GENERATIVE AI RADAR
MANUFACTURING

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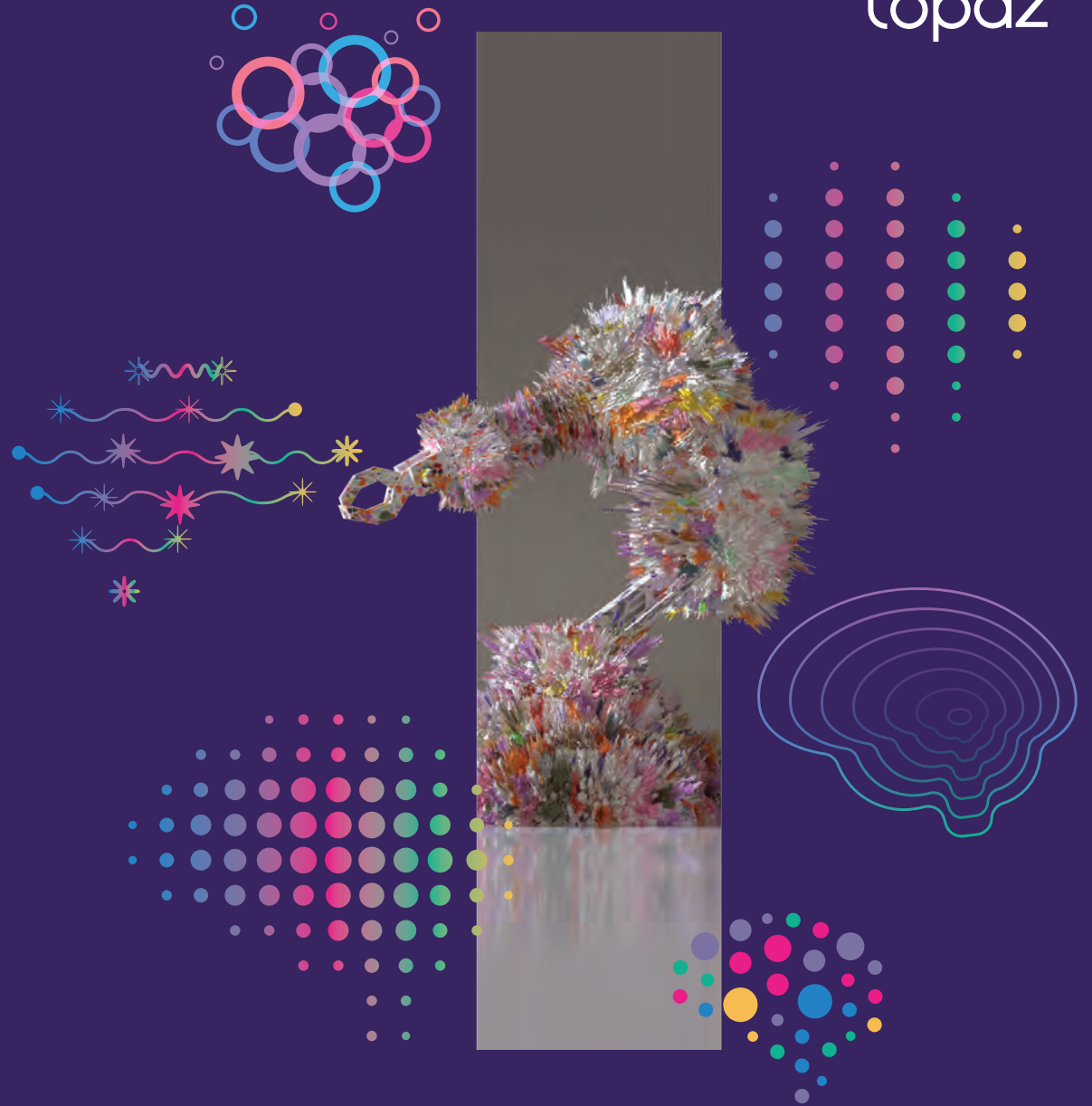
Generative AI Radar – Manufacturing

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 being 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 manufacturing compares with the rest of the pack.
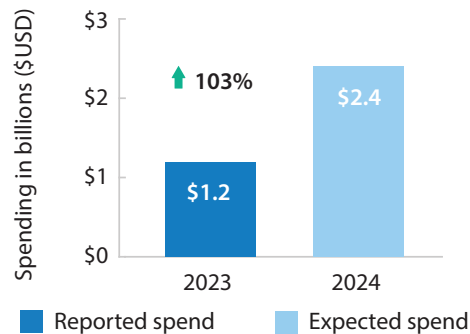
Spending will double

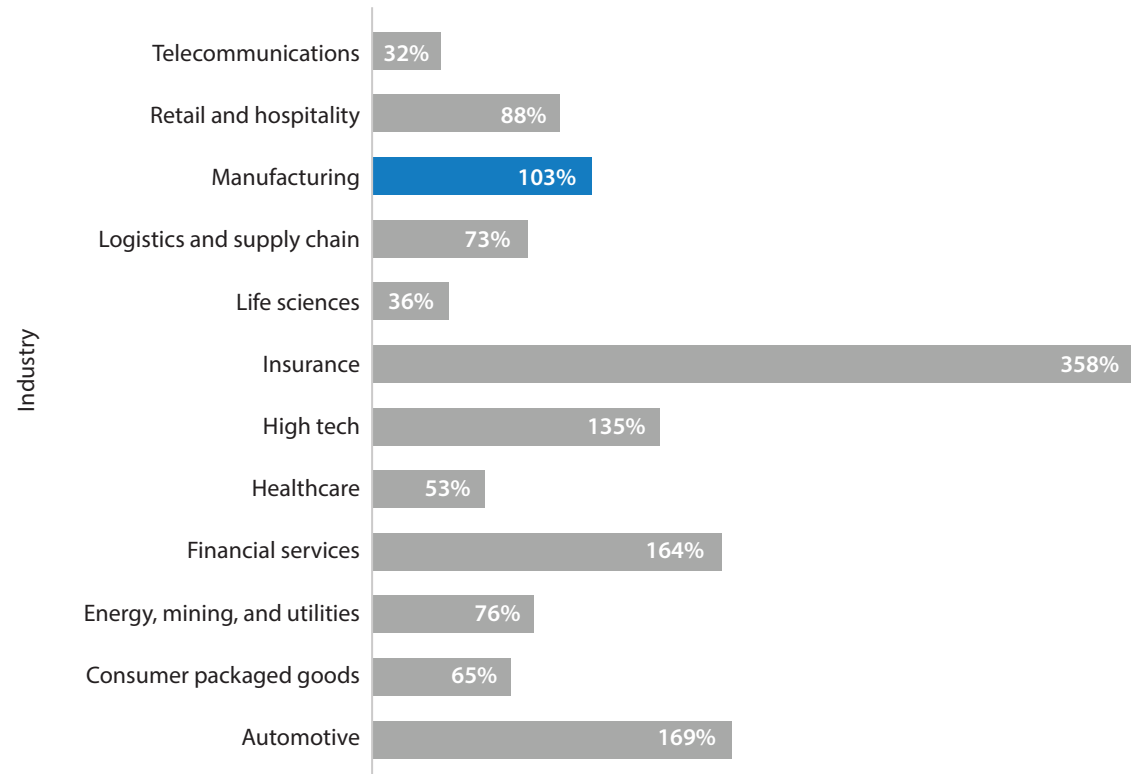## Manufacturing's spending growth is rapid but weaker than the overall trend

Manufacturing's spending is set to grow by 103% in next year – The industry spent more than $1 billion on generative AI in 2023, with this projected to grow to $2.4 billion in 2024.

Manufacturing generative AI spending

Spending in billions ($USD)

- 2023: $1.2 (Reported spend)
- ↑ 103%
- 2024: $2.4 (Expected spend)

Reported spend | Expected spend

Expected generative AI spending growth in 2024 by industry

Industry	Growth
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%

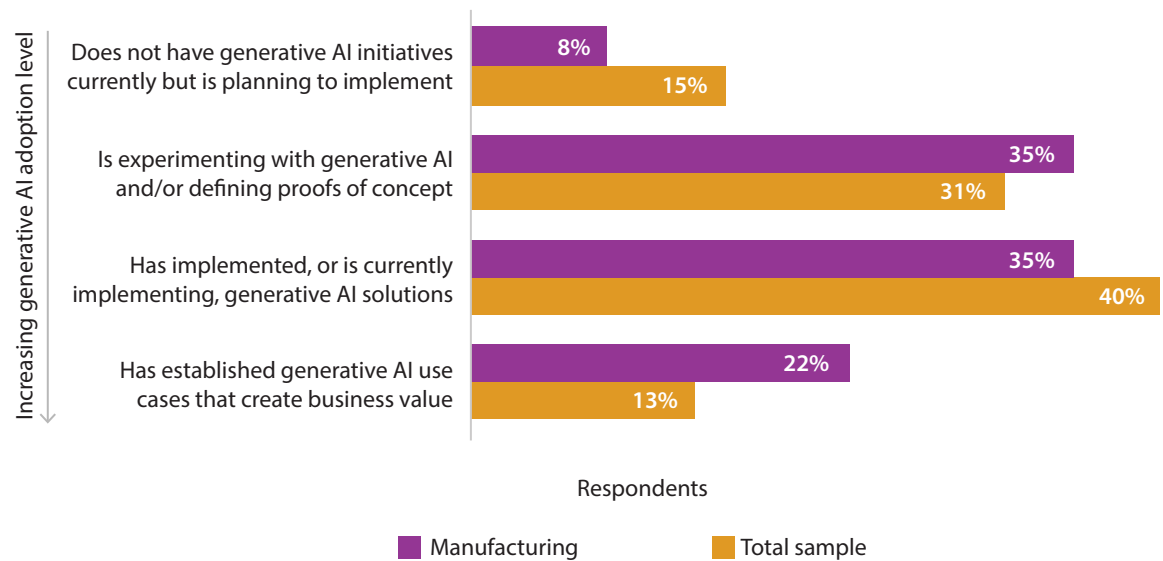Expected generative AI spending growth in 2024

Generative AI beds in

Manufacturing firms lead other sectors with use cases that create business value

92% of manufacturing companies have started their generative AI journey – Only 8% of manufacturing companies have not started experimenting with generative AI, compared with 15% of the overall trend.

22% of manufacturing companies have use cases that create business value – 22% of manufacturing companies have already created business value through their generative AI use cases, compared with 13% of our overall sample.

Generative AI adoption by proportion of respondents

Increasing generative AI adoption level

Adoption level	Manufacturing	Total sample
Does not have generative AI initiatives currently but is planning to implement	8%	15%
Is experimenting with generative AI and/or defining proofs of concept	35%	31%
Has implemented, or is currently implementing, generative AI solutions	35%	40%
Has established generative AI use cases that create business value	22%	13%

Respondents

■ Manufacturing ■ Total sample

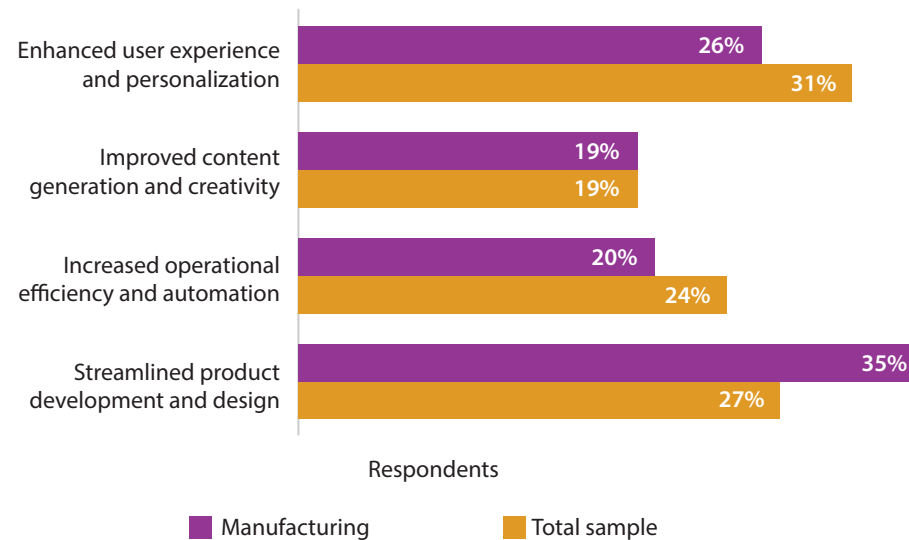*Note: Percentage numbers do not add up to 100% because of rounding.*

Product development drives manufacturing's generative AI optimism

User experience also top of manufacturing's list

High optimism for streamlined product development – Manufacturing companies expect generative AI to have higher positive impact on streamlined product development and design than the overall sample (35% vs 27%).

Where companies expect generative AI to have the most positive impact

Enhanced user experience and personalization — Manufacturing 26%, Total sample 31%

Improved content generation and creativity — Manufacturing 19%, Total sample 19%

Increased operational efficiency and automation — Manufacturing 20%, Total sample 24%

Streamlined product development and design — Manufacturing 35%, Total sample 27%

Respondents

■ Manufacturing   ■ Total sample

| *Note: Percentage numbers do not add up to 100% because of rounding.*

Business impact sentiment

Manufacturing is just as positive about generative AI's business impact as the overall trend

The manufacturing industry is positive about generative AI's impact on business – 74% of manufacturing believes generative AI will have a positive impact on business. Only 9% of manufacturing expressed a negative sentiment.

Expected generative AI impact on business areas by proportion of respondents

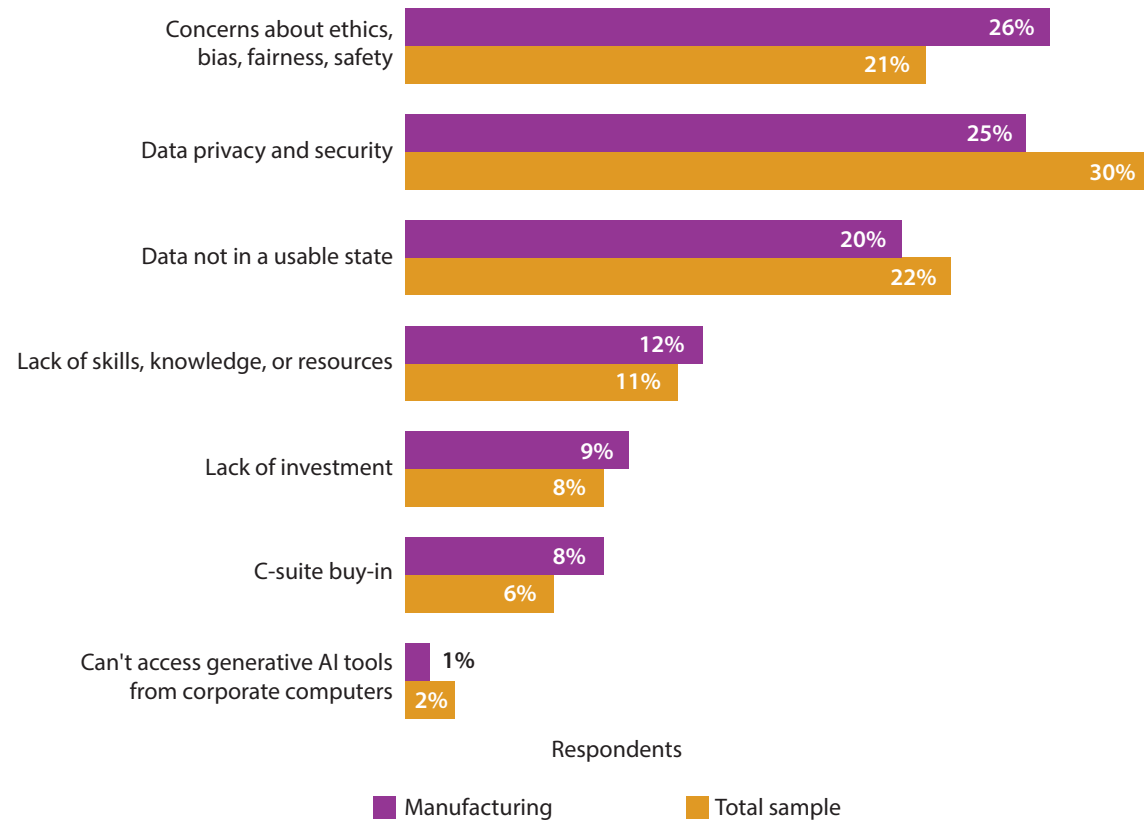Legend: ■ Positive ■ Neutral ■ Negative

Respondents
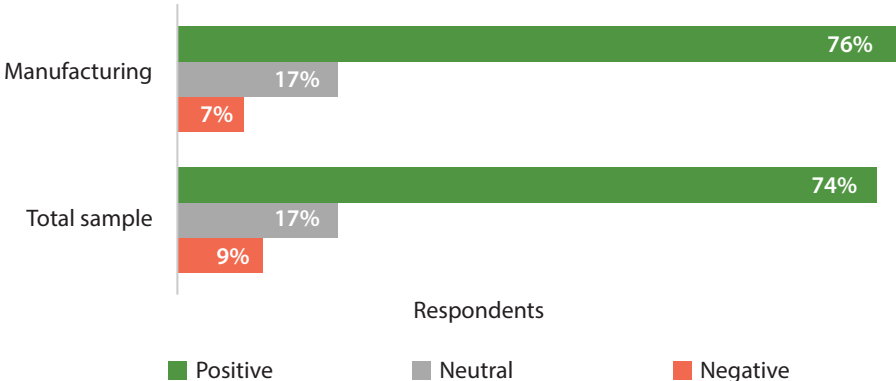
| Note: Percentage numbers do not add up to 100% because of rounding.

Obstacles to generative AI adoption

Manufacturing is most concerned with ethics, bias, and data privacy

Manufacturing firms worried about ethics, bias, and data privacy – 26% of manufacturing ranked ethics, bias, fairness, and safety as their top challenge to generative AI adoption. Another 25% ranked data privacy and security as key obstacles. These sentiments are statistically the same as the overall trend.

Obstacles to generative AI adoption by proportion of respondents

Obstacle	Manufacturing	Total sample
Concerns about ethics, bias, fairness, safety	26%	21%
Data privacy and security	25%	30%
Data not in a usable state	20%	22%
Lack of skills, knowledge, or resources	12%	11%
Lack of investment	9%	8%
C-suite buy-in	8%	6%
Can't access generative AI tools from corporate computers	1%	2%

Respondents

■ Manufacturing   ■ Total sample

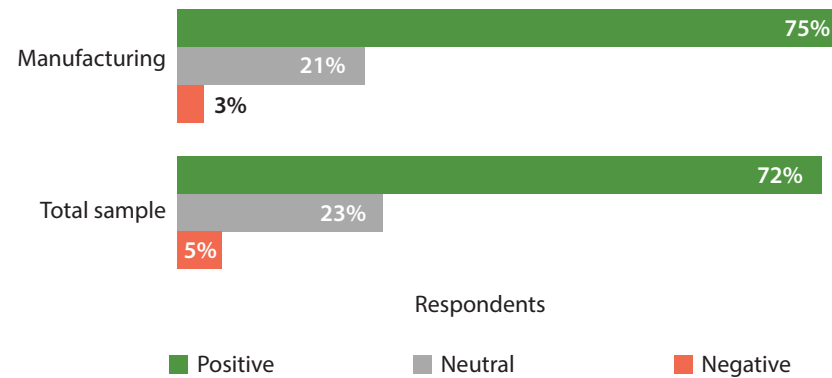*Note: Percentage numbers do not add up to 100% because of rounding.*

Confidence in ability to manage and control generative AI systems

Only 3% of the manufacturing sector is negative about their ability to manage generative AI

Manufacturing companies are confident in their generative AI management – 75% of manufacturing is positive in their ability to manage generative AI, statistically in line with the overall trend. Only 3% of manufacturing expressed a negative sentiment.

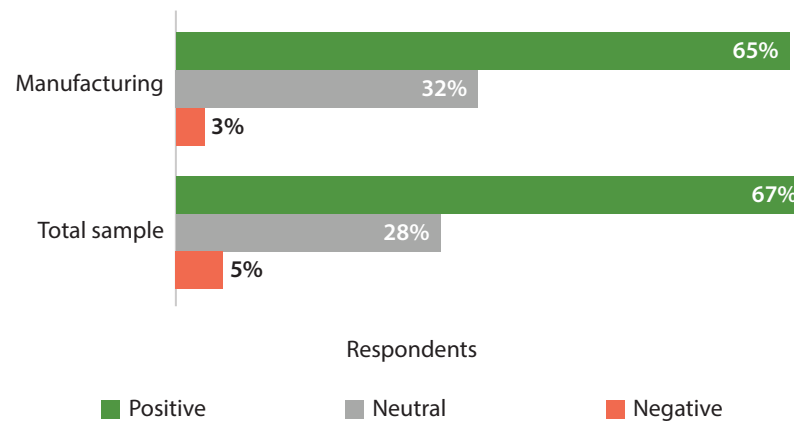Confidence in ability to manage generative AI by proportion of respondents

Manufacturing: Positive 75%, Neutral 21%, Negative 3%

Total sample: Positive 72%, Neutral 23%, Negative 5%

Respondents

■ Positive   ■ Neutral   ■ Negative

Note: Sentiment on confidence in managing generative AI systems. Percentage numbers do not add up to 100% because of rounding.

Manufacturing confident in workforce readiness

Most manufacturing companies are confident about the readiness of their workforce for generative AI

Manufacturing companies are confident that their teams are ready for generative AI – 65% of manufacturing is positive about workforce generative AI readiness, statistically in line with the overall trend (67%).

Sentiment on workforce readiness to adopt generative AI by proportion of respondents

	Positive	Neutral	Negative
Manufacturing	65%	32%	3%
Total sample	67%	28%	5%

Respondents

■ Positive ■ Neutral ■ Negative

Note: Sentiment on confidence in managing generative AI systems. Percentage numbers do not add up to 100% because of rounding.
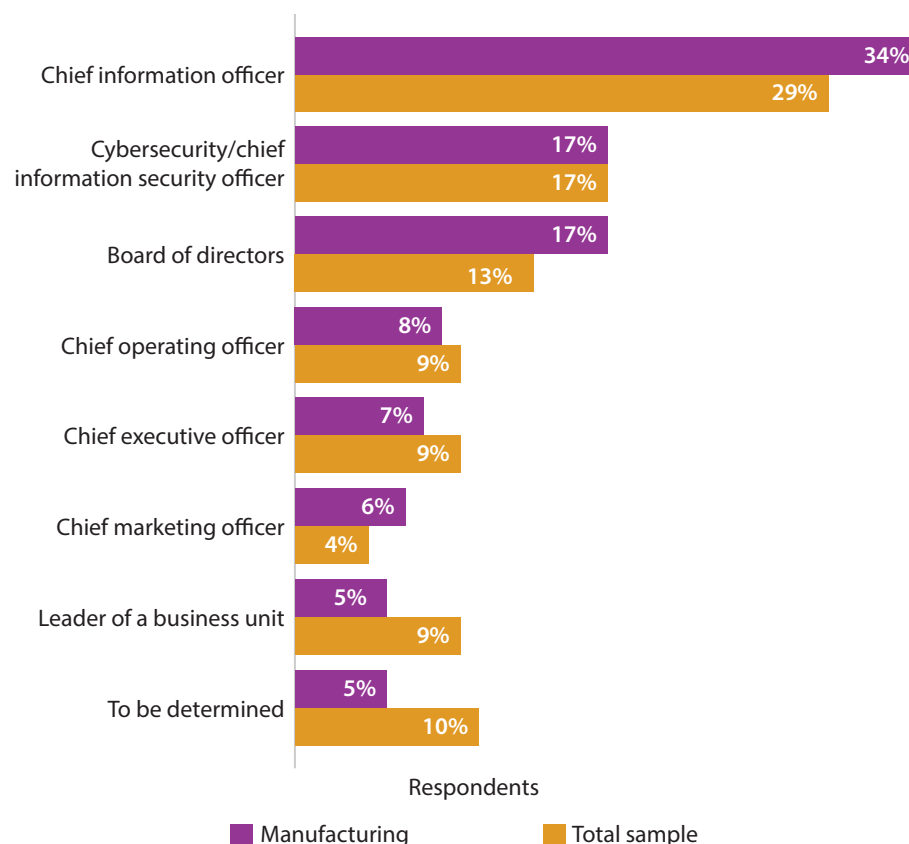
Manufacturing firms focused on generative AI leadership

CIOs are the main sponsors of generative AI for manufacturing companies

CIOs sponsor generative AI in manufacturing – Manufacturing companies are focused on IT requirements of generative AI, with CIOs as the most likely primary sponsors.

Fewer manufacturing companies report no one as the primary sponsor – 10% of the overall sample report the primary generative AI sponsor as "to be determined." Only 5% of manufacturing reported the same.

Primary sponsor of generative AI initiatives by proportion of respondents

Sponsor	Manufacturing	Total sample
Chief information officer	34%	29%
Cybersecurity/chief information security officer	17%	17%
Board of directors	17%	13%
Chief operating officer	8%	9%
Chief executive officer	7%	9%
Chief marketing officer	6%	4%
Leader of a business unit	5%	9%
To be determined	5%	10%

Respondents

■ Manufacturing   ■ Total sample

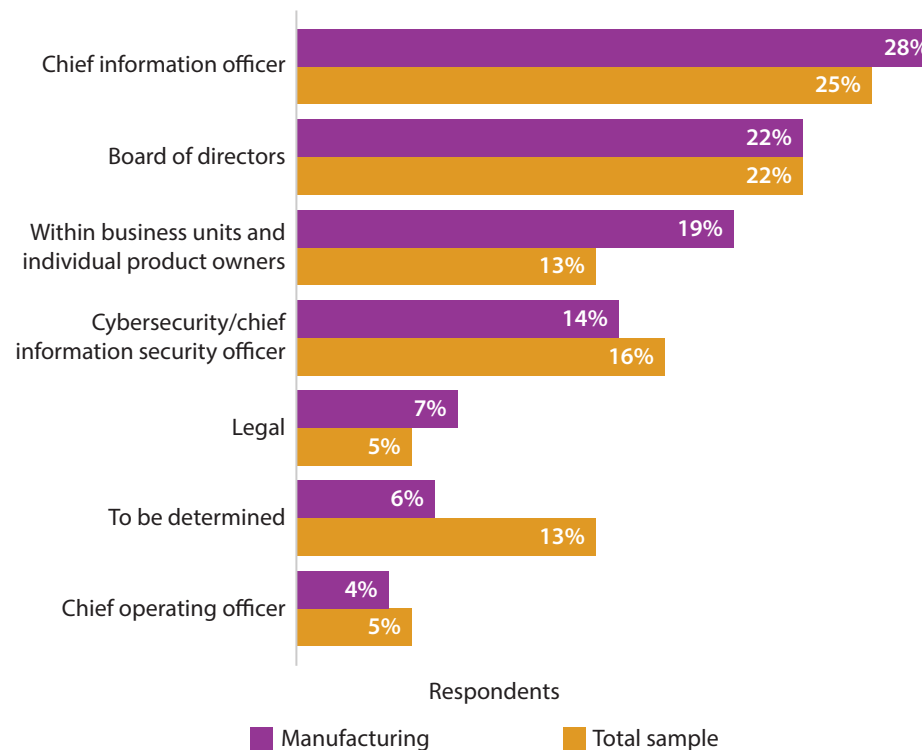*Note: Percentage numbers do not add up to 100% because of rounding.*

CIOs and boards take lead on regulation

But more manufacturing firms prepared to devolve leadership on regulation to lower levels

Chief information officers and boards of directors take the regulatory lead – 28% of CIOs and 22% of boards of directors take the lead on the definition of generative AI regulations and policies.

However, individual product owners also have a say – manufacturing product owners (19%) take the lead more often compared with the overall trend (13%).

Primary generative AI policy maker by proportion of respondents

Role	Manufacturing	Total sample
Chief information officer	28%	25%
Board of directors	22%	22%
Within business units and individual product owners	19%	13%
Cybersecurity/chief information security officer	14%	16%
Legal	7%	5%
To be determined	6%	13%
Chief operating officer	4%	5%

Respondents

■ Manufacturing ■ Total sample

| *Note: Percentage numbers do not add up to 100% because of rounding.*

About Infosys Knowledge Institute

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