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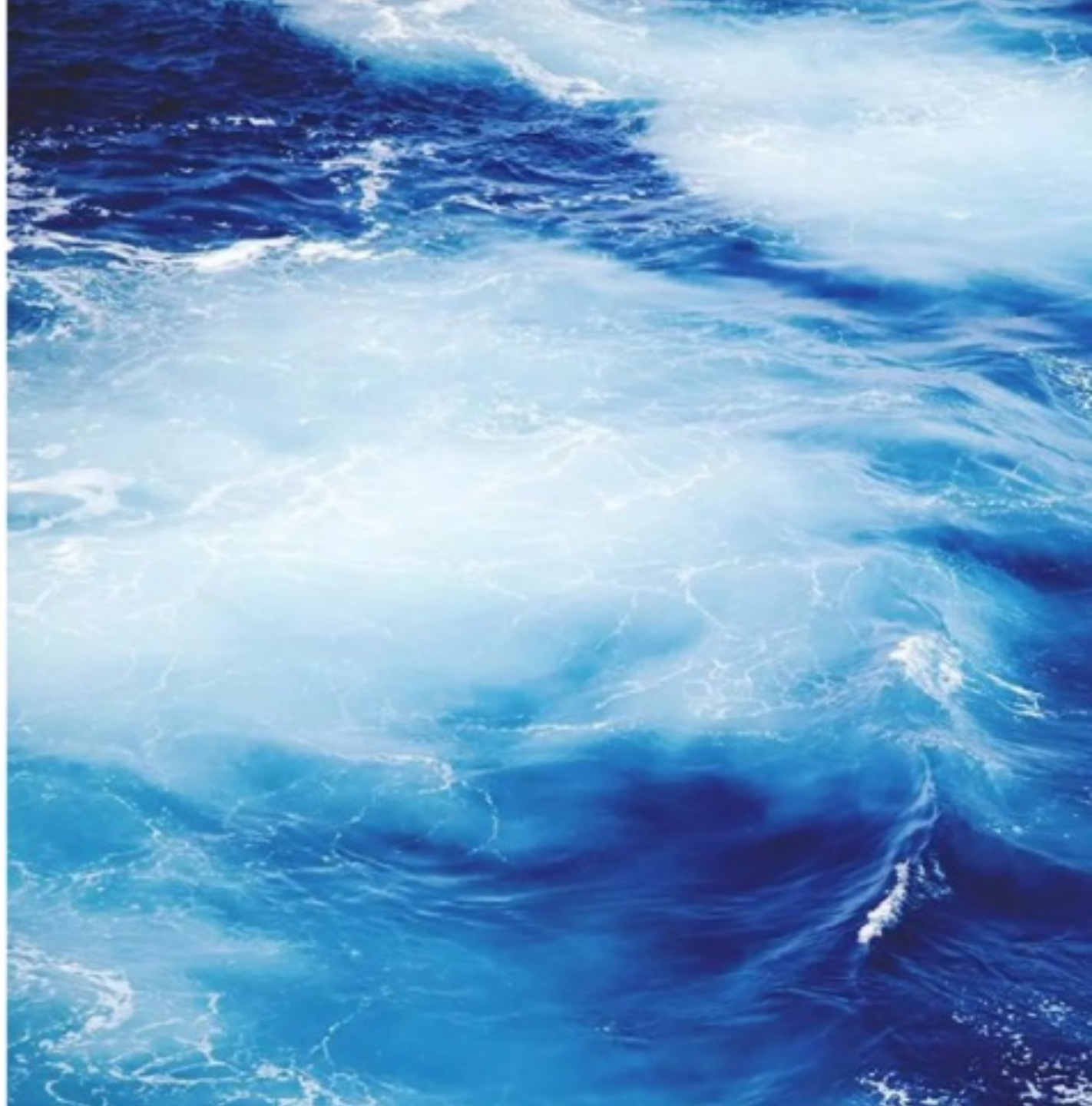
September 2023

State of Enterprise Tech Spending

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Tech Buyers Remain Cautious Amid Glimmers of Growth

1   79% of enterprise buyers expect to deploy generative AI/LLMs in the next 12 months.

2   Contract approval time was flat, suggesting a near-term state of equilibrium with finance orgs.

3   93% of respondents expect to move beyond gen AI/LLM experimentation within two years.

4   Gen AI emerges as a buyer priority among historically strong categories such as automation and data ops.

5   Optimization of SaaS spend as a lever for budget reduction has fallen significantly.

6   Hiring, a long-term bullish signal, ticked up relative to six months ago.

7   Pure bottoms-up adoption continues to face strong headwinds for production deployments.

Enterprise Tech Spend Sentiment Index

The latest Index changes may suggest that declining buyer sentiment is beginning to level out relative to last quarter. The survey results suggest signs of growth in AI/ML, and the outlook for tech spending overall looks promising.

It's worth noting that this sentiment isn't just reflective of current budgets, as it also reflects how enterprises predict and plan for their futures. The Index's modest uptick indicates that enterprises are feeling less uncertain about the path ahead than they were in Q1 2023.

55.4
Q3 2022

51.2
Q3 2023

50.2
Q1 2023

What's Driving Sentiment Index

Our index increased by 0.98 points between Q1 and Q2 2023 due to several factors including:

- **More companies are compressing budgets**, but not drastically. There was a minor 2-pp increase in companies reducing budget spend by 10% or more.

- **Persistent conservatism in technology strategy**, given ongoing economic unpredictability.

- **Slow-to-flat approval times for companies**, as enterprises become more diligent in adopting new technologies, particularly those that create dramatic organizational change.

- A **strong 1-year and 5-year outlook on budgets** for AI/ML drove the Index's modest uptick. 59% of respondents seek to increase AI/ML budget in next six months versus 35% in Q1 2023.

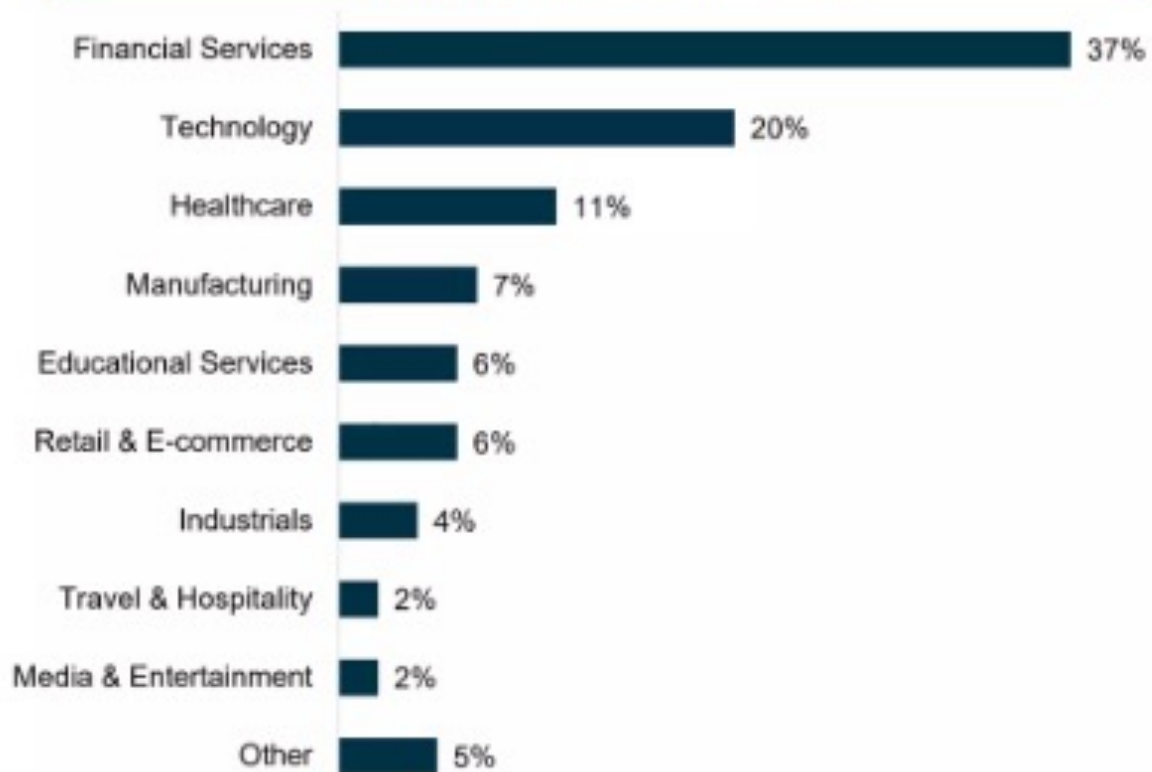|	Q1 2023		Q3 2023
Overall trend on technology budgets	55.75	⮕	55.50
Approval times for enterprise contracts	36.00	⮕	36.00
How do the economic conditions change your technology strategy?	23.50	⬈	25.00
4 key category budget trajectory — Data, Security, AI/ML, Dev (6 Month, 1 Year, 5 Year)	70.33	⬈	74.33

Demographics and
Macro Trends

Survey Composition

- Battery's Cloud Software Spending Survey saw participation from **100 CXOs representing ~$35B in annual technology spend.**
- **75% of respondents spend $100M+ on cloud infrastructure, application software, data platforms and ML tooling.**
- **90% of respondents are from companies with 1,000+ FTEs** across financial services, tech, healthcare and manufacturing.

Industry Representation

Industry	%
Financial Services	37%
Technology	20%
Healthcare	11%
Manufacturing	7%
Educational Services	6%
Retail & E-commerce	6%
Industrials	4%
Travel & Hospitality	2%
Media & Entertainment	2%
Other	5%

Budget Distribution: Total Technology Spend Per Company

$20-$99M	$100-$249M	$250M-$499M	$500M-$1B	> $1B
25%	30%	17%	10%	18%

Impact of Economic Conditions on Technology Spending Strategy

Breakout by Technology Budget
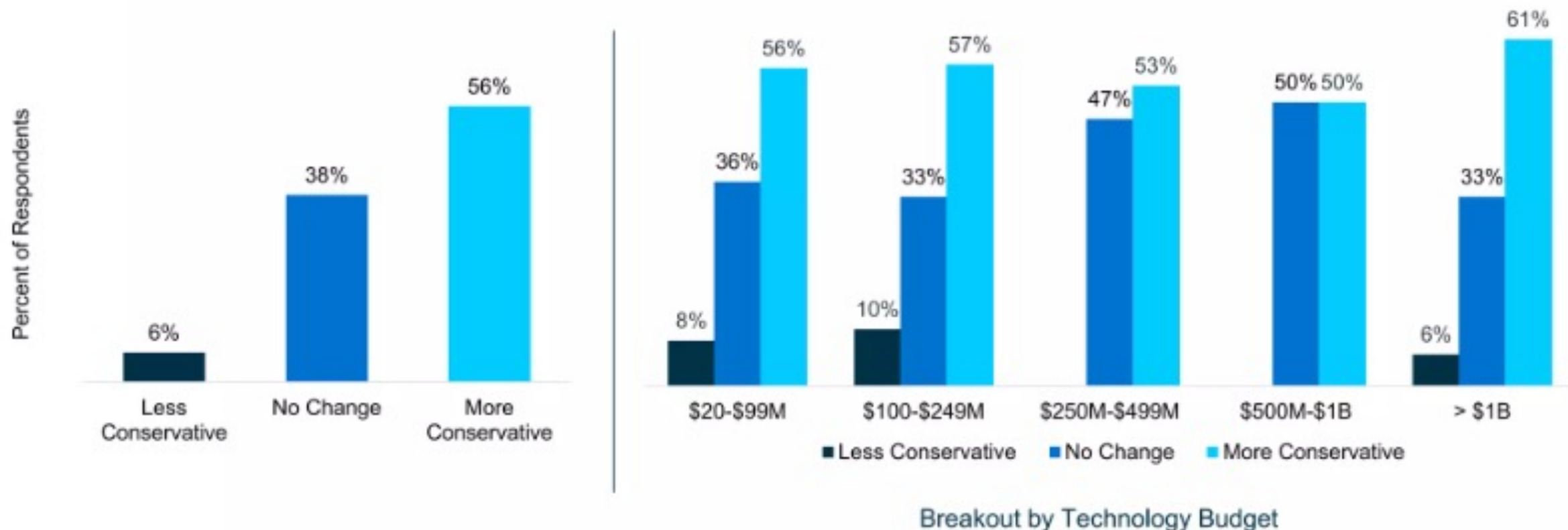
While respondents remain cautious amid an uncertain economic outlook, we saw 'less conservative' budget approaches increase from 3% to 6% since Q1, suggestive of leveling in the downturn of spending appetite.

Source: Battery Q3 2023 Cloud Software Spending Survey

Technology Budget and Spending Trends

Percent of Respondents

| Q3 2022 | Q1 2023 | Q3 2023 |

- Down >10%
- Down 0-10%
- Flat
- Up 0-10%
- Up >10%

Budget Distribution: Total Technology Spend per Company

1 Despite greater economic headwinds, decision makers plan budget expansion over the next six months.

2 The number of companies with declining technology budgets remained relatively steady between Q1 2023 and Q3 2023.

3 Industries matter. 54% of financial industry buyers are increasing budget while 24% remain flat. Contrast that with manufacturing, where we see 57% increasing, 14% decreasing.

4 Budgets for midsize companies (500-999 FTEs) are the most impacted, with 40% down, 40% flat and only 20% increasing.

5 The technology industry is the tale of two worlds, with 55% of respondents increasing budget and 40% decreasing.

Top Priorities for CXOs Planning to Reduce Budget

CXOs Planning to Reduce Budget

Percent of Respondents

- Q3 2022: 11% (10% Down 0-10%, 1% Down >10%)
- Q1 2023: 27% (23% Down 0-10%, 4% Down >10%)
- Q3 2023: 29% (23% Down 0-10%, 6% Down >10%)

■ Down >10% ■ Down 0-10%
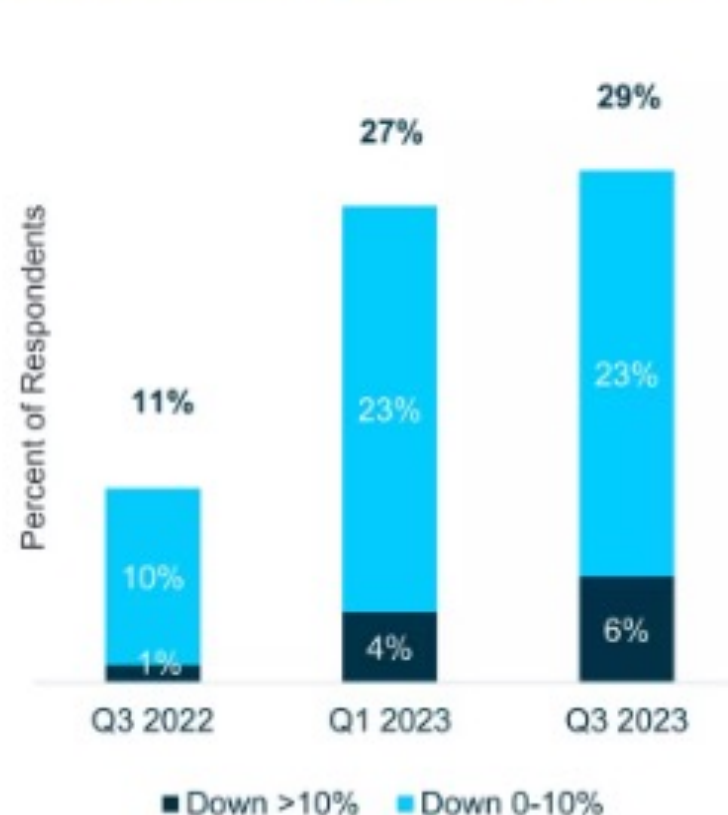
Top 3 Priorities for Reducing Technology Budget for CXOs

Percent of Respondents Planning to Reduce Budget

- Vendor consolidation: 93%
- Cloud migration: 79%
- Reduce workforce: 66%
- Optimize SaaS licensing: 48%
- Other: 14%

We saw a notable change in priorities here since last quarter, with a 25-pp jump in respondents reducing budget through cloud migration. By comparison, we saw a 34-pp drop in SaaS license optimizing, signaling that buyers now have a better handle on out-of-control spending.

"Other" responses focused on optimizing consulting and outsourced spend.
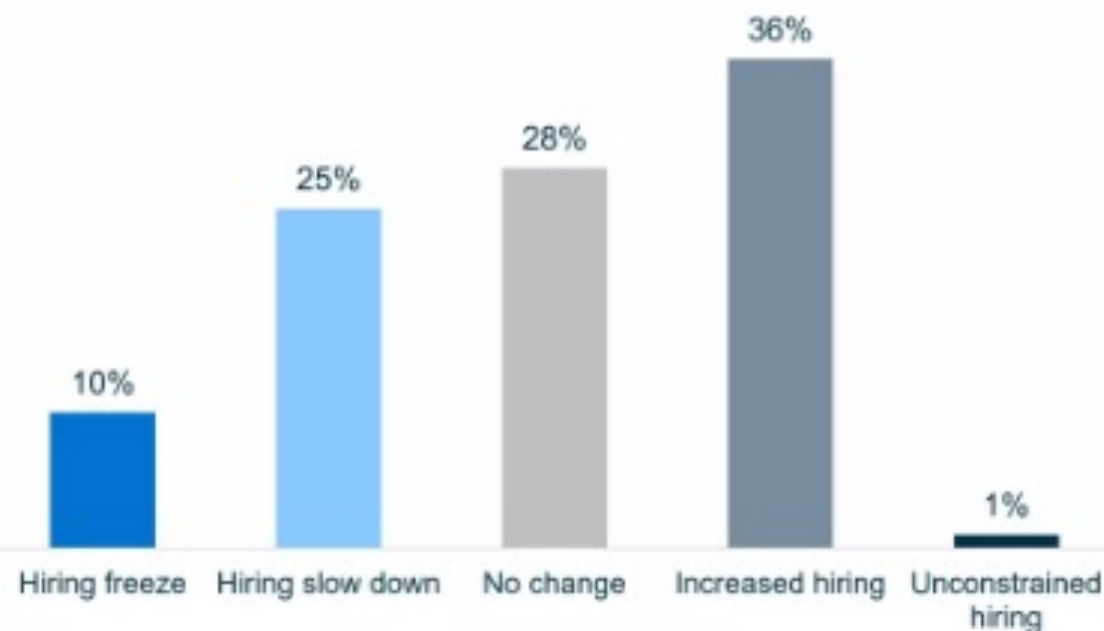
We saw a minor 2-pp uptick in respondents reporting significant budget reductions compared to last survey. Majority of CXOs cite vendor consolidation (93%) and cloud migration (79%) as top priorities for budget reduction.

Headcount Plan and Hiring Focus for CXOs

Q1 2023 Plans for Headcount

Percent of Respondents

- Hiring freeze: 12%
- Hiring slow down: 34%
- No change: 27%
- Increased hiring: 25%
- Unconstrained hiring: 2%

Q3 2023 Plans for Headcount

- Hiring freeze: 10%
- Hiring slow down: 25%
- No change: 28%
- Increased hiring: 36%
- Unconstrained hiring: 1%
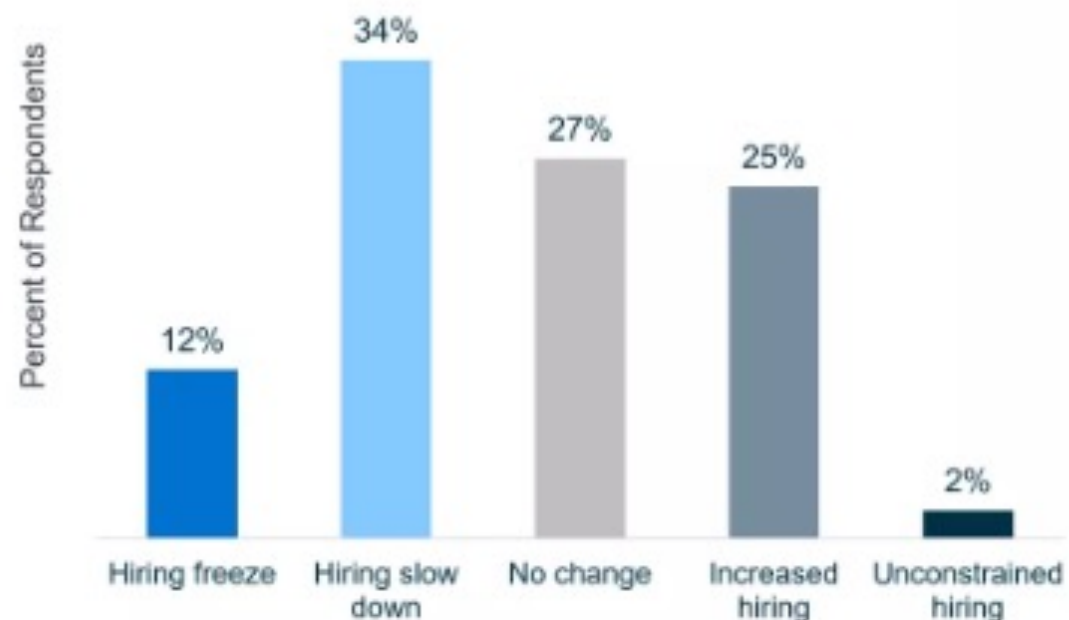
Across enterprises, we continue to see positive trends in hiring, often a leading indicator for future projects and budgets. Among Q3 respondents, 37% plan to increase hiring compared to only 27% in Q1 2023.

Priorities, Deployment and Category-Specific Spending

Evolving Cloud Priorities

Organizations Exploring Gen AI Q1 2023 (prior survey)
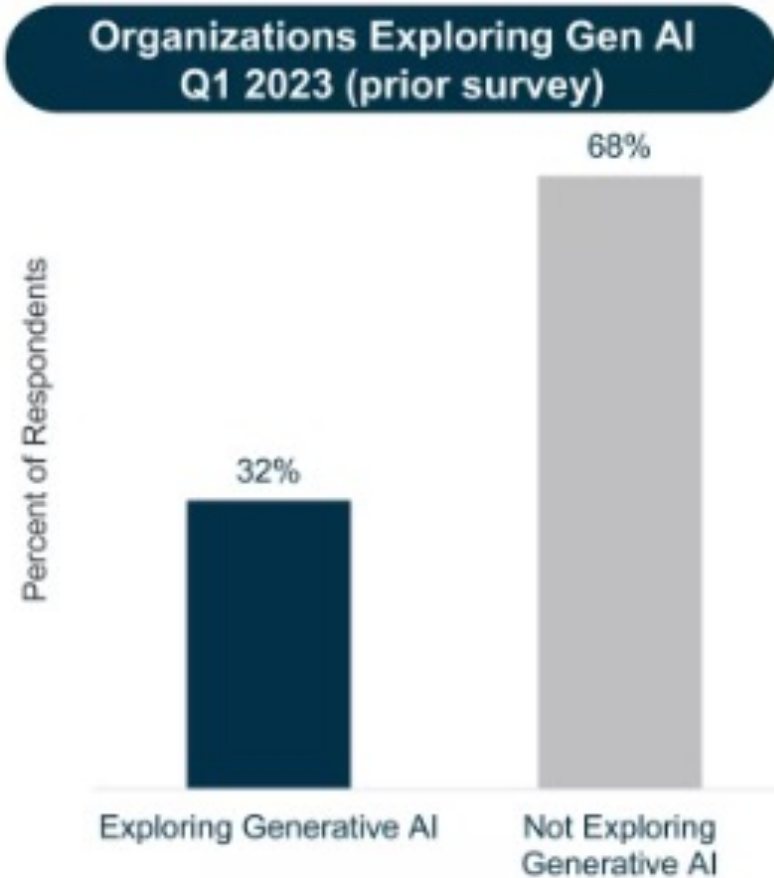
In our Q1 2023 survey, we saw that only 32% of enterprises were exploring generative AI. Since then, we have observed generative AI and LLMs advance rapidly and gain prominence. Therefore, we feel it is crucial to include these trends in future iterations of our survey, as well as other evolving priorities for enterprise tech buyers.

To that end, we added new questions regarding generative AI and LLMs to the Q3 survey to capture a clearer picture of buyer sentiment.

Cloud Software Spending Priorities

Software Themes That CXOs consider Top-5 Priority Over Next 12 Months

Among the top 5 priorities, most CXOs continue to focus on infrastructure software, enterprise security and core enterprise applications. Notably, the prioritization of cloud infrastructure declined by 15-pp, with more competing priorities and the fact many companies have already begun their cloud journey over the past few years.

Percent of Respondents

Category	Value
Cloud Infrastructure	65%
Data Warehouse	62%
Enterprise Apps	53%
Enterprise Security	52%
Generative AI and LLMs	51%
AI/ML Tool Chains and MLOps	47%
Data Operations	35%
Vertical Specific Software	34%
Automation	32%
Dev Security	23%
Collaboration	22%
Developer Tools and Apps	13%
Product analytics	11%

Generative AI and LLMs now rank as highly as historically strong buyer priorities like automation and data ops.

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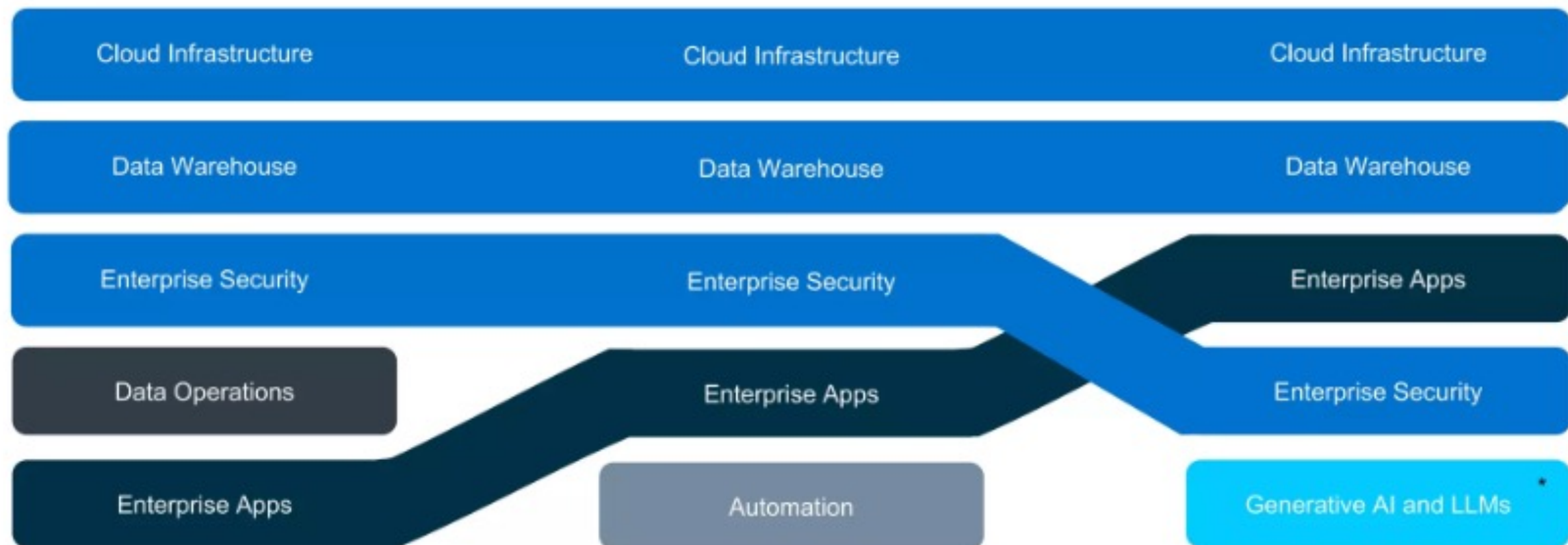
Source: Battery Q3 2023 Cloud Software Spending Survey

Evolution of Cloud Software Spending Priorities
Cloud Software Top 5 Priorities for CXOs Over Next 12 Months

Q3 2022

Q1 2023

Q3 2023

Cloud Infrastructure

Cloud Infrastructure

Cloud Infrastructure

Data Warehouse

Data Warehouse

Data Warehouse

Enterprise Security

Enterprise Security

Enterprise Apps

Data Operations

Enterprise Apps

Enterprise Security

Enterprise Apps

Automation

Generative AI and LLMs *

Buyers are demonstrating strong interest in generative AI and LLMs, now among the to
five priorities. Enterprise apps continue to rise in priority and security remains steady.

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Enterprise and Bottoms-Up Software Adoption

Approval Times for Enterprise Contracts

Percent of Respondents

Slowed Down
- 26%
- 32%
- 35%

Same
- 58%
- 64%
- 58%

Sped Up
- 16%
- 4%
- 7%
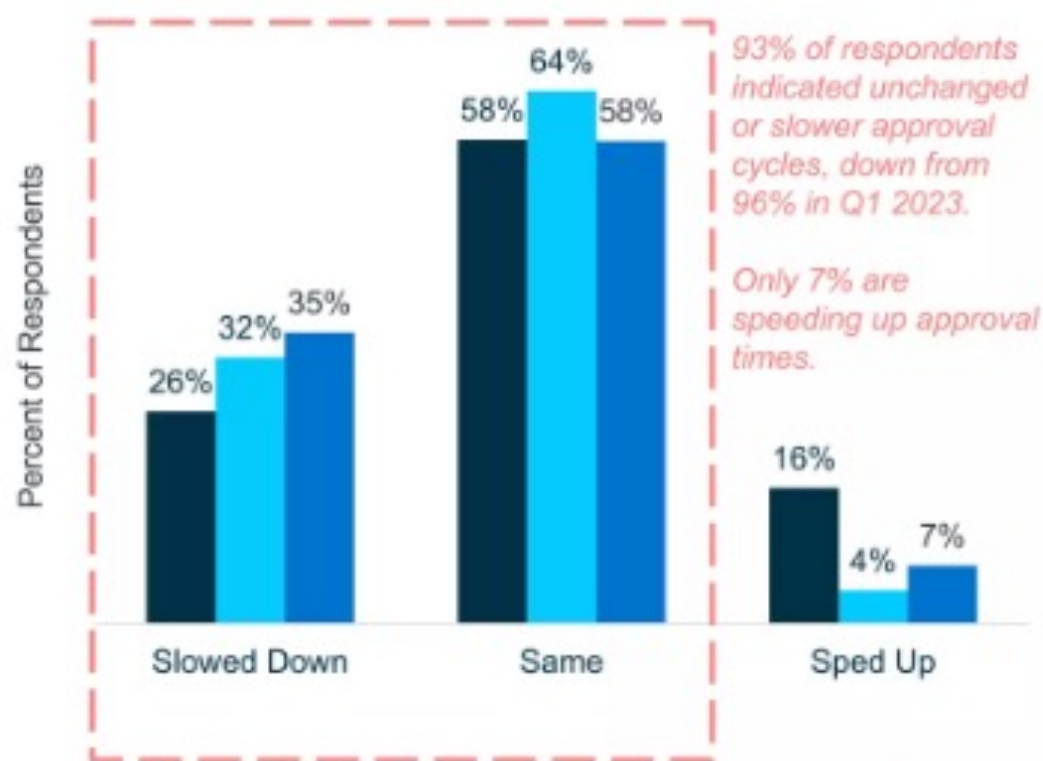
93% of respondents indicated unchanged or slower approval cycles, down from 96% in Q1 2023.

Only 7% are speeding up approval times.

Engineers Allowed to Self-Select Tools

Percent of Respondents

Dev/Test Environments
- 74%
- 46%
- 44%
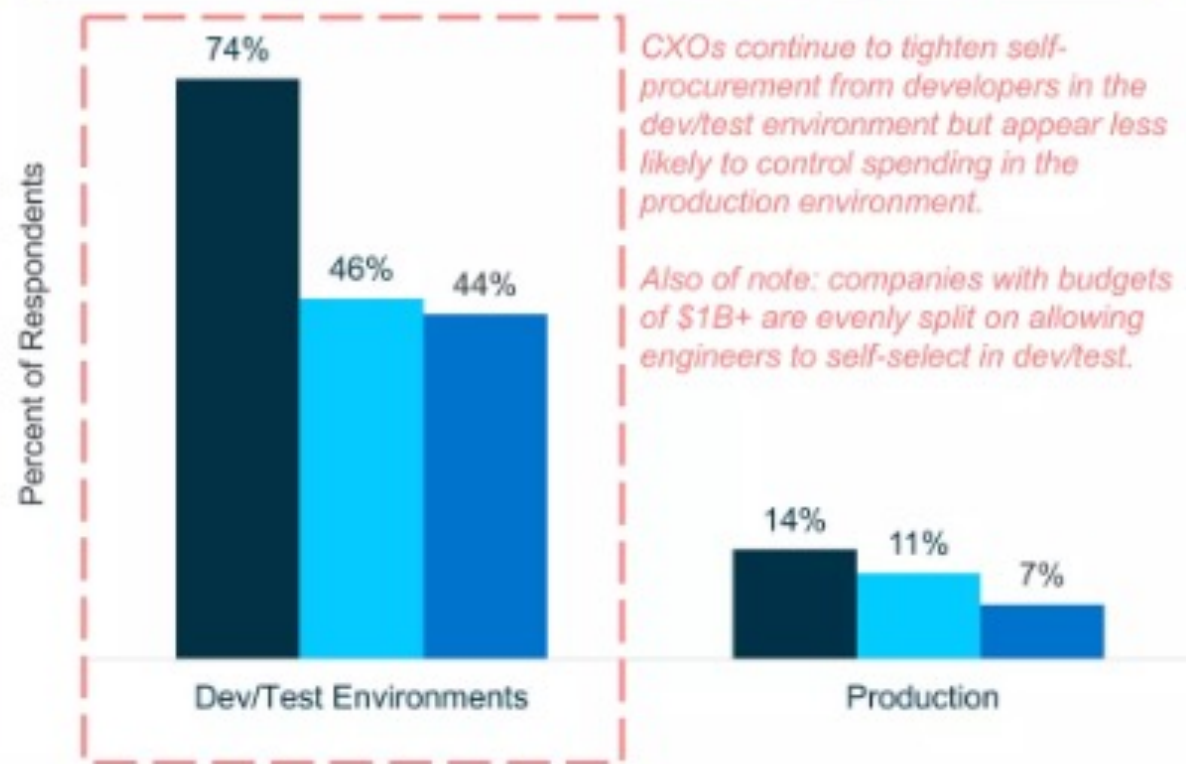
Production
- 14%
- 11%
- 7%

CXOs continue to tighten self-procurement from developers in the dev/test environment but appear less likely to control spending in the production environment.
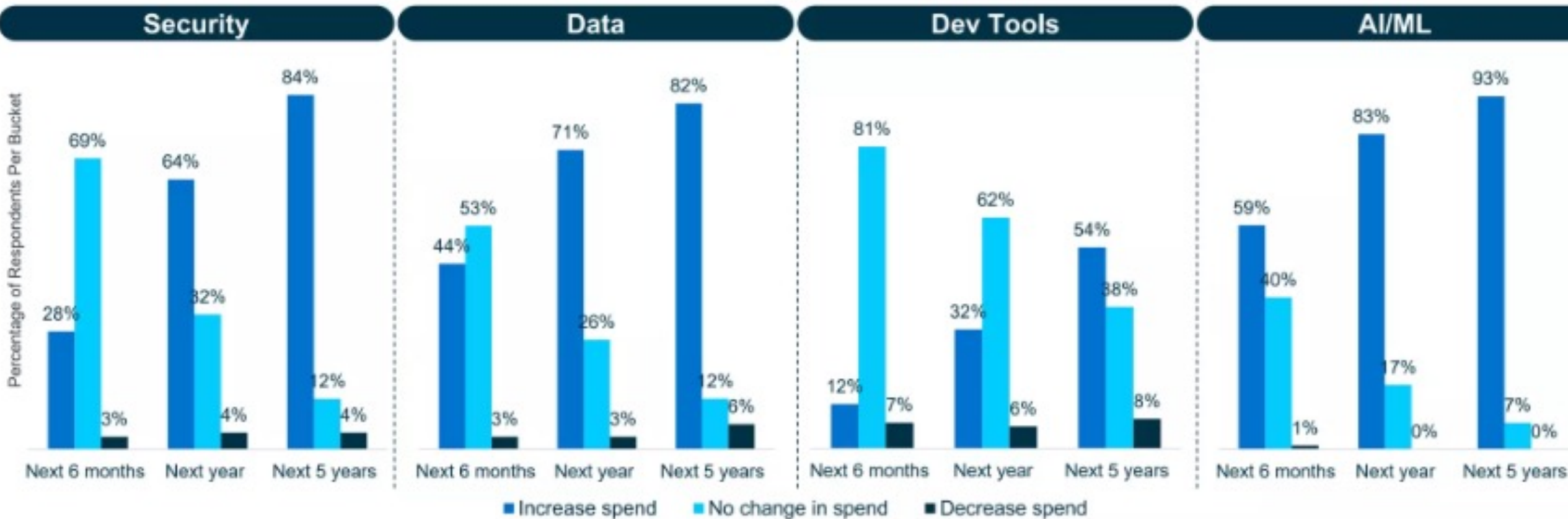
Also of note: companies with budgets of $1B+ are evenly split on allowing engineers to self-select in dev/test.

■ Q3 2022 ■ Q1 2023 ■ Q3 2023

CXOs continue to move away from "bottoms-up" technology adoption, extending a multi-year trend of tightening restrictions on self-procurement.

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Source: Battery Q3 2023 Cloud Software Spending Survey

Expected Cloud Software Spending Change by Category

Security

- Next 6 months: 28%, 69%, 3%
- Next year: 64%, 32%, 4%
- Next 5 years: 84%, 12%, 4%

Data

- Next 6 months: 44%, 53%, 3%
- Next year: 71%, 26%, 3%
- Next 5 years: 82%, 12%, 6%

Dev Tools

- Next 6 months: 12%, 81%, 7%
- Next year: 32%, 62%, 6%
- Next 5 years: 54%, 38%, 8%

AI/ML

- Next 6 months: 59%, 40%, 1%
- Next year: 83%, 17%, 0%
- Next 5 years: 93%, 7%, 0%

Percentage of Respondents Per Bucket

■ Increase spend   ■ No change in spend   ■ Decrease spend

AI/ML and data both are themes with strong budgetary momentum. By comparison, spending on dev tools remains flat with less anticipated upside in the next few years.
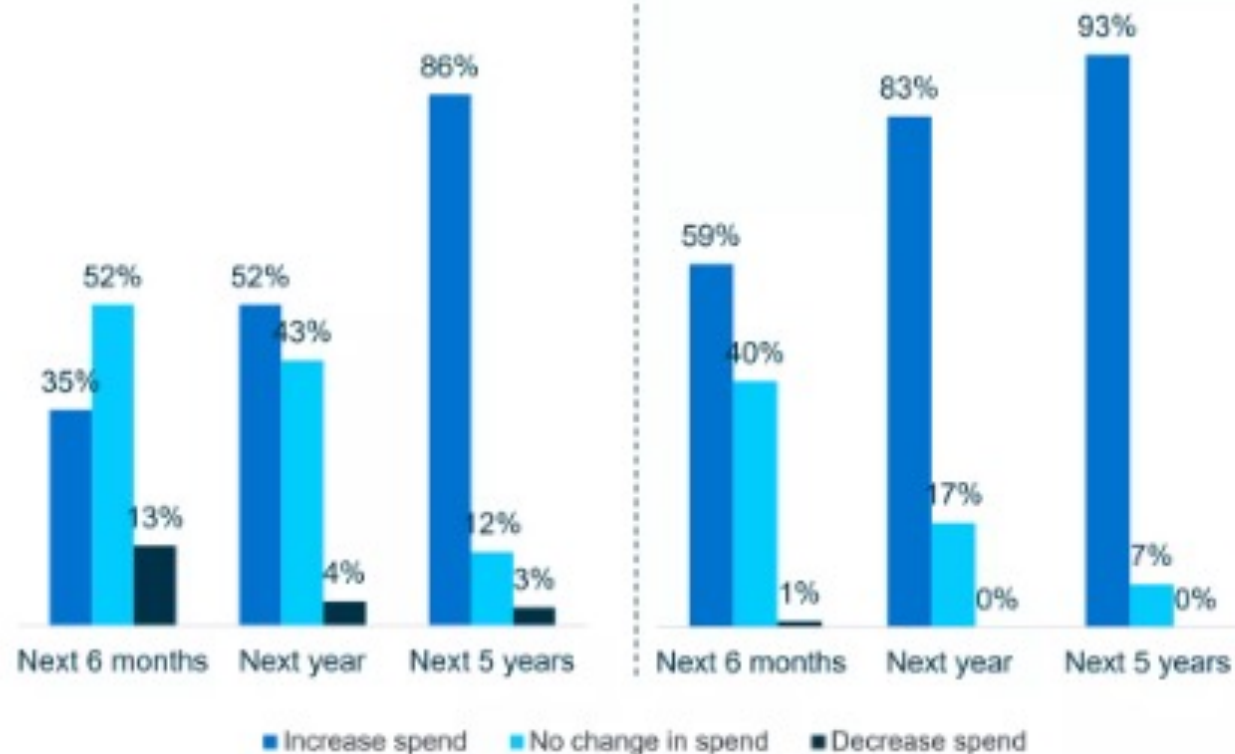
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Source: Battery Q3 2023 Cloud Software Spending Survey

Expected Cloud Software Spending – AI/ML

Q1 2023

- 35% — Next 6 months (Increase spend)
- 52% — Next 6 months (No change in spend)
- 13% — Next 6 months (Decrease spend)
- 52% — Next year (Increase spend)
- 43% — Next year (No change in spend)
- 4% — Next year (Decrease spend)
- 86% — Next 5 years (Increase spend)
- 12% — Next 5 years (No change in spend)
- 3% — Next 5 years (Decrease spend)

Q3 2023

- 59% — Next 6 months (Increase spend)
- 40% — Next 6 months (No change in spend)
- 1% — Next 6 months (Decrease spend)
- 83% — Next year (Increase spend)
- 17% — Next year (No change in spend)
- 0% — Next year (Decrease spend)
- 93% — Next 5 years (Increase spend)
- 7% — Next 5 years (No change in spend)
- 0% — Next 5 years (Decrease spend)

Legend: ■ Increase spend ■ No change in spend ■ Decrease spend
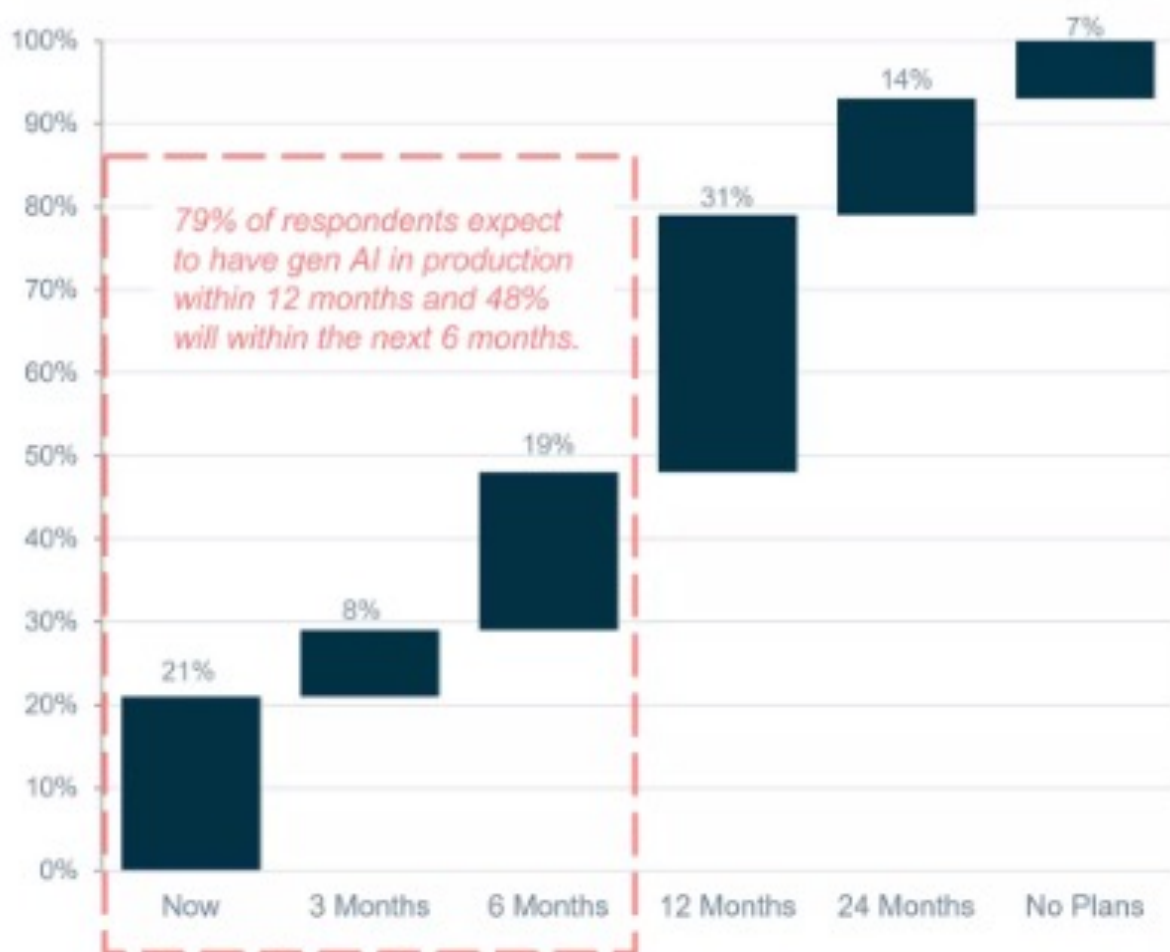
59% of respondents expect to increase AI/ML spending in the next six months, a 24-pp increase from Q1 2023. We are seeing fewer enterprise tech buyers remain on the sidelines of the AI trend.

Line chart: Next 6 Months, Next Year, Next 5 Years — Q12023, Q32023
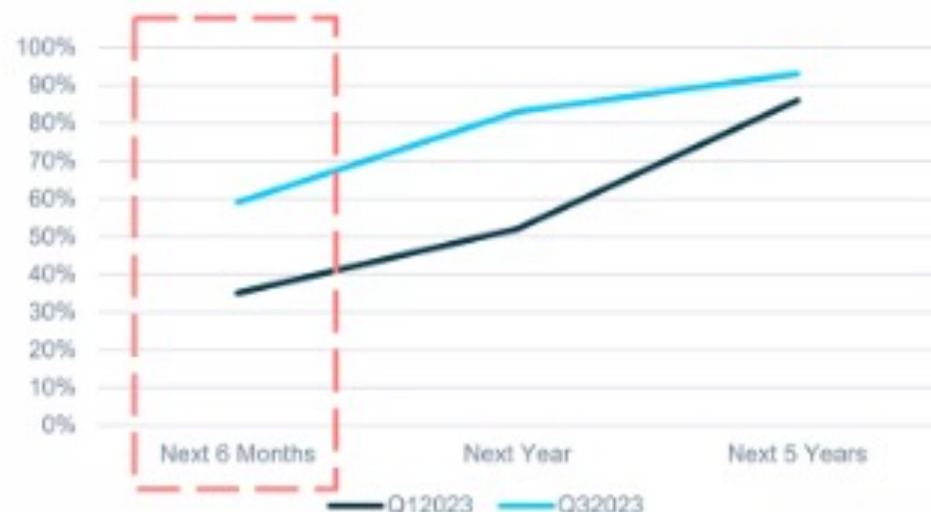
Industries of virtually every sector and size are expanding AI/ML investment—at a notably accelerated pace compared to earlier this year. Respondents plan to deploy ~$1.5B in budget on AI/ML technologies, including generative AI.

Production Deployment for Generative AI

Deployment Plans

79% of respondents expect to have gen AI in production within 12 months and 48% will within the next 6 months.

21% 8% 19% 31% 14% 7%

Now | 3 Months | 6 Months | 12 Months | 24 Months | No Plans

Early In Evolution – What's Next?

1 Enterprises are beginning to move **beyond the experimentation phase with generative AI** to execute meaningful deployments, primarily for customer, people, sales and knowledge management use cases.

2 Gen AI intent has exploded, with **79% of organizations planning to deploy the technology within 12 months,** more than double (32%) only 6 months ago.

3 **Geography matters with gen AI.** 38% of European respondents have no plans to deploy gen AI in the next 2 years or in the foreseeable future, while only 19% in North America have no plans, possibly because of privacy concerns around European Union AI Act.

4 **So far in 2023 (as of Q2 2023), venture-capital investors have deployed $14.1B across 86 generative AI deals.** Excluding the $10B OpenAI minority round, $4.1B has been invested into generative AI startups.

Utilize Foundation Model(s) or Build... or Something in Between?

45%
Out of Box Solution (e.g. GPT-4 API)

30%
Finetune a foundation model

17%
We're not sure yet

8%
Train your own model from scratch

Respondents are split between using out of the box solution and fine tuning. Only 8% of respondents plan to build models from scratch, while 75% plan to use foundation model(s) and 30% plan to do additional fine-tuning and augmentation. We anticipate that proprietary data and augmentation will matter meaningfully in the future.

Battery   Source: Battery Q3 2023 Cloud Software Spending Survey

Barriers to Deployment of LLMs and Generative AI

Barriers & Opportunities

79% of respondents rank data privacy among the top three barriers to LLM deployment. Given that 75% of respondents use foundation models, many may look for services to control data.
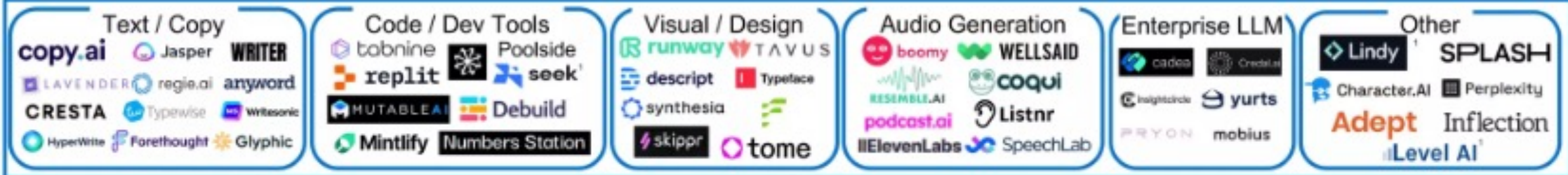
Data Privacy

Data Quality

Model Accuracy

Model Evaluation

Despite significant noise about model hallucinations, they're not a major factor for enterprise buyer decision-making. Data protections, however, are a top concern.
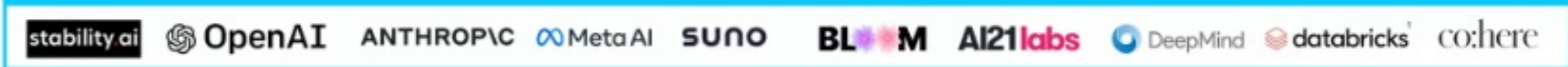
Generative AI Landscape

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

Appendix

Enterprise Tech Spend Sentiment Index Methodology

The Battery Ventures Enterprise Tech Spend Sentiment Index is based on budget, spending trends, budget outlook (data, security, AI/ML, dev tools etc.) and approval times, producing a score between 0 and 100. A higher numeric score indicates a more positive outlook among tech buyers, a minimal increase that can be attributed to positive outlooks across AI/ML & Data Spending. Since Q3 2022 we are still down 4.2 points in sentiment index.

51.2
Q3 2023