorns aren't out of the woods yet as the market shifts from valuation to scale

| Valuation | # Companies | **Global Private Software Unicorns*** (Current Unicorns \| Latest Disclosed Post-$) | **Software IPOs** (2013 – 2023 IPO Cohort \| EV at IPO) | **Public Software Companies** (2013 – 2023 IPO Cohort \| EV at Current) |
|---|---|---|---|---|
| $1B+ | 1,000 | | 95 | 74 |
| $3B+ | 115 | | 46 | 56 |
| $5B+ | 50 | | 24 | 36 |
| $10B+ | 17 | | 11 | 16 |



**Legend**

- # of companies represents aggregate # in each bucket (i.e., # of companies in the $10B+ category are also included in the $1B+ bucket).
- Logos shown reflect where those companies are valued today.

**$1B is the new $100M when it comes to ARR. Despite a high bar to go public, 10 years of software company IPOs have paved the way for private unicorns.**

Source: Pitchbook, CapIQ as of 11/07/23.

Note: Private Software Unicorns are based upon their latest known financing valuation and excludes companies that are HQ in China and companies that have been labelled as Cryptocurrency/Blockchain companies by Pitchbook. This category also excludes companies that have been through M&A, Buyout/LBO, Joint Venture, Reverse Merger or Bankruptcy: Admin/Reorg as their latest financing deal type. 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/. Operating metrics reflected are non-GAAP. *Anthropic valuation not disclosed but based on an article from *The Information* dated 10/4/23.

# Short-term pain will result in long-term success

**The 4 cycles of value creation in software**

High / Growth / Low

**1**

**2012 - 2020**

**High-Burn / High-Growth**

Low interest-rate environment, combined with a one-time COVID-driven digital transformation spend increase, rewards a "growth-at-all-costs" mentality, resulting in bloated cost structures for software businesses.

**2**

**2021 - 2022**

**High-Burn / Slowing-Growth**

High expense rates persist, but revenue growth rates slow amid economic uncertainty and recession fears. Rising interest rates compressed multiples from ~40x to the 8-10x long-term historical average; spending slowdown drives revenue compression.

**3**

**2023**

**Expense Management**

SVB collapses, the straw that breaks the "growth-at-all-costs" camel's back. Founders must proactively manage expenses and accept slower near-term growth. High-growth companies reduce growth guidance, but expense cuts remain shallow.

**4**

**2024+**

**Low-Burn / High-Growth**

Once companies manage expenses, we will soon see a convergence to the long-term target of 30% operating margins. As growth returns, highly-profitable, high-growth companies will return. The era of $1B B2B software companies is here, and with >30% operating margins and efficiency built in, we will see higher-quality franchises.

Low — Efficiency — High

**The return to fundamentals creates long-term healthy companies.**

# Product market fit is not one and done

**databricks**[1]

| | | | |
|---|---|---|---|
| Trend | Big Data | Lakehouse | AI |
| Product Innovation | Apache Spark | Delta Lake | mosaicML, mlflow |
| Laggard | hadoop MapReduce | teradata, Netezza, Cloudera | DataRobot |

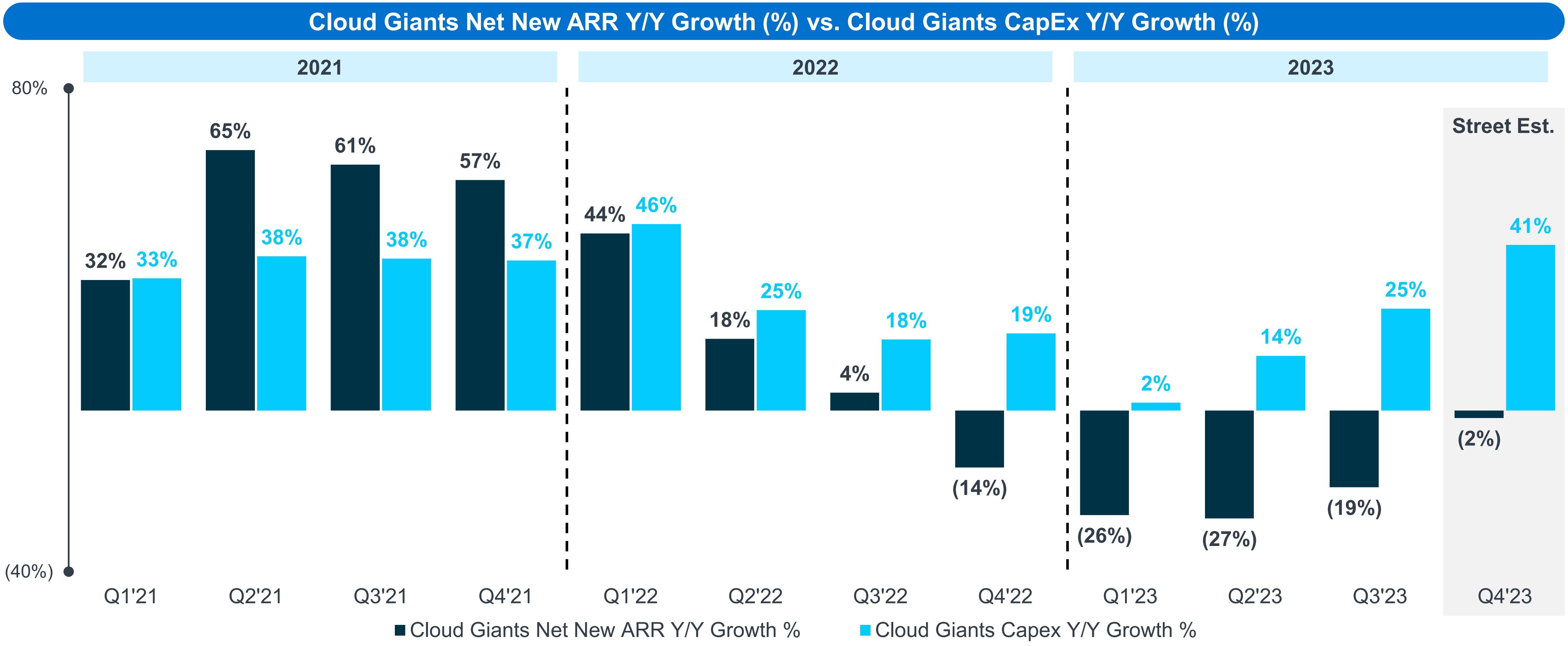
**ATLASSIAN**

| | | | |
|---|---|---|---|
| Trend | Developers | ITSM | Collaboration |
| Product Innovation | Confluence, Jira | Jira Service Management, Opsgenie | loom |
| Laggard | Rally Software | Micro Focus, bmc | Cisco webex |

**Companies must continue to innovate and consistently re-prove product market fit or risk disruption.**

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/

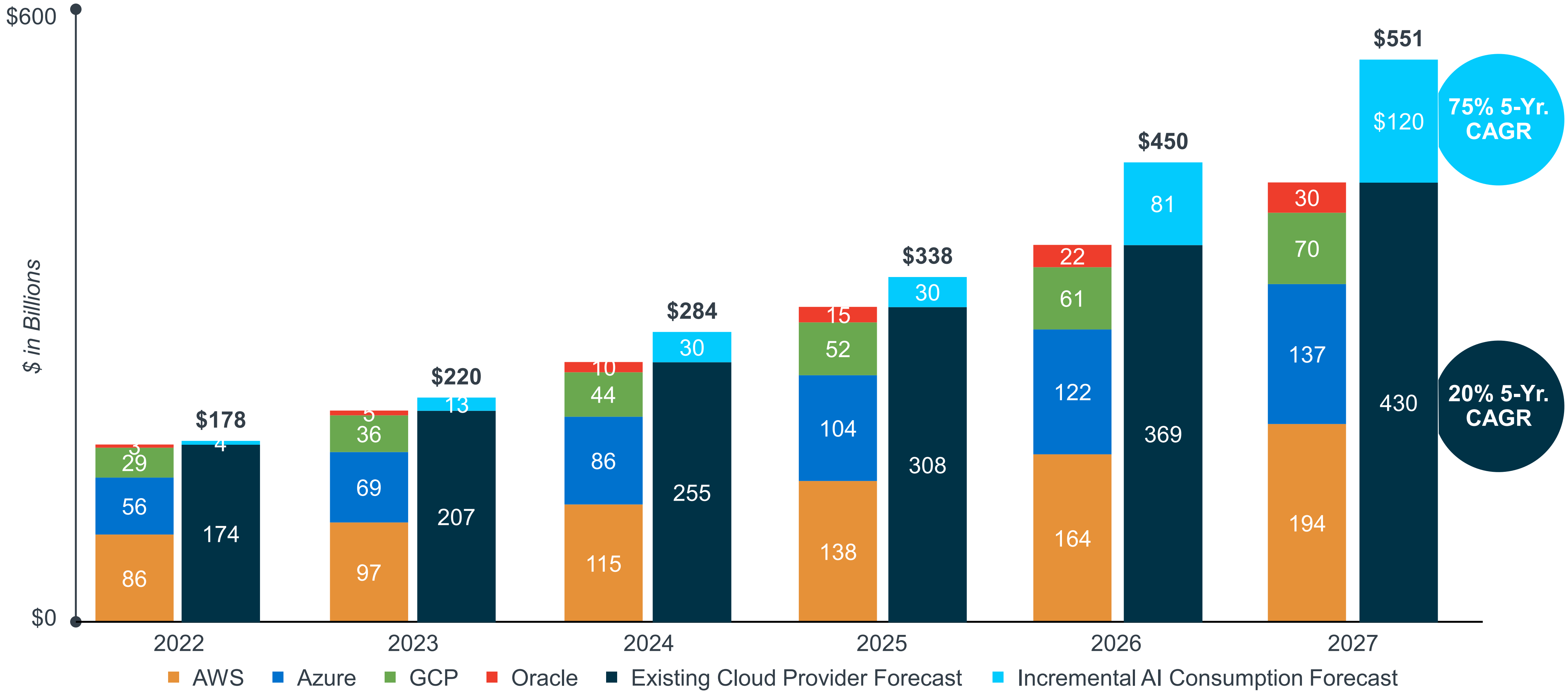
# Cloud optimizations persist as cloud vendors ramp AI investments




**Cloud providers are investing ahead of the curve as the demand for AI accelerates.**

Note: Growth rates reflect FX-adjusted figures (i.e., not constant currency). Cloud Giants represents the sum of AWS, Azure and Google Cloud.
Source: CapIQ, Goldman Sachs Research.

# AI will fuel the next era of cloud consumption




**Cloud adoption is rapidly expanding with AI, and the stakes have never been higher. There is $100B+ of incremental revenue that is up for grabs by 2027.**

Note: Cloud 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.

Source: Battery estimates, Goldman Sachs research

# Operational Best Practices

# 1 Metrics that matter: The early-stage and growth-stage playbook

| | Startup: $1-5M ARR | Scaleup: $5-15M ARR | Scaling: $15-30M ARR |
|---|---|---|---|
| ARR Growth | 3.0x+ | 3.0x | 2.0x |
| New Logo Growth | 3.0x+ | 2.5-3.0x | 1.5-2.0x |
| GDR / NDR % | 90%+ \| 110%+ | 90%+ \| 120% | 90%+ \| 130% |
| Gross Margin % | >60% | >70% | >75% |
| S&M as a % of Revenue | 130% \| $1.6M / Qtr. | 100% \| $4M / Qtr. | 80% \| $7M / Qtr. |
| R&D as a % of Revenue | 100% \| $1.3M / Qtr. | 80% \| $3M / Qtr. | 60% \| $5M / Qtr. |
| G&A as a % of Revenue | 50% \| $0.6M / Qtr. | 40% \| $2M / Qtr. | 30% \| $3M / Qtr. |
| Magic Number (Net New) | 0.6-0.7x | 0.7-0.8x | 0.8-1.0x |
| Burn Ratio (Net Burn / Net New ARR) | 2.0-3.0x | 2.0-2.5x | 1.0-2.0x |

**Growth is not enough. Companies must also track logo velocity, OpEx efficiency and the path to profitability from the earliest phases of a company's life.**

# 2 Business models are shifting to consumption & outcome-based pricing

Low ........................................ Customer – Vendor Alignment ........................................ High

| On-Premises (Pre 2010s) | Cloud-Native (2010s – 2020s) | AI-Powered (The Future) |
|---|---|---|
| **On-Premises: Buying the right to software** | **Cloud-Native:** Subscribing to the right software | **AI-Powered:** Paying for the right outcome |
| **Perpetual Software License** | **Subscription Software License** | **Consumption & Outcome-Based Pricing** |
| + Predictable software costs, low vendor dependency and perpetual ownership. | + Shifts the software installation, delivery and maintenance burden from customer to vendor and offers a more flexible pricing model. | + Customers only pay for consumption and successful outcomes, resulting in true customer and vendor alignment. |
| - Low alignment between customer and vendor. Customer is responsible for installation and mgmt. along with finding value. | - Upfront commitment each period may result in unused services and still puts the onus of success on the customer. | - 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. |

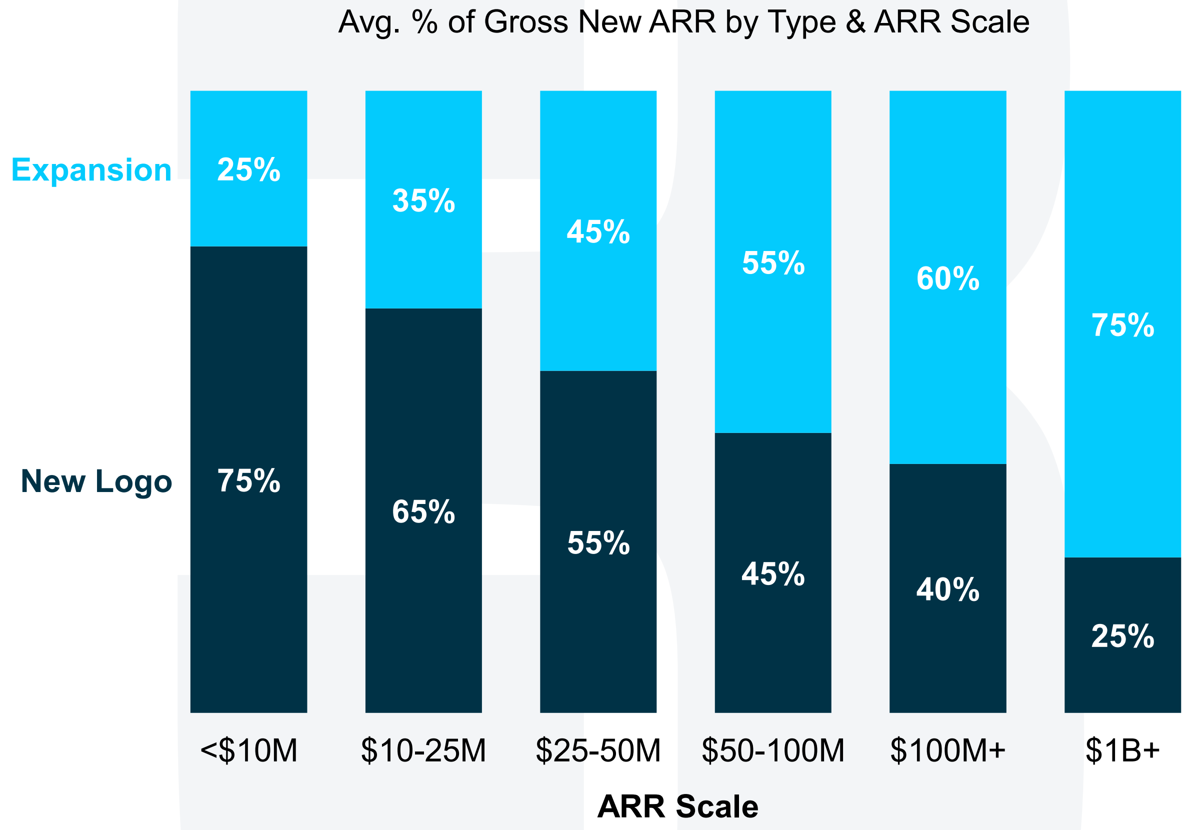
**Consumption and outcome-based pricing is key to aligning customers and vendors.**

# 3 Overemphasize logo velocity to make up for lower ASPs in uncertain economic environments

## Ways to Incentivize Logo Velocity

| | |
|---|---|
| **1 Logo-Based Quota** | Quotas based on the number of new logos closed during a specific period (vs. the $ ARR closed). *Note: it's important to include guardrails around the minimum acceptable annual contract value (ACV) for each customer profile (i.e., enterprise, mid-market, SMB, etc.)* |
| **2 Quota Retirement Gates** | Sales rep quota is based on the $ ARR closed, but in order to retire quota, the sales rep must close a minimum number of new logos. |
| **3 Bonus Incentives** | Involves offering extra compensation for logos closed. *This can be delivered on an individual basis (i.e., each rep is paid for every new logo that they close) or a group-wide basis (i.e., the sales team is given a bonus based on an aggregate new logo target).* |

## Gross New ARR Distribution




**Expansion cycles are not durable without sufficient new logo volume.**

# 4 AI is upending the S&M workflow…

| | Lead Prospecting | Engagement | Close / Forecast | Retain & Expand |
|---|---|---|---|---|
| **Incumbent Tool Stack** | dun & bradstreet, LinkedIn | salesforce, ORACLE | Excel, Google Sheets | Gainsight[1] |
| **Incumbent Workflow** | • SDR : AE ratio is 1:2<br>• Expensive marketing program spend to drive top-of-funnel leads | • $300K AE OTE<br>• 9 mo. + ramp time<br>• Erratic attainment | • Guesswork to forecast and estimate pipeline conversion | • CSM : paying customer ratio is 1:10-25<br>• CSM hires scale linearly with customer growth |
| **AI Innovators** | HIGHSPOT, HubSpot, Apollo.io, zoominfo | GONG[1], Salesloft, Outreach, HubSpot | GONG[1], Clari | Vitally, Catalyst |
| **Impact** | • SDR : AE ratio expands to 1:3 / 1:4<br>• Marketing program spend is reduced through more targeted leads and greater automation | • 6 mo. ramp time<br>• AI-driven intelligence and decision-augmentation for predictable attainment<br>• Training / knowledge transfer | • Data-driven approach drives greater accuracy when forecasting revenue<br>• Companies can use leading pipeline signals to course correct in real-time | • CSM : paying customer ratio expands to 1:50+ w/ AI-driven automation<br>• Personalized approach to deliver better customer experiences |

**AI is augmenting traditional GTM playbooks by driving higher conversion across the funnel and allowing AEs/strategic sellers to own more of the workflow.**

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/

# 5 …With the potential to drive material headcount savings

| | Status Quo | | Future w/ AI Automation | |
|---|---|---|---|---|
| | Headcount | AE:[x] ratio | Headcount | AE:[x] ratio |
| AEs | 30 | | 30 | |
| SDRs | 15 | 2:1 | 10 | 3:1 |
| SEs | 20 | 3:2 | 10 | 3:1 |
| CSMs | 15 | 2:1 | 10 | 3:1 |
| Marketing | 30 | 1:1 | 15 | 2:1 |
| **Total** | **110** | | **75** | |

**~30%**

**S&M headcount savings** from AI-powered automation

**At 30% to 40% of revenue, sales and marketing is one of the highest cost centers for companies. AI-driven automation has the power to drive meaningful efficiencies.**

# 6 Building and scaling the right sales team

| | Seed | Early-Stage | Mid-Stage | Late-Stage |
|---|---|---|---|---|
| **GTM goal** | Find product market fit | Establish repeatability | Scale growth | Maintain growth at scale, and prove efficiency / durability |
| **Mandate** | Understand the use case / pain point, ICP, buyer and budget | Build / implement sales playbook and a repeatable sales process | Scale the sales playbook and process | Manage all revenue generating activities |
| **Success metric** | Initial customers | Consistent new customer lands | Accelerating new customer lands | Profitable unit economics |
| **Sales leader** | CEO / Founder *(product knowledge / vision)* | Head of Sales *(player / coach)* | VP of Sales *(team builder / manager)* | Chief Revenue Officer *(strategic, higher-level leadership)* |
| **Supporting team** | 100% founder-led | 2+ AEs / SDRs reporting to head of Sales or CEO | Scale headcount to match sales capacity and growth + onboard sales managers to coach reps | Manage capacity with growth while driving specialization (seller focus, territories, etc.) |
| **SDR to AE ratio** | N/A | 1:3 | 1:3 | 1:3 |
| **Quota** | N/A | Logo-based quota to incentivize velocity | ARR-based quota | ARR-based quota |
| **Sales team coverage** | No specialization – 100% coverage | No specialization – 100% coverage | Coverage split by geo, account, product, etc. | Coverage split by geo, account, product, etc. |

**Sales organizations must evolve alongside company growth.**

# 7 Measure R&D and align on the right metrics

## Key Engineering Performance / Productivity Benchmarks

| | ELITE | STRONG | FAIR |
|---|---|---|---|
| **SERVICE UPTIME**<br>Measures system, service, solution or infrastructure reliability. | **Five 9s** | Four 9s | Three 9s |
| **TOTAL INCIDENTS & INCIDENT SEVERITY**<br>Measures frequency (weekly, quarterly, etc.) and severity (i.e., Sev-1, Sev-2, etc.). | **< 10 Per month** | 10 – 30 Per month | 30+ Per month |
| **CYCLE TIME**<br>Time from code to 'production'. Shorter cycles correlates to small PR sizes. | **< 2 Days** | 2 – 4 Days | > 4 Days |
| **PICKUP TIME**<br>Measures the time a pull requests waits to be reviewed. | **< 1 Hours** | 1-3 Hours | 3+ Hours |
| **REVIEW & DEPLOY TIME**<br>Time taken to complete a code review and merge code. Low review time represents a healthy / automated review process. | **< 1 Hours** | 1-5 Hours | 5+ Hours |
| **DEPLOY FREQUENCY**<br>Measures how often code is released. Elite deploy frequency represents a stable and healthy continuous delivery pipeline. | **Daily +** | *> 1 / Week* | *< 1 / Week* |
| **ACCEPTANCE RATE**<br>Measures the percentage of code merged and released to code committed. | **> 80%** | 60% | < 50% |

**Commentary:**

Engineering performance and productivity benchmarks are meant to introduce visibility and predictability across development teams, just as operating and S&M performance is measured.

**Best practices:**

- Organization size matters so adapt metrics accordingly.
- Start with objective metrics such as service uptime, incidents, deploy frequency.
- Build a muscle of reporting and improving on metrics over time.

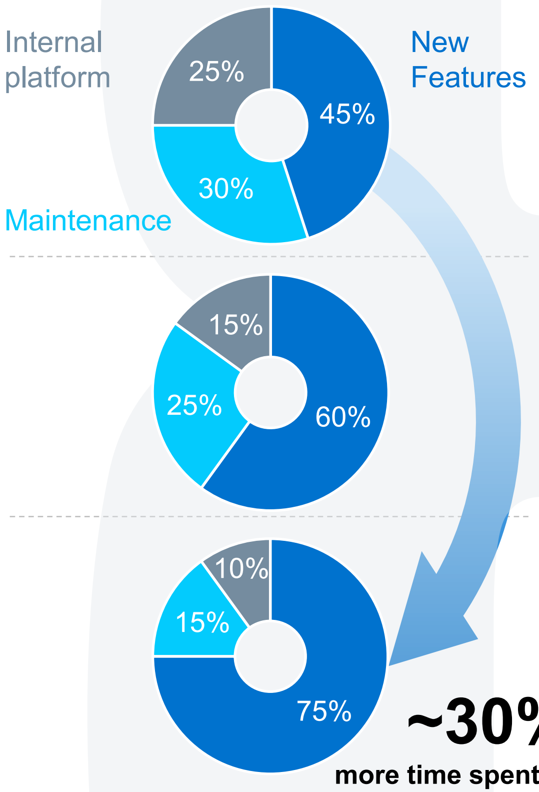
**At 20%+ of revenue, R&D is typically the second largest OpEx line item but is rarely measured. Leverage efficiency metrics to maintain a healthy R&D org.**

Source: LinearB

# 8 Gen AI is augmenting how R&D resources are spent

| | Tool Stack | Ratios |
|---|---|---|
| Pre-cloud | IBM, solarwinds, Pivotal, ca technologies, TRICENTIS | Eng : Mgr 6:1<br>Eng : PM 8:1<br>Eng : QA 15:1 |
| Cloud-native | APPDYNAMICS[1], GitHub, LaunchDarkly, JFrog[1], GitLab, DATADOG[1] | |
| AI-powered | Vercel, LINEARB[1], snyk, GitHub Copilot, poolside, replit, warp | Eng : Mgr 8:1<br>Eng : PM 10:1<br>Eng : QA 20:1 |

## R&D Resource Allocation




**~30%**

**more time spent on New Features** from AI-powered automation

**Battery's R&D Resource Allocation Framework:**

**New Features:** Engineering time and resources on new products, additional features or sub-features, customer/partner requests and integrations.

**Maintenance:** Engineering time and resources on improved quality, reliability, stability, security and performance.

**Internal Platforms:** Engineering time and resources dedicated to improving productivity, automation, testing, code refactoring, migrations and upgrades.

**Engineering teams are a collection of investments in people, time and tools. AI is augmenting the R&D resource allocation framework by enabling teams to spend more time on developing new features.**




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/

# 9 AI is upending the G&A workflow…

| | Legal | Recruiting & HR | Finance & Accounting | IT |
|---|---|---|---|---|
| **Incumbent Tool Stack** | LexisNexis | Taleo, LinkedIn | SAP, ORACLE, Anaplan | zendesk |
| **Incumbent Workflow** | • Expensive law firm<br>• Manual / repetitive work<br>• Bloated internal team | • Expensive talent agency<br>• Manual lead qualification<br>• Repetitive data capture | • Manual data entry<br>• Single-player workflow<br>• Repetitive ad hoc analysis | • Rules-based engine<br>• Physical IT desk<br>• Human-powered |
| **AI Innovators** | casetext, Harvey, ontra[1] | RIPPLING, bob[1], workable, Metaview | AUDITBOARD[1], bill, INTUIT, cube[1] | servicenow, Moveworks |
| **Impact** | • Outcome-based deliverables<br>• Automated boilerplate tasks<br>• Increase efficiency and better customer experience | • Automated candidate sourcing and qualification<br>• Less reliance on external agencies | • Democratization of analytics<br>• Greater forecasting accuracy<br>• Collaborative workflow | • Automated ticket and response<br>• Higher deflection rates for IT incidents<br>• Faster time to resolution |

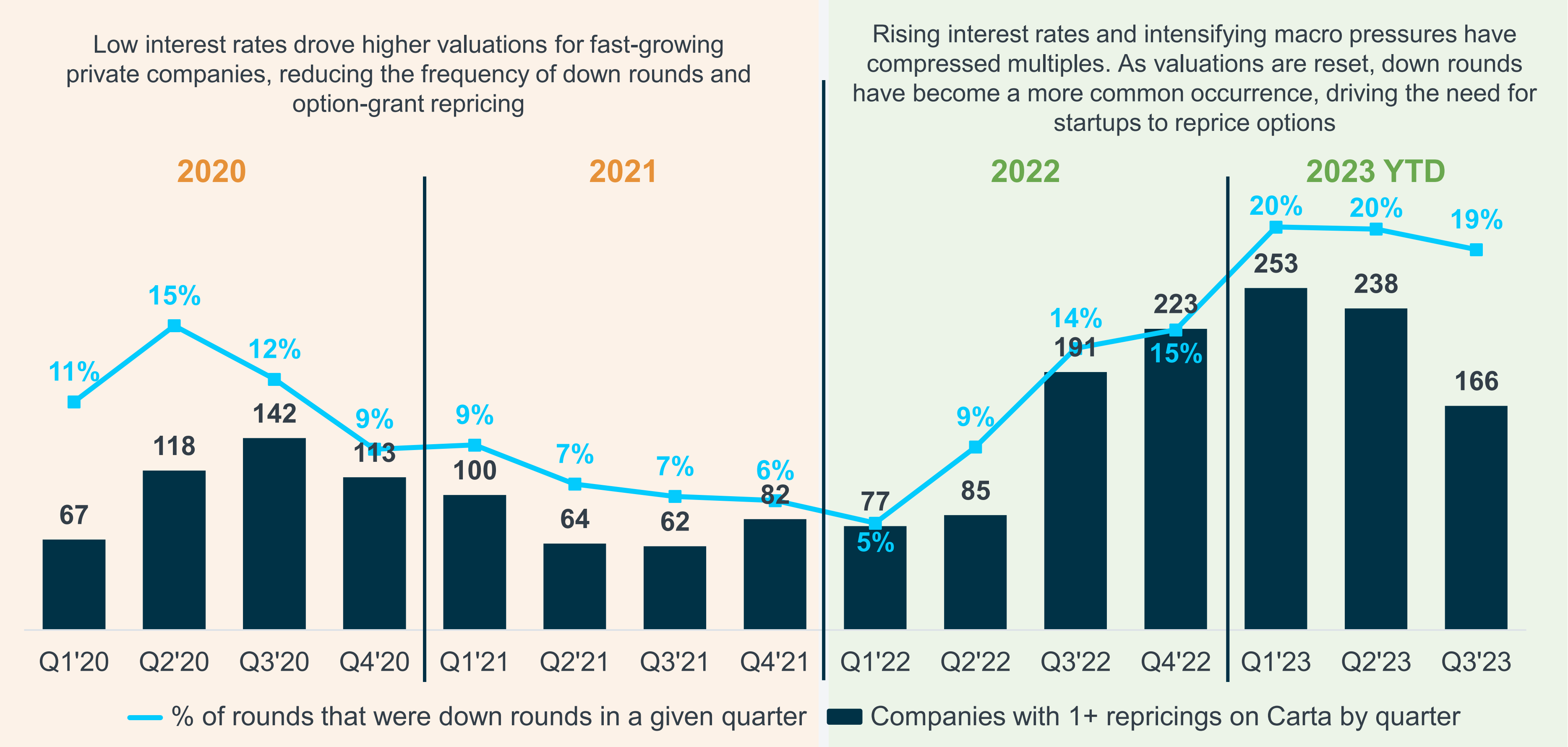
INTUIT *"…live experts are more productive, **saving 160,000 hours per year with AI-driven features like those in TurboTax Live Full Service**, where intelligent document understanding automatically extracts and deciphers uploaded documents, nearly completely eliminating the need for data entry."*

**AI is transforming G&A functions from cost centers to value centers.**

Source: Company filings
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/

# 10 Valuation Resets are Catalyzing Stock Option Repricing

**# of Repriced Option Grants vs. % of Fundraising Rounds that were Down Rounds**




**Key Considerations**

**Who participates**
All employees or limited to key employees / execs

**Which securities apply**
Vested vs. unvested

**How the options are repriced**
Adjusting the strike price or issuing additional shares

**As valuations reset, private companies should not be afraid of repricing existing employee stock options to retain top talent and realign incentives.**

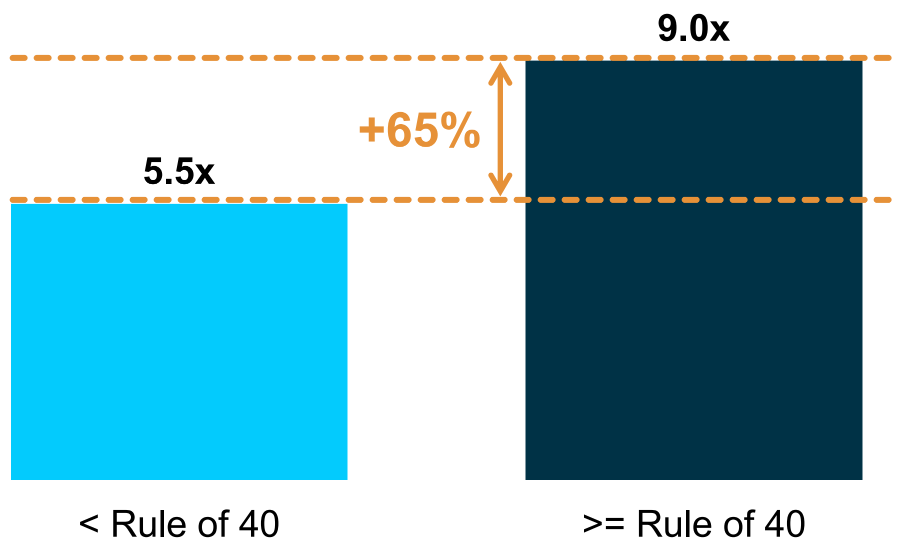
Source: Carta
Note: Represents an aggregated and anonymized sample of Carta customer data

 Battery 

# Wrapping it up – a window into the future

| | Companies Today | $ Δ* (Today vs. Future) | Future Companies w / AI Automation |
|---|---|---|---|
| **Revenue**<br>Y/Y Growth | **$200M**<br>30% | | **$200M**<br>30% |
| **Gross Margin** | **80%** | | **80%** |
| R&D % of Rev<br>S&M % of Rev<br>G&A % of Rev | 25%<br>35%<br>15% | (-) ~20%<br>(-) ~30%<br>(-) ~20% | 20%<br>25%<br>12% |
| **Total OpEx** | **75%** | **(-) ~24%** | **57%** |
| **EBIT Margin** | **5%** | **(+) ~360%** | **23%** |
| **Rule of 40 Positive** | ✗ | | ✓ |
| **Enterprise Value** | **$1.4B** | **(+) ~65%** | **$2.3B** |

**Avg. Forward Revenue Multiple**




Assuming a valuation premium for greater than rule of 40 businesses, a ~24% reduction in OpEx spend powered by AI automation can result in a ~65% valuation premium

**Market bounce back timing is uncertain, but you can increase value by increasing efficiency. The effect will be amplified when growth returns.**

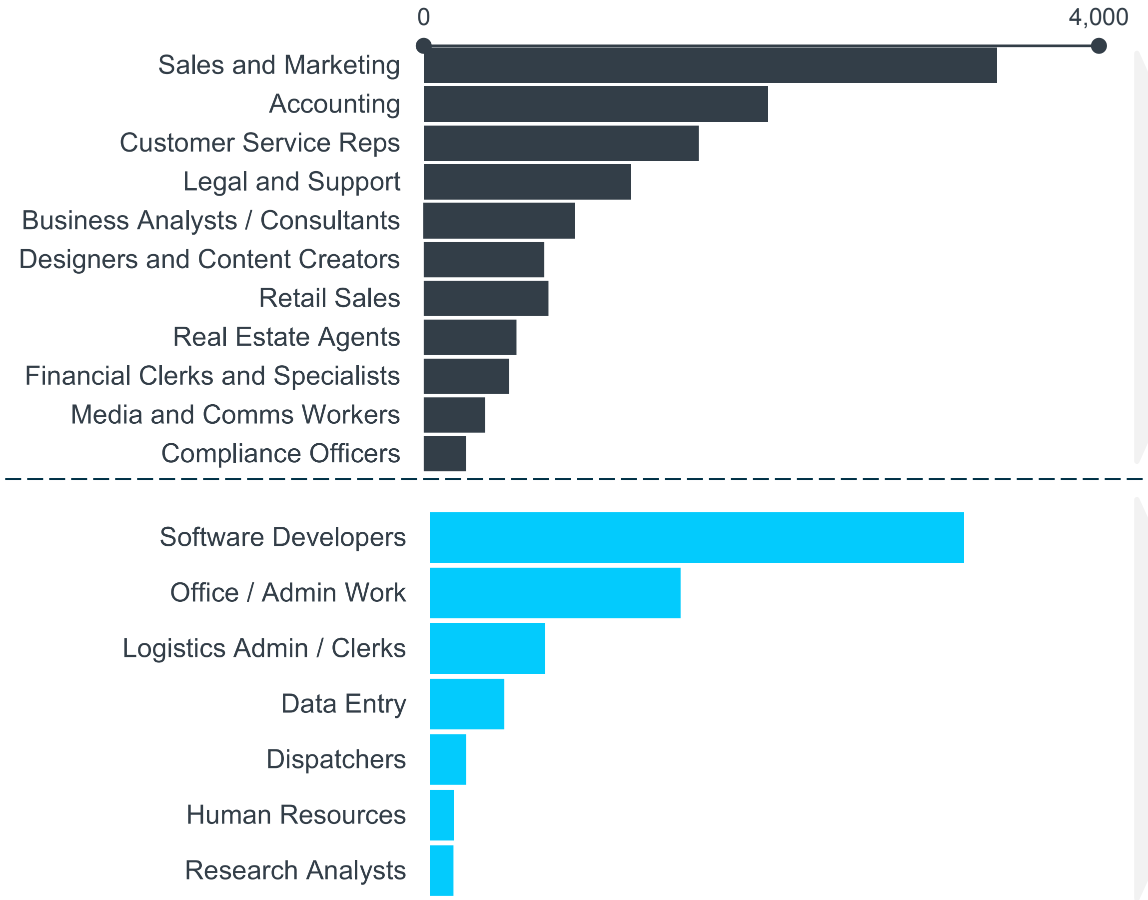
Note: $ Δ represents change in attributable dollar value. Market data as of 11/7/2023.
Source: Average Forward Revenue Multiple based on CapIQ data. Illustrative P&L based on Battery estimates.

Battery

# Themes of Interest

# Generative AI is automating repetitive tasks across every function

## US Headcount Exposure to Generative AI by Job Category[1]




## Workflows Automated

### Customer Facing

**Sales (SDRs and AEs)**
*Automated outreach drafting and CRM ingestion based on call transcriptions and analysis*

**Legal**
*Legal document review, contract drafting and redlining for both litigators and in-house counsel*

**Content Creators and Designers**
*AI-powered image and video editing capabilities, including text-to-image generation*

### Customer Facing

**HR and Learning & Development**
*AI-generated avatars to convert curriculum text into full fledged videos for employee education*

**Research Analysts**
*Enterprise search platforms and internal knowledge management to streamline access to information*

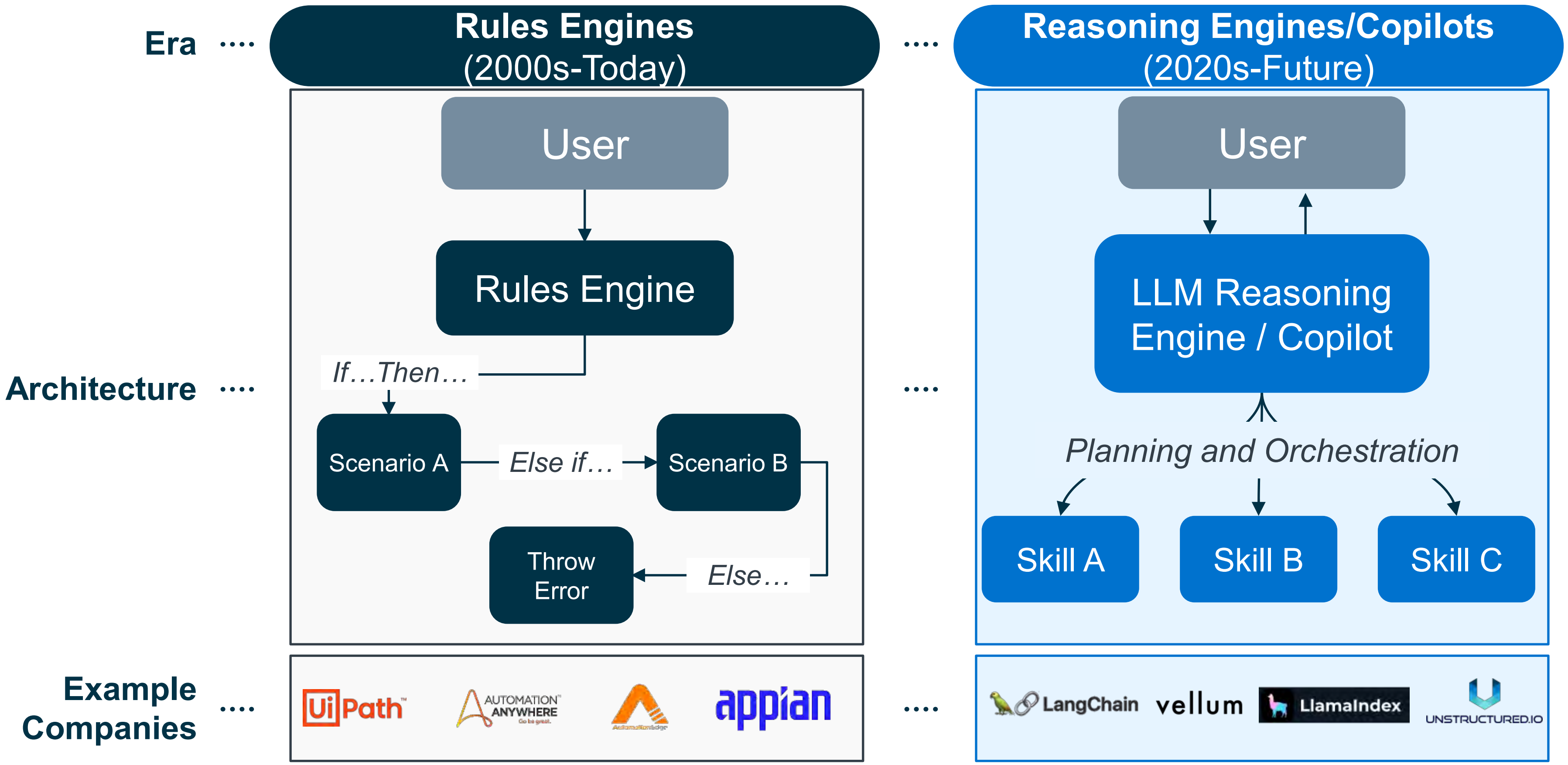
**Software Development**
*AI-powered code generation, review and testing to streamline more boilerplate code and tasks*

**Generative AI's influence has continued to expand and will influence how businesses think about both their customer and internal-facing workflows.**

Source: BLS

[1] Job Categories are based on a grouping of BLS jobs that have similar functions and software needs.

# AI Copilots are proliferating across critical market segments




**Coding Copilots**
GitHub Copilot, replit, FACTORY, tabnine, poolside, codeium

**Legal Copilots**
casetext, Lexis+ AI, Harvey., Robin, Spellbook

**Sales and Marketing Copilots**
Glyphic, Copilot, pod, CloudSale, regie.ai

**Data Science Copilots**
seek[1], JULIUS.AI, QUERIO

**Financial Copilots**
truewind, Basis, Squack

**New wave of reasoning engines / copilots powered by LLMs are more flexible than previous rules engines, broadening their scope of work significantly.**

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/

# "Choose your own adventure": Every business will need a unique LLM infrastructure stack that fits its needs

## RETRIEVAL AUGMENTED GENERATION
Weaviate[1], Qdrant, Pinecone, LlamaIndex, UNSTRUCTURED.IO

## PROMPT ENGINEERING
Galileo[1], Weights & Biases, Humanloop, PromptLayer, HoneyHive

## FINE-TUNING / TRAINING
mosaicML / databricks[1], Predibase, anyscale, CentML, Galileo[1], arize[1], Hugging Face, Humanloop

## OPEN SOURCE MODELS
Hugging Face BigScience, Google Research FLAN-T5, LLaMA by Meta, MISTRAL AI_, NOMIC, mosaicML MPT-7B, stability.ai, together.ai

## CLOSED SOURCE MODEL PROVIDERS
OpenAI, cohere, ANTHROP\C, AI21 labs, Reka, contextual.ai

## GPU CLOUD
aws, Google Cloud Platform, Azure, Lambda, CoreWeave, Paperspace, ORACLE

## SERVERLESS & DECENTRALIZED GPUS
Modal, anyscale, BANANA, RunPod, mystic, FOUNDRY, together.ai, salad, baseten

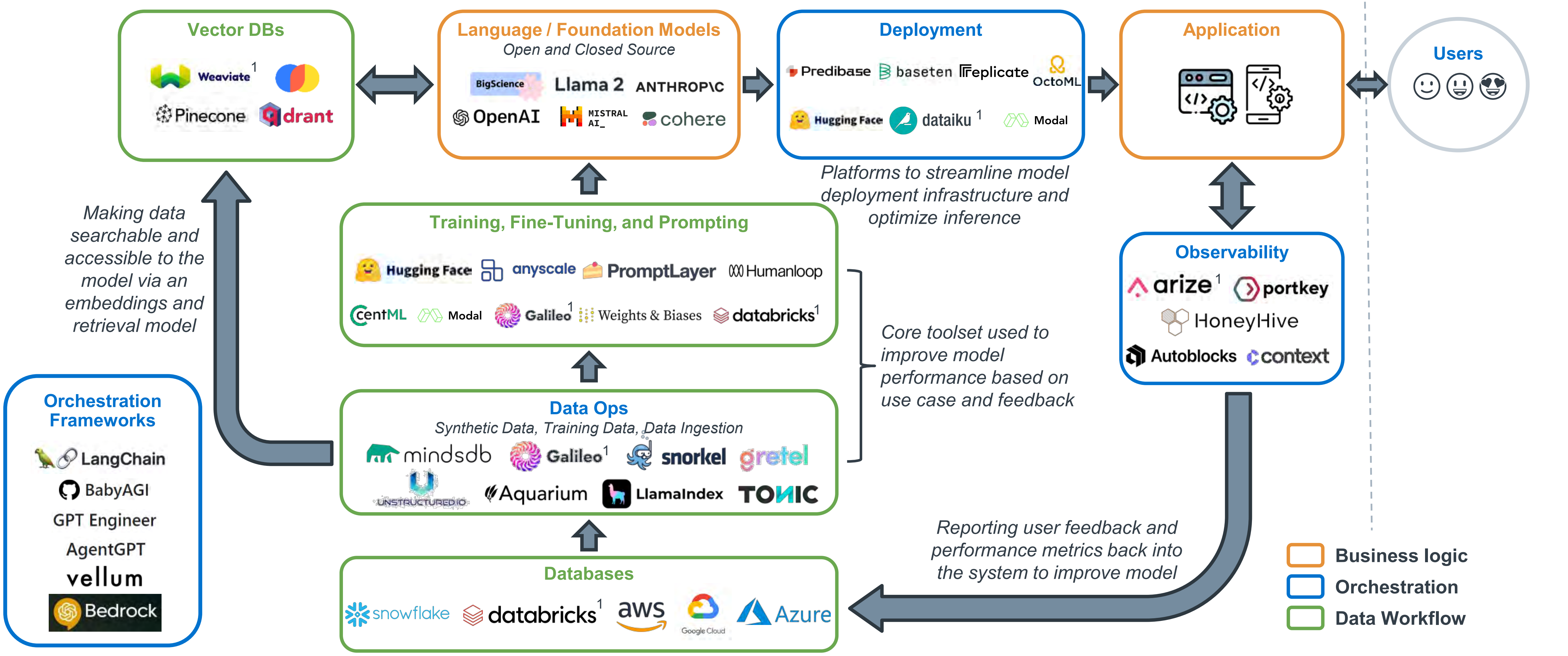
## MODEL HUB AND DEPLOYMENT
Hugging Face, replicate, dataiku[1], OctoML, baseten

## HARDWARE
NVIDIA, GRAPHCORE, SambaNova SYSTEMS, cerebras, AMD, aws

**Companies must balance the required performance, cost and developer experience when constructing their LLM infrastructure stack.**

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/

# Emerging software architecture for LLM apps shifts focus from code to orchestration




**LLMs, the powerful engines under the hood of many AI-native companies, must have the right supporting infrastructure to become complete applications.**





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/

# AI adoption necessitates new security and compliance tools

## Compliance / Governance Workflow, Documentation & Policies

- credo ai
- Holistic AI
- anch.AI
- KONFER
- preamble
- MONITAUR
- enzai
- Collibra[1]
- FAIRLY
- MITHRIL SECURITY
- TRUSTIBLE
- CRANIUM

## Data Prep / Management

- gretel
- PRIVATE AI
- hazy
- TONIC

## Secure / Private Training

- FedML
- Flower
- DynamoFL
- Devron
- integrate.ai

## Explainability, Fairness & Anti-Bias

- arize[1]
- Giskard
- truera
- Galileo[1]
- fiddler
- Arthur

## Secure Chat & LLM Firewall

- AIMON
- Usage Panda
- CREDAL
- Rebuff AI
- insightcircle

## AI / ML Security

- TROJ.AI
- HIDDENLAYER
- ROBUST INTELLIGENCE
- Protect AI
- CALYPSOAI

**As AI expands the attack surface, companies require guardrails to ensure the safety, compliance and governance of AI.**





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/

# AI is driving software development efficiency with a new emerging toolchain

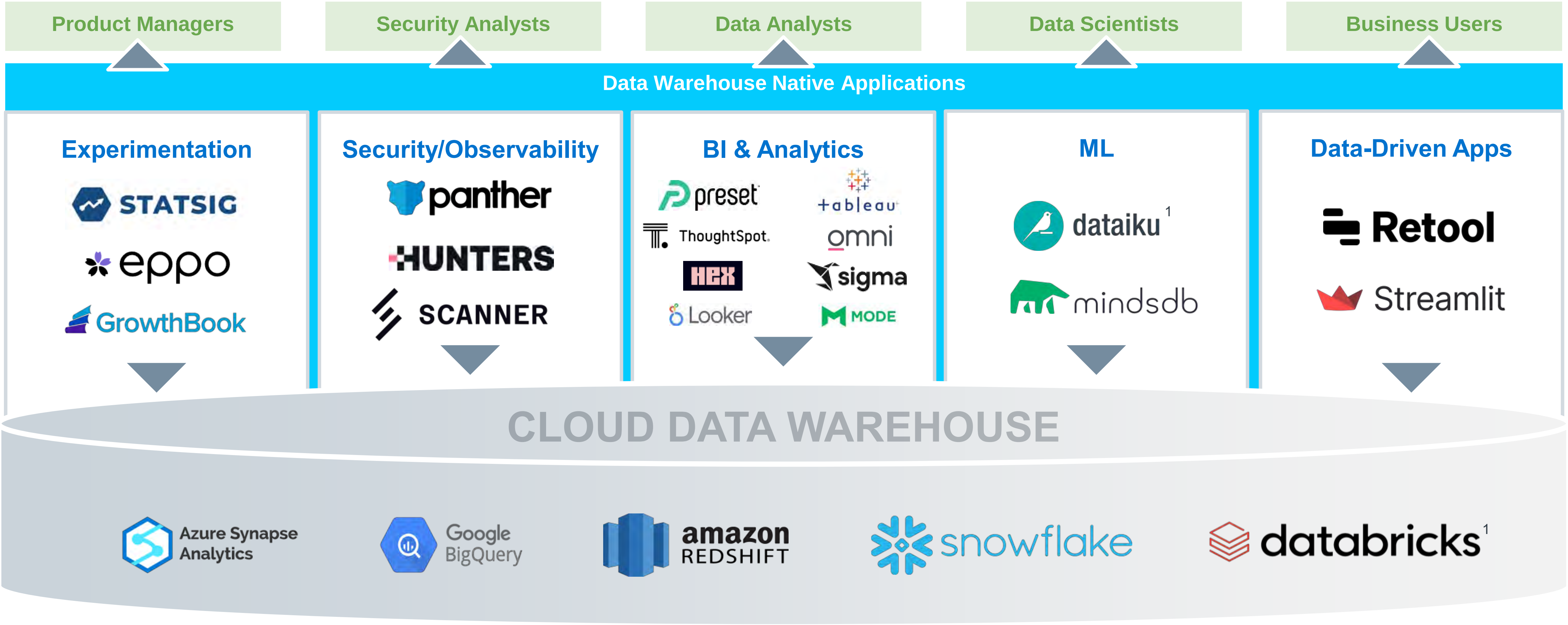
| | Develop | Integrate | Deploy | Monitor & Secure |
|---|---|---|---|---|
| **Cloud-Native Software Development Toolchain** | IJ, Visual Studio, Fig, eclipse | circleci, GitHub, cypress[1], TRICENTIS, Jenkins, BrowserStack, Gradle, Playwright | Azure, amazon web services, HEROKU, fastly[1], Digital Ocean, Google Cloud | APPDYNAMICS, CONTRAST SECURITY[1], new relic, Checkmarx |
| **AI-Native Software Development Toolchain** | warp, GitHub Copilot, replit, Magic, Cursor, modular.dev, mutable.ai, poolside, codeium | GitLab Duo, codium ai, grit, checksum, bloop., Qase | Vercel, LINEARB[1], CLOUDFLARE, harness[1], Fly.io, Railway | DATADOG, snyk, dynatrace, Semgrep |

**New AI-powered tools are emerging across the software development lifecycle to automate and streamline manual work.**




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/

# Mission-critical software platforms turbocharged by data lakes




**Data-intensive applications are built directly on modern data lakes, bringing customers closer to the data.**




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/

Battery

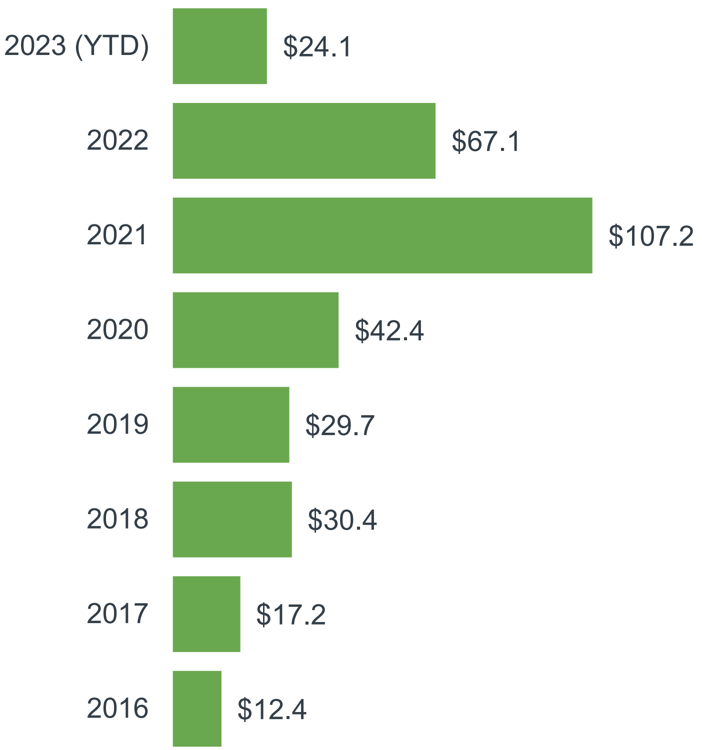
# Future of OpenCloud

# The emerging set of AI and cloud-native companies is promising

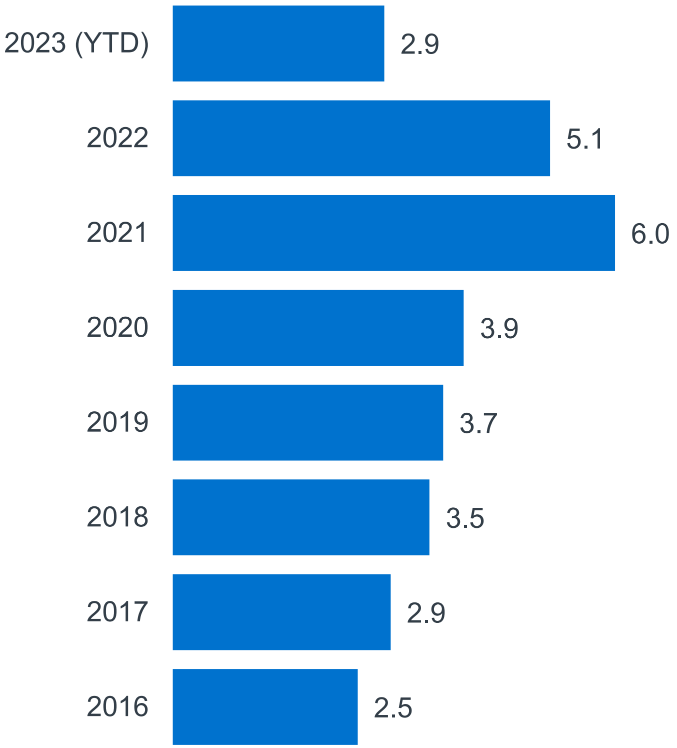
### Select Private Unicorns
Last Disclosed Valuation

| Company | Valuation | Company | Valuation |
| --- | --- | --- | --- |
| OpenAI | $85.0 NEW | scale | $7.3 |
| databricks[1] | $43.5 | GONG[1] | $7.3 |
| ANTHROPIC | $20.0* NEW | 1Password | $6.8 |
| celonis | $13.0 | Grafana | $6.0 |
| Airtable | $11.7 | workato[1] | $5.7 |
| WIZ | $10.3 | Fivetran | $5.6 |
| LACEWORK | $8.3 | POSTMAN[1] | $5.6 |
| netskope | $7.5 | CockroachDB | $5.4 NEW |
| snyk | $7.4 | Collibra[1] | $5.3 |

### Financing Deal Value
$ in Billions




### Financing Deal Volume
Volume in Thousands




**AI and cloud financings have continued to accelerate and there is a healthy backlog of private company unicorns gearing up for IPO.**

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 11/7/2023. Select Private Unicorns are private companies that are enterprise infrastructure-focused with valuations of $5.0B or greater as of November 2023. *Anthropic valuation not disclosed but based on an Information article dated 10/4/23.

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

Aggregate Traction

IPO • $5.3B — 8.3x — Current $44.1B — 1.2x — CY '24E $54.0B

| Date of IPO | Company | IPO | Current | CY '24E | IPO to CY '24E CAGR |
|---|---|---|---|---|---|
| 2021 | HashiCorp | 329 | 573 | 682 | 28% |
| 2021 | GitLab | 233 | 558 | 713 | 42% |
| 2021 | SentinelOne | 150 | 598 | 799 | 61% |
| 2021 | CONFLUENT[1] | 308 | 757 | 987 | 39% |
| 2021 | UiPath | 832 | 1,149 | 1,517 | 18% |
| 2020 | JFrog[1] | 146 | 337 | 422 | 28% |
| 2020 | snowflake | 533 | 2,696 | 3,603 | 57% |
| 2019 | CLOUDFLARE | 270 | 1,234 | 1,670 | 42% |
| 2018 | CROWDSTRIKE | 384 | 2,927 | 3,906 | 52% |

Run-Rate Revenue ($M)

| Date of IPO | Company | IPO | Current | CY '24E | IPO to CY '24E CAGR |
|---|---|---|---|---|---|
| 2019 | elastic | 227 | 1,175 | 1,411 | 35% |
| 2019 | DATADOG[1] | 333 | 2,038 | 2,529 | 47% |
| 2018 | zscaler | 180 | 1,820 | 2,310 | 46% |
| 2017 | mongoDB | 142 | 1,695 | 1,959 | 44% |
| 2017 | okta | 195 | 2,224 | 2,575 | 40% |
| 2016 | twilio | 237 | 4,151 | 4,439 | 41% |
| 2015 | ATLASSIAN | 385 | 3,756 | 4,505 | 31% |
| 2012 | paloalto NETWORKS | 263 | 7,813 | 8,918 | 33% |
| 2012 | servicenow | 190 | 8,600 | 10,858 | 38% |

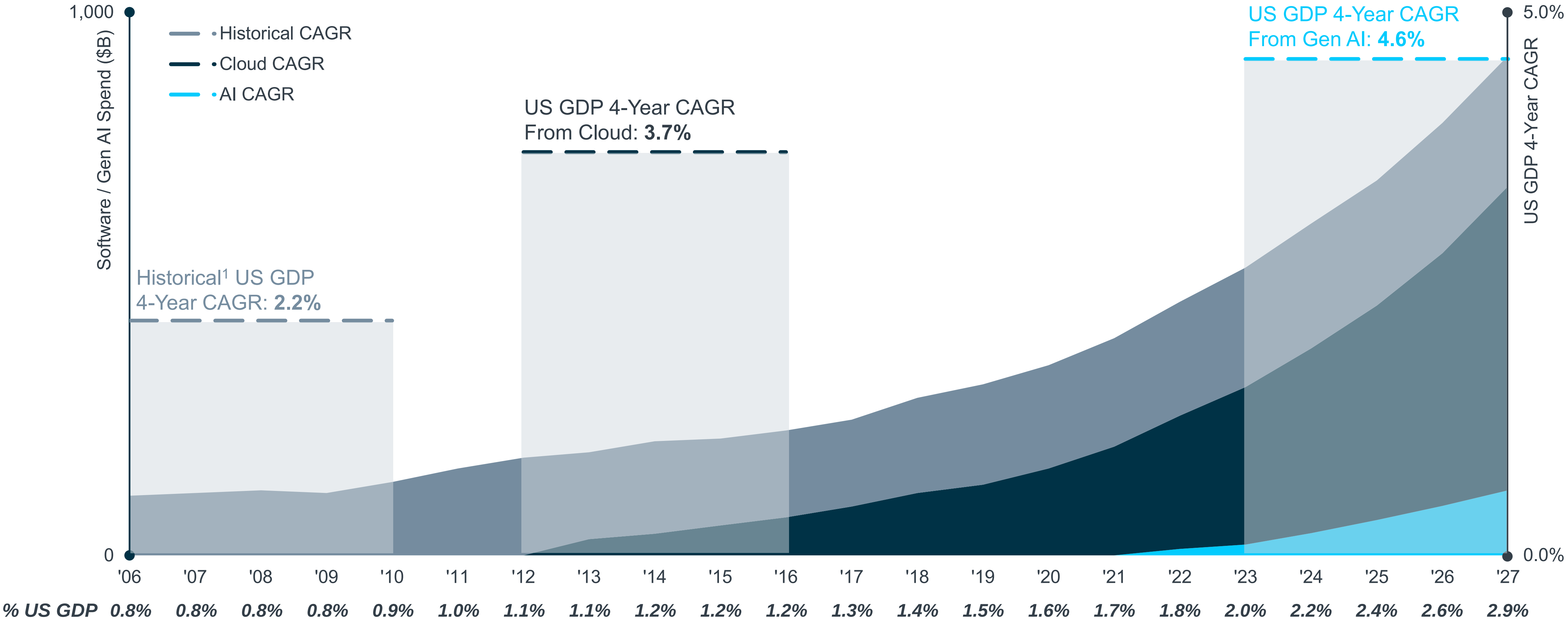
Run-Rate Revenue ($M)

○ Date of IPO

**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 (Current Revenue / IPO Revenue)^(1 / (2023-IPO Year)) - 1

# Generative AI is the second wave of software-powered GDP acceleration




**Spending on generative AI solutions is expected to reach $120B+ by 2027, a CAGR of ~73%, spurring a second era of GDP acceleration.**

Source: Evercore, Bloomberg
[1] Historical defined as 2006-2010 4-year CAGR

# We're still in the early innings for OpenCloud


[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*

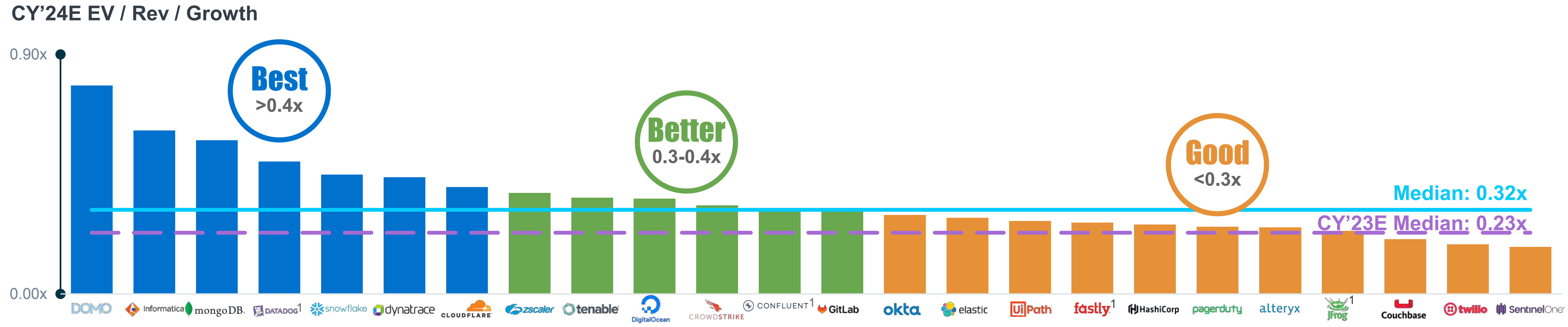
**Patrick Hsu**
*phsu@battery.com*

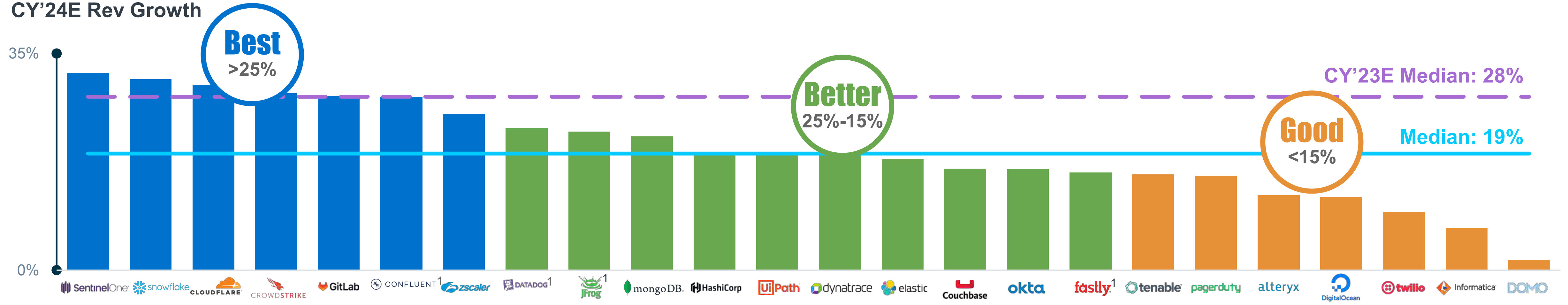
**Sudhee Chilappagari**
*sudhee@battery.com*

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

# Appendix:
# Building a Lasting Public Company:
# Focus on KPIs that Matter

# EV / revenue / growth levels the playing field



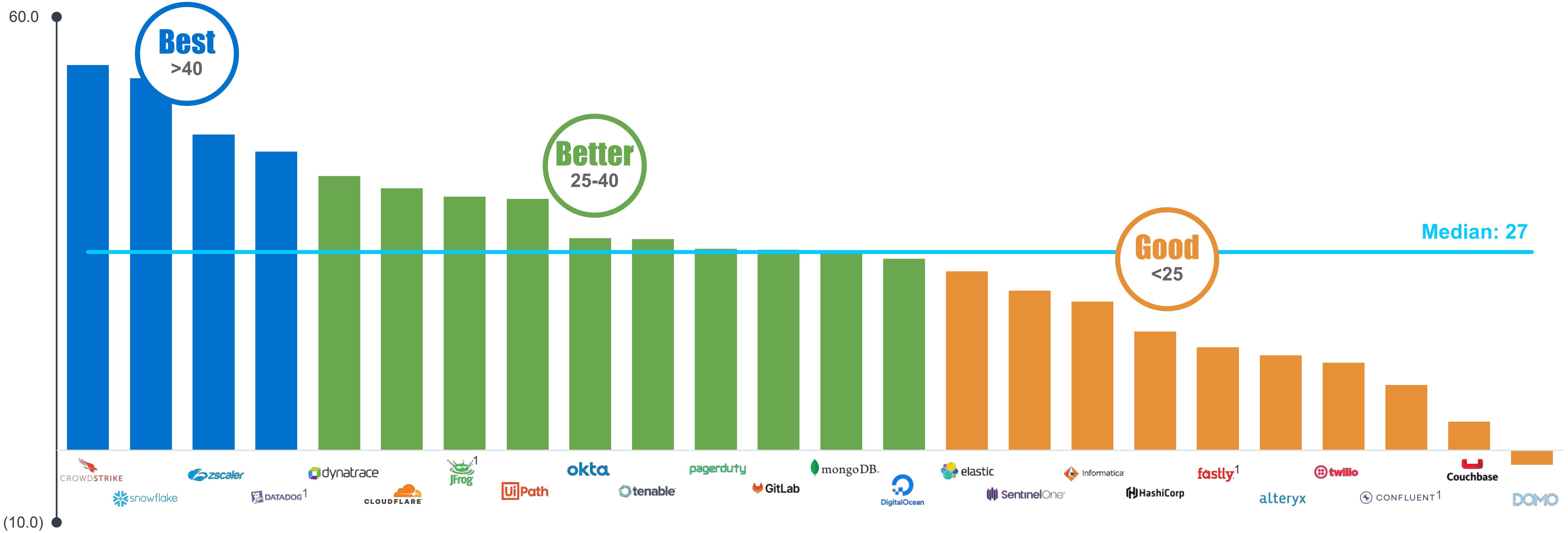




**Adjusting the revenue multiple for growth provides insight into the relative value. However, analysts continue to underestimate the growth potential of cloud-infrastructure businesses.**

Source: CapIQ. Market data as of 11/7/23 and represents the subset of cloud infrastructure companies that have IPO'd since 2016 and excludes companies that have since been acquired or have more than 10% of revenues as services (e.g., C3 AI, Sumo Logic, Talend), N=24

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/

# Rule of 40 measures efficiency




| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CY'24 Growth | 29% | 31% | 25% | 22% | 18% | 28% | 19% | 22% | 14% | 16% | 11% | 15% | 28% | 22% | 18% | 32% | 6% | 22% | 19% | 12% | 9% | 15% | 18% | 16% | 2% |
| CY'24 FCF Margin | 25% | 21% | 18% | 19% | 20% | 8% | 16% | 13% | 15% | 13% | 16% | 13% | (0%) | 5% | 7% | (10%) | 14% | (13%) | (3%) | 1% | 3% | (1%) | (14%) | (12%) | (4%) |

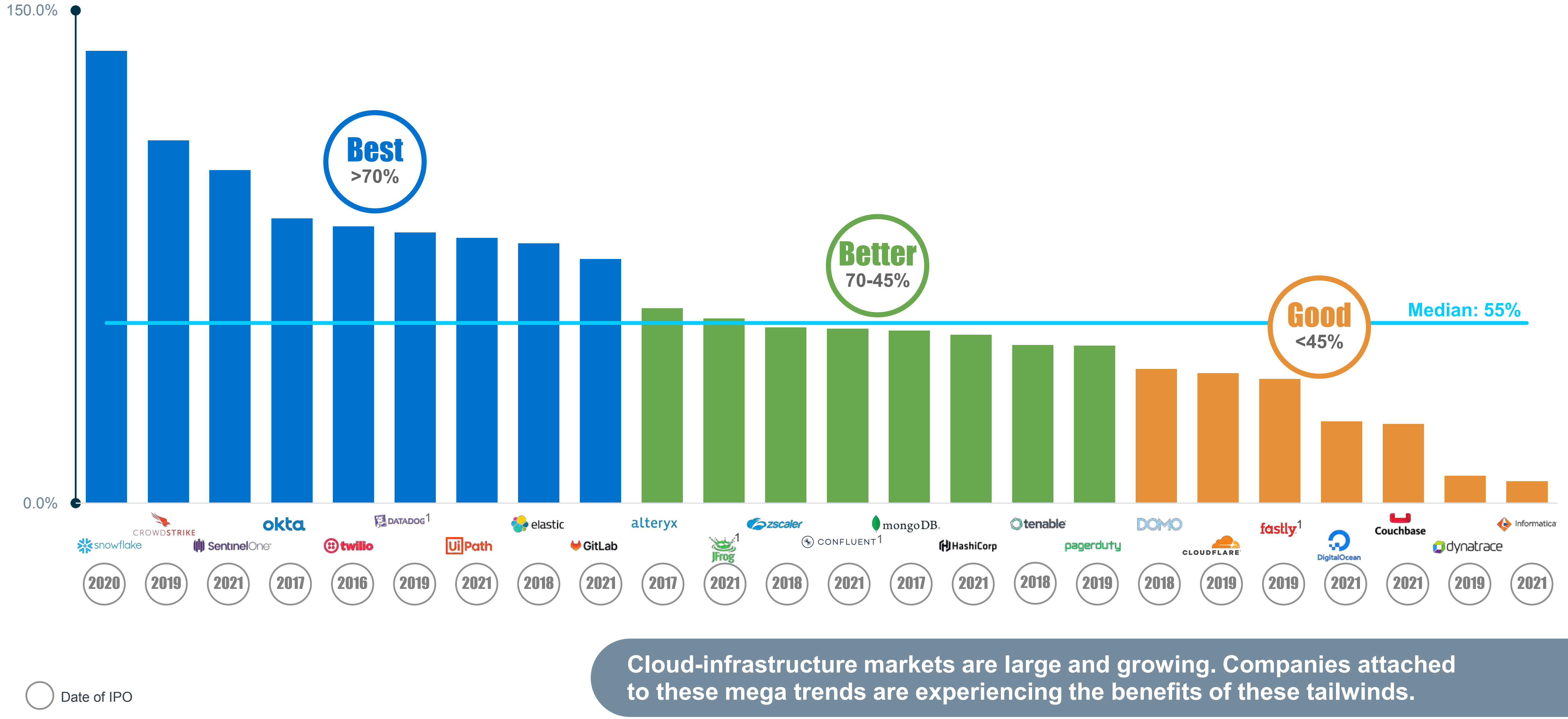
**As software businesses mature and growth naturally slows, improving profit margins is integral to driving free cashflow generation and sustaining the Rule of 40 over time.**

Source: CapIQ. Market data as of 11/7/23 and represents the subset of cloud infrastructure companies that have IPO'd since 2016 and excludes companies that have since been acquired or have more than 10% of revenues as services (e.g., C3 AI, Sumo Logic, Talend), N=24.

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/

Rule of 40 defined as CY24E revenue growth + CY24E FCF margin based on consensus estimates.

# Last twelve months revenue growth at IPO

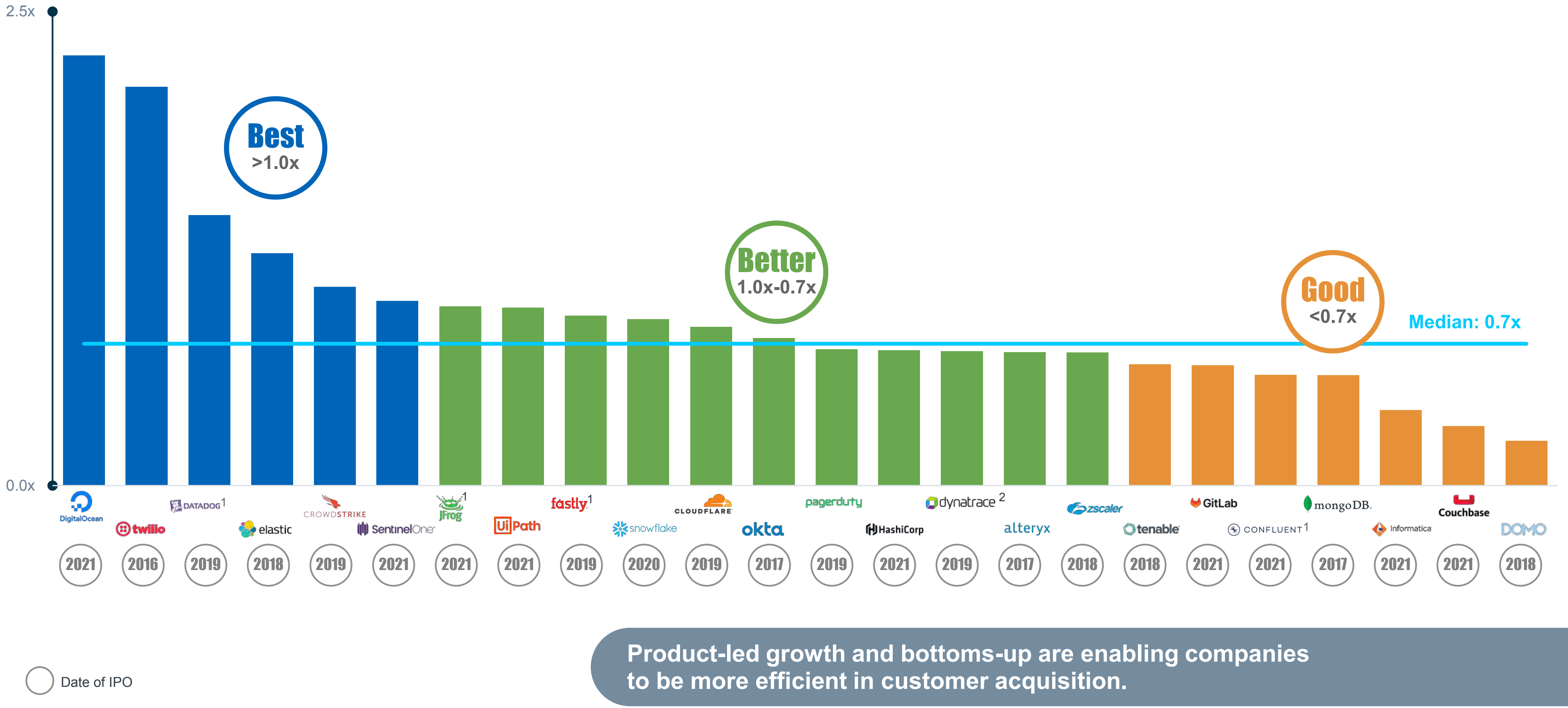



**Cloud-infrastructure markets are large and growing. Companies attached to these mega trends are experiencing the benefits of these tailwinds.**

Source: CapIQ, Company Filings. Represents the subset of cloud infrastructure companies that have IPO'd since 2016 and excludes companies that have since been acquired or have more than 10% of revenues as services (e.g., C3 AI, Sumo Logic, Talend), N=24

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/

# Average magic number over the last twelve months at IPO



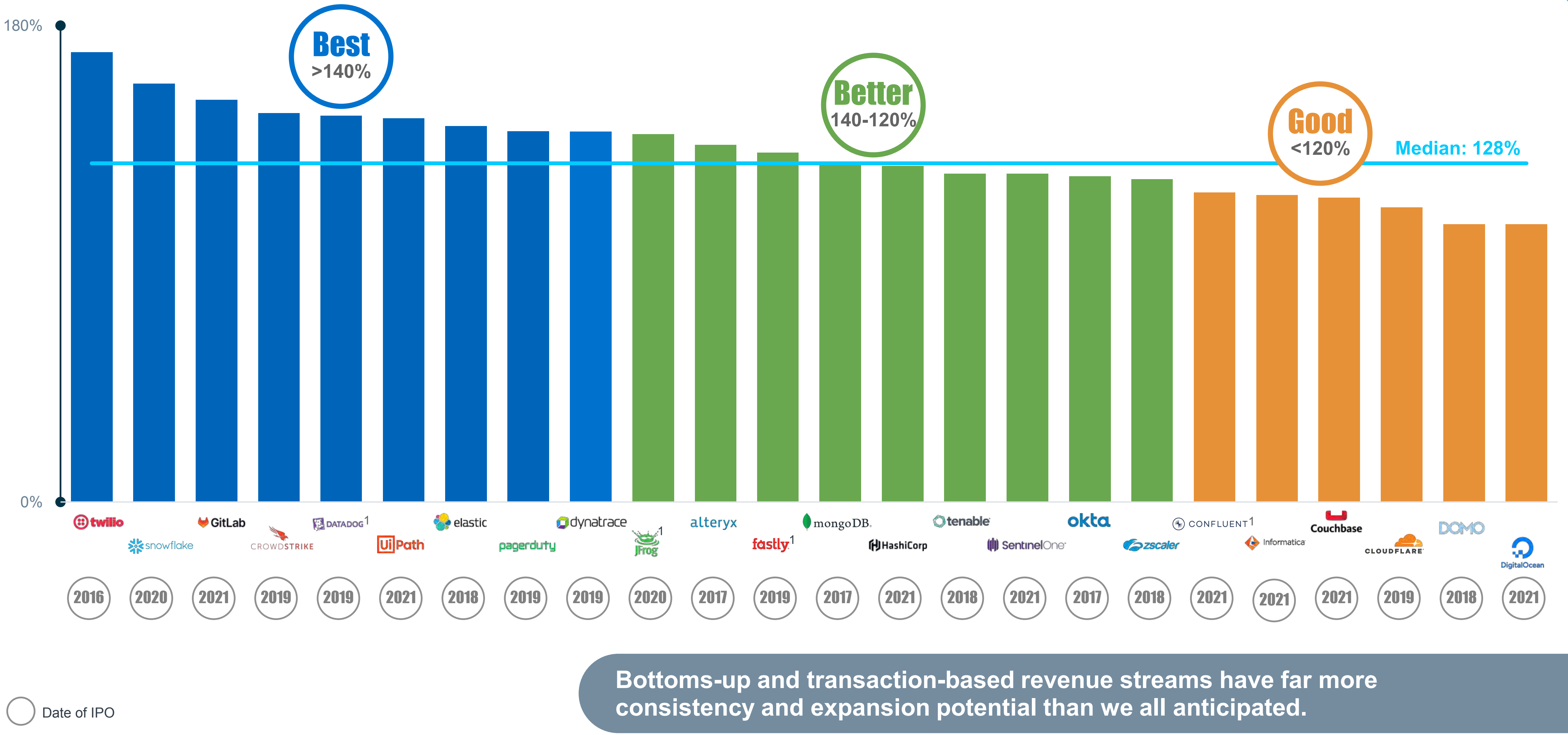

**Product-led growth and bottoms-up are enabling companies to be more efficient in customer acquisition.**

Source: CapIQ, Company Filings. Represents the subset of cloud infrastructure companies that have IPO'd since 2016 and excludes companies that have since been acquired or have more than 10% of revenues as services (e.g., C3 AI, Sumo Logic, Talend), N=24

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/

[2] Dynatrace excludes amortization / depreciation of acquired assets and restructuring costs. 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.

# Dollar-based net retention at IPO



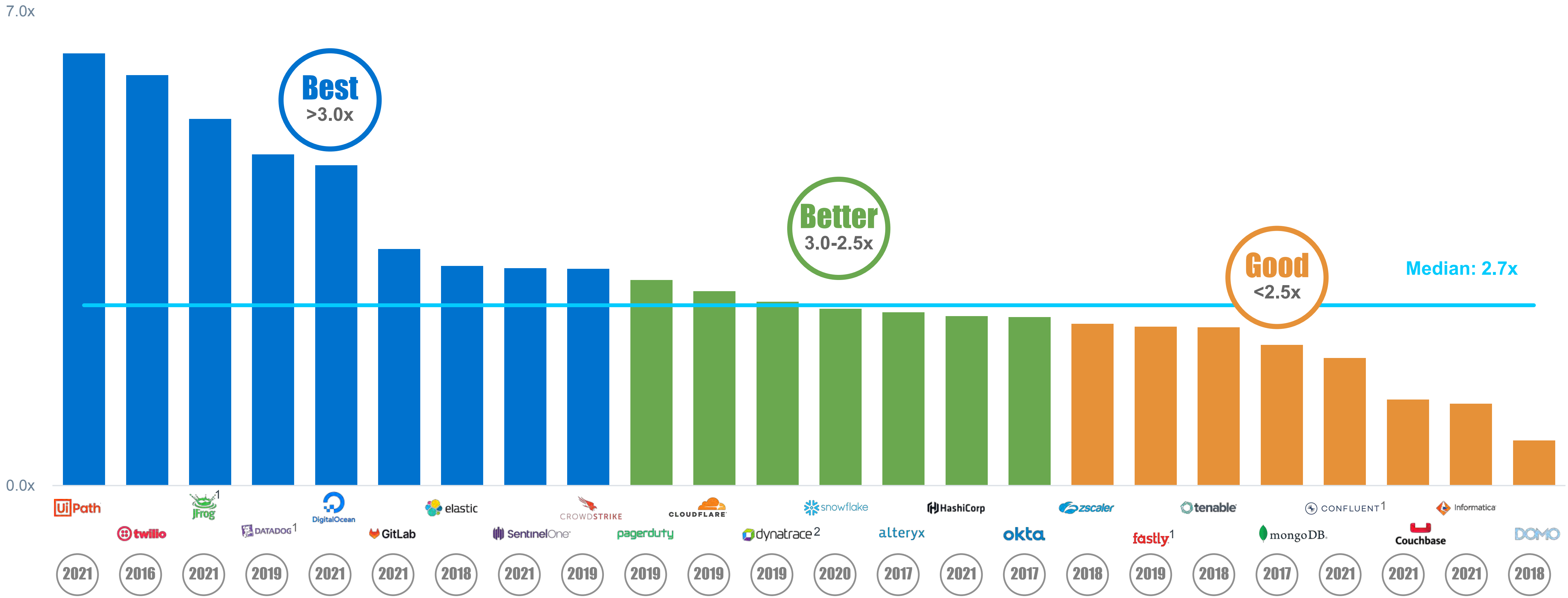

**Bottoms-up and transaction-based revenue streams have far more consistency and expansion potential than we all anticipated.**

Source: CapIQ, Company Filings. Represents the subset of cloud infrastructure companies that have IPO'd since 2016 and excludes companies that have since been acquired or have more than 10% of revenues as services (e.g., C3 AI, Sumo Logic, Talend), N=24

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/

Dollar-based net retention at IPO is defined on a per company basis, and numbers shown are those disclosed by the company, but generally measure propensity of customer relationships or cohort revenue expansion potential over a 12-month period

# LTV:CAC Ratio at IPO




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

Source: CapIQ, Company Filings. Represents the subset of cloud infrastructure companies that have IPO'd since 2016 and excludes companies that have since been acquired or have more than 10% of revenues as services (e.g., C3 AI, Sumo Logic, Talend), N=24

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/

[2] Dynatrace excludes amortization / depreciation of acquired assets and restructuring costs. LTV calculated as GAAP subscription gross margin / (gross churn (est.) + 11% discount rate). CAC calculated as LTM GAAP S&M exp. / (Qo subscription revenue)*4 – (Q-4 subscription revenue)*4). ARR used instead of subscription revenue if disclosed.