GENERATIVE AI RADAR
LIFE SCIENCES

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Generative AI Radar – Life sciences

Generative AI is still new, yet enterprises are already exploring its transformative potential

This year will bring further developments in generative AI as organizations get to grips with it.

Through this study we aimed to uncover how companies use generative AI, how much they spend on it, how it's rolled out in organizations large and small, and where it makes an impact. We looked at 3,000 companies across 12 industries:

- Automotive
- Consumer package goods
- Energy, mining, and utilities
- Financial services
- Healthcare
- High tech
- Insurance
- Life sciences
- Logistics and supply chain
- Manufacturing
- Retail and hospitality
- Telecommunications

Many companies told us they are already spending significant sums of money — and are set to spend more this year. However, this pattern isn't the same across sectors. In this data book we highlight how life sciences compares with the rest of the pack.
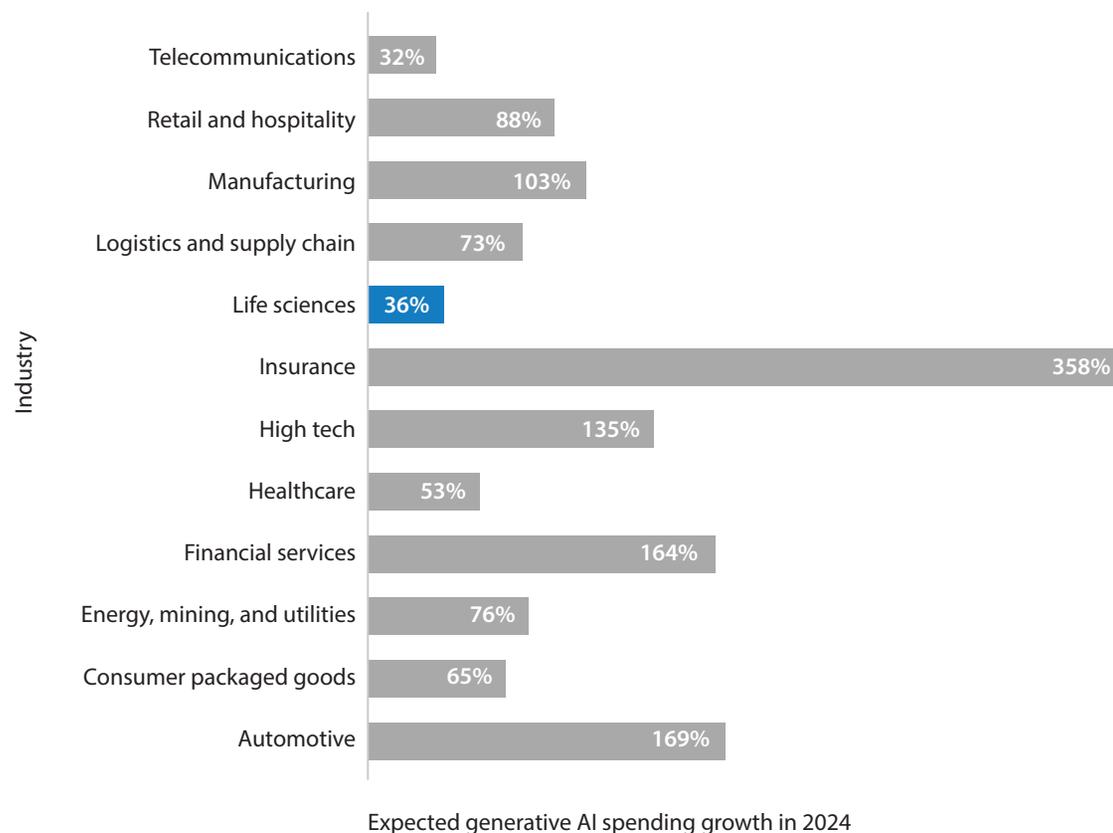
Generative AI spending growth is slow

Life sciences' generative AI spending projected to grow slower than most industries this year

Life sciences spending set to grow 36% in 2024 – Life sciences firms spent $470 million on generative AI in 2023. This is projected to grow to $637 million in 2024. This ranks life sciences among lowest spending sectors, about the same as telecommunications.

Life sciences generative AI spending

Spending in millions ($USD)

- 2023: $470
- 2024: $637
- ↑ 36%

Legend:
- ■ Reported spend
- ■ Expected spend

Expected generative AI spending growth by industry

Industry:

- Telecommunications: 32%
- Retail and hospitality: 88%
- Manufacturing: 103%
- Logistics and supply chain: 73%
- Life sciences: 36%
- Insurance: 358%
- High tech: 135%
- Healthcare: 53%
- Financial services: 164%
- Energy, mining, and utilities: 76%
- Consumer packaged goods: 65%
- Automotive: 169%
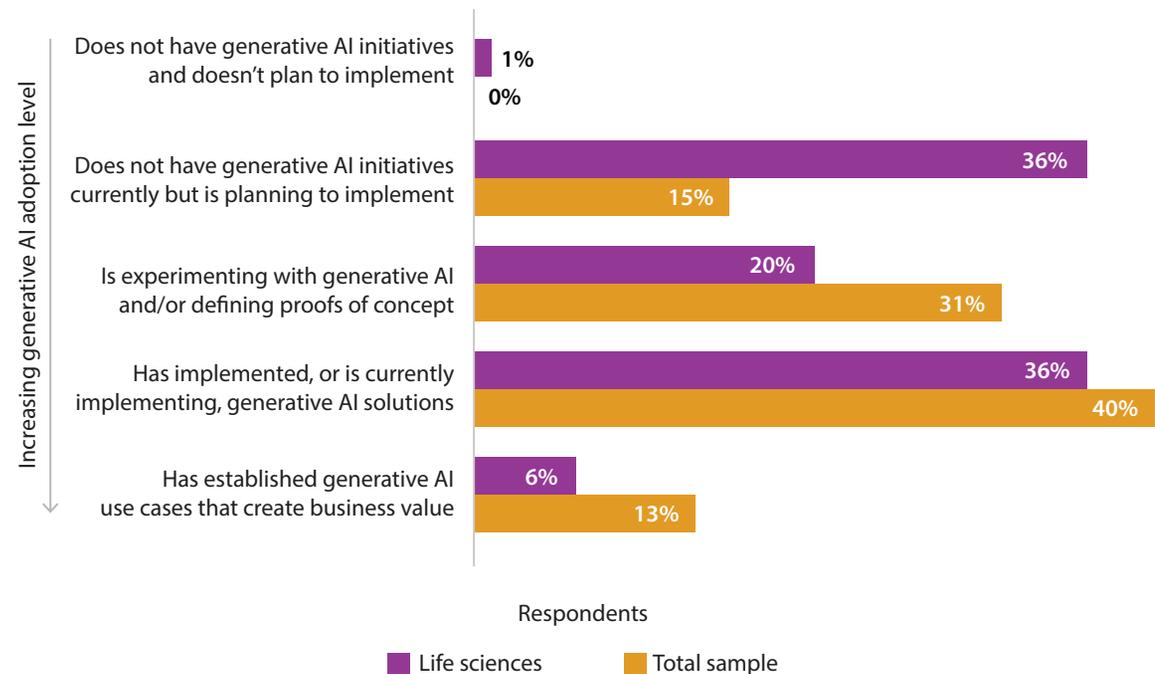
Expected generative AI spending growth in 2024

Life sciences firms lag in generative AI implementation

More than one-third of life sciences firms are implementing generative AI solutions

Over one-third of life sciences companies yet to start their generative AI journey – 36% of the life sciences firms haven't started their generative AI journey, more than double the overall trend (15%).
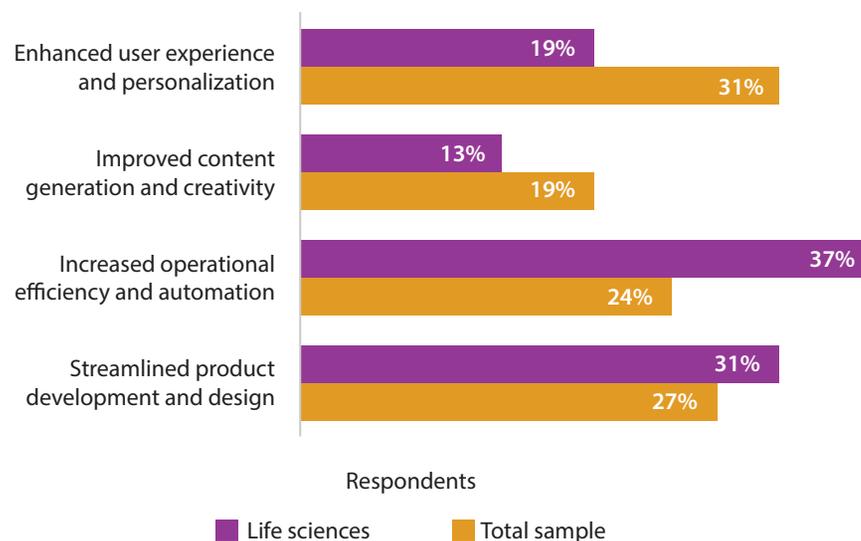
Generative AI adoption by proportion of respondents

Increasing generative AI adoption level →

Adoption level	Life sciences	Total sample
Does not have generative AI initiatives and doesn't plan to implement	1%	0%
Does not have generative AI initiatives currently but is planning to implement	36%	15%
Is experimenting with generative AI and/or defining proofs of concept	20%	31%
Has implemented, or is currently implementing, generative AI solutions	36%	40%
Has established generative AI use cases that create business value	6%	13%

Respondents

■ Life sciences ■ Total sample

Note: Percentages do not add up to 100% because of rounding.

Generative AI optimism leans toward efficiency

Life sciences sector outstrips overall trend with high hopes for operational efficiency and automation

Life sciences industry is most optimistic about generative AI's impact on efficiency and automation – 37% of life sciences companies expect generative AI to have a positive impact on operational efficiency and automation — significantly higher than the overall trend (24%).

Where companies expect generative AI to have the most positive impact
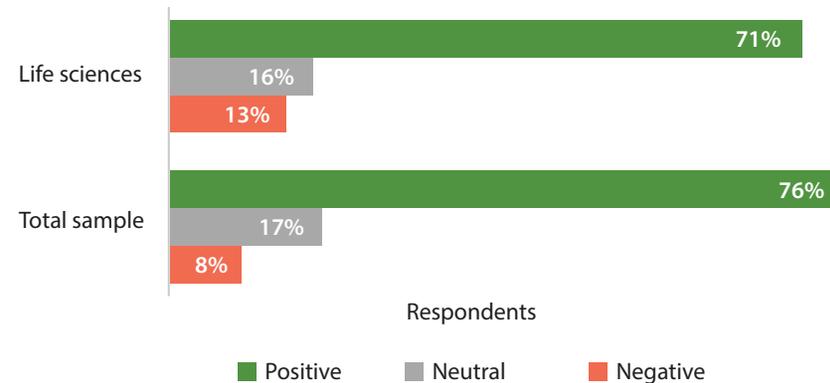

Category	Life sciences	Total sample
Enhanced user experience and personalization	19%	31%
Improved content generation and creativity	13%	19%
Increased operational efficiency and automation	37%	24%
Streamlined product development and design	31%	27%

Respondents

■ Life sciences   ■ Total sample

Note: Percentages do not add up to 100% because of rounding.

Majority of life sciences companies are positive generative AI's impact

However, the sector's negative sentiment is much higher than the overall trend

Life sciences is less positive about generative AI's business impact – 71% of life sciences companies believe generative AI will have a positive impact on business. 13% expressed a negative sentiment, higher than the overall trend (8%).

Expected generative AI impact on business areas by proportion of respondents

- Life sciences: 71% Positive, 16% Neutral, 13% Negative
- Total sample: 76% Positive, 17% Neutral, 8% Negative

Respondents

■ Positive   ■ Neutral   ■ Negative

Note: We calculated "business impact sentiment" by asking survey respondents to rate their sentiment on generative AI's impact on the following business areas: business model, cost efficiency, profit, reputation, revenue, and talent. Then we combined those answers into one measure.
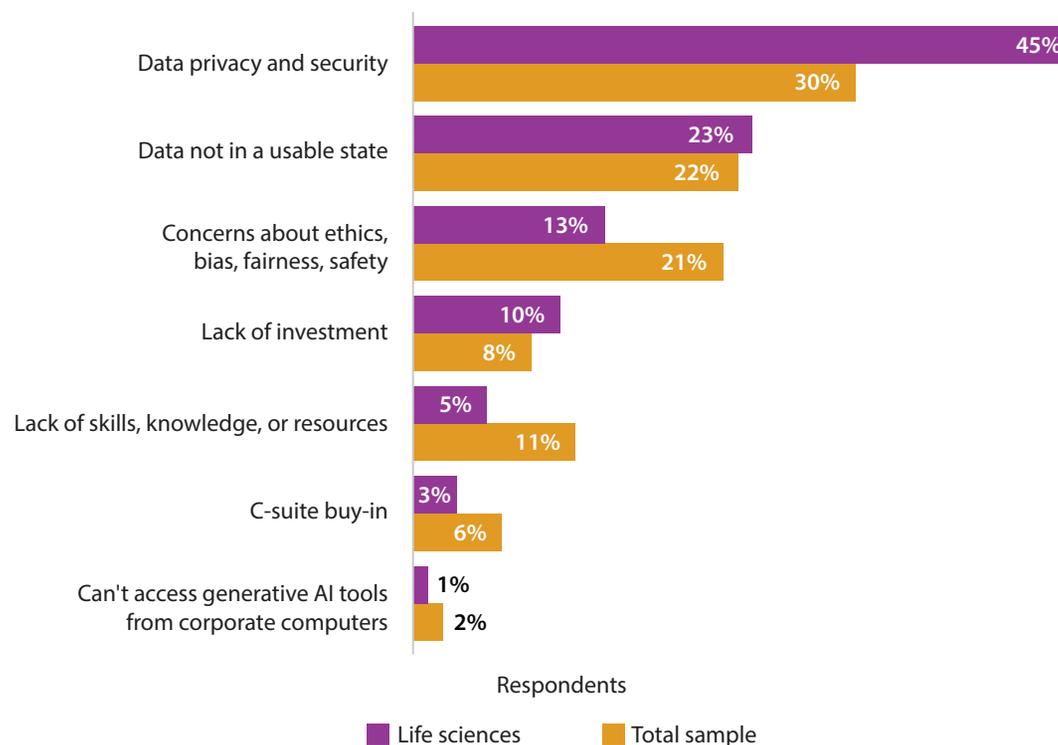
Nearly half of sector held back by privacy concerns

Data privacy and security top the list of generative AI barriers but life sciences is less worried about ethics

Data privacy and security is the top barrier to generative AI adoption – 45% of life sciences sector ranked data privacy as their top barrier to generative AI adoption, much higher than the overall trend.

Ethics and bias are less of a barrier – Just 13% of life sciences companies are concerned with ethics and fairness, compared with the overall trend (21%).

Obstacles to generative AI adoption by proportion of respondents

Obstacle	Life sciences	Total sample
Data privacy and security	45%	30%
Data not in a usable state	23%	22%
Concerns about ethics, bias, fairness, safety	13%	21%
Lack of investment	10%	8%
Lack of skills, knowledge, or resources	5%	11%
C-suite buy-in	3%	6%
Can't access generative AI tools from corporate computers	1%	2%

Respondents

■ Life sciences   ■ Total sample

Note: Percentage of respondents ranking challenge as biggest obstacle to implementing generative AI. Percentages do not add up to 100% because of rounding.

Tepid confidence in ability to manage generative AI systems

Life sciences sector's confidence in generative AI management is significantly lower than the overall trend

Life sciences companies are much less confident in their generative AI management – Only 50% of life sciences is positive in their ability to manage generative AI, much lower than the overall trend. 15% of life sciences expressed a negative sentiment, significantly higher than overall trend (5%).

Confidence in ability to manage generative AI systems by proportion of respondents
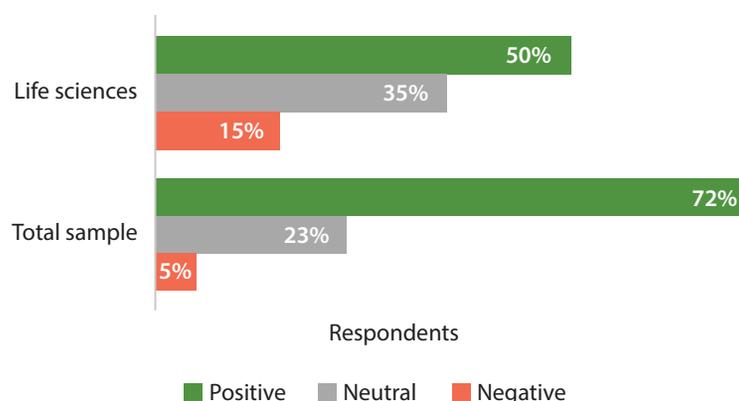
Note: Sentiment on confidence in managing generative AI systems. Percentages do not add up to 100% because of rounding.

Workforce generative AI readiness is a concern or life sciences

Only 50% of life sciences firms are positive about their team's readiness to adopt generative AI

Life sciences is twice as negative about workforce readiness – Life sciences is significantly more negative about workforce generative AI readiness than our overall sample (12% vs. 5%).

Sentiment on workforce readiness to adopt generative AI by proportion of respondents
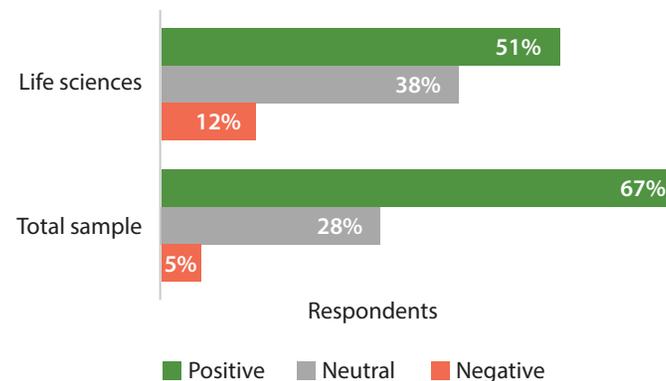
Note: Sentiment on workforce readiness to adopt generative AI. Percentages do not add up to 100% because of rounding.
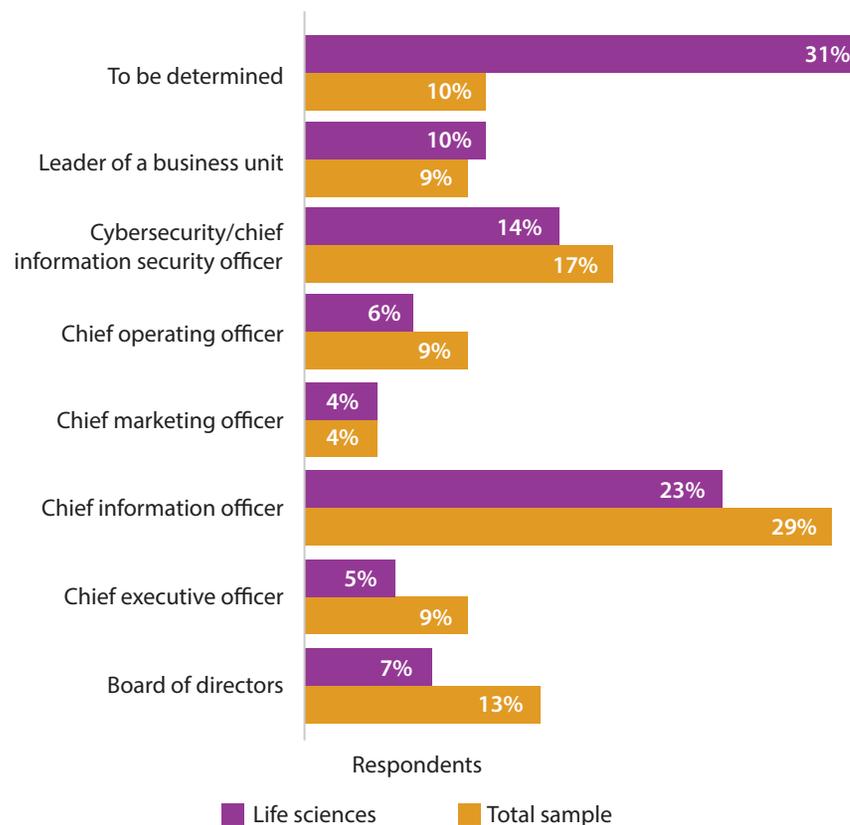
Life sciences still determining who sponsors generative AI initiatives

But CIOs are the primary sponsor for 23% of life sciences firms

One-third of life sciences firms are yet to establish a primary generative AI sponsor – 31% of life sciences sector are still determining their primary generative AI sponsors, significantly higher than the overall trend (10%).

CIOs sponsor generative AI generative AI initiatives more often – 23% of life sciences firms report that the CIO primarily sponsors generative AI.

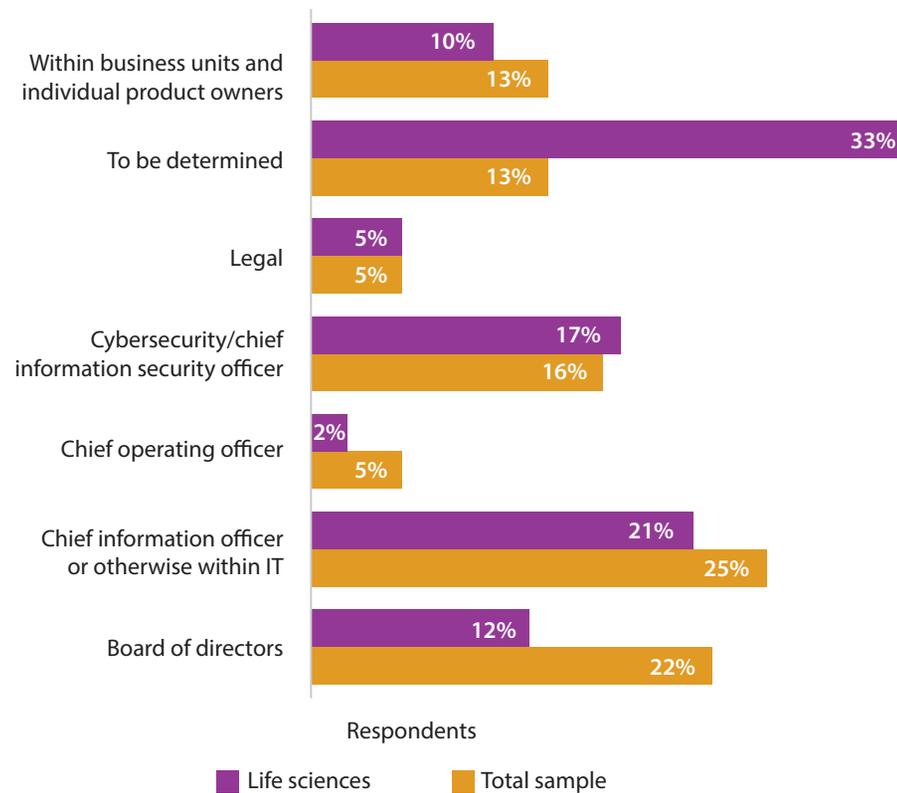Primary sponsor of generative AI initiatives by proportion of respondents

Primary sponsor	Life sciences	Total sample
To be determined	31%	10%
Leader of a business unit	10%	9%
Cybersecurity/chief information security officer	14%	17%
Chief operating officer	6%	9%
Chief marketing officer	4%	4%
Chief information officer	23%	29%
Chief executive officer	5%	9%
Board of directors	7%	13%

Respondents

■ Life sciences   ■ Total sample

Note: Percentages do not add up to 100% because of rounding.

Generative AI governance is less concrete

Governance is most likely undetermined for one-third of life sciences sector

More life sciences companies without a designated generative AI policy maker – 33% of life sciences respondents haven't determined who governs generative AI, compared with only 13% of the overall trend.

Primary generative AI policy maker by proportion of respondents

Category	Life sciences	Total sample
Within business units and individual product owners	10%	13%
To be determined	33%	13%
Legal	5%	5%
Cybersecurity/chief information security officer	17%	16%
Chief operating officer	2%	5%
Chief information officer or otherwise within IT	21%	25%
Board of directors	12%	22%

Respondents

■ Life sciences ■ Total sample

Note: Percentages do not add up to 100% because of rounding.

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