Unlocking enterprise AI: opportunities and strategies

Survey summary report

About

These slides contain supplementary charts and data from our 2024 survey of 715 technical executives and 385 data practitioners.

Details about the survey can be found in our report, Unlocking enterprise AI: opportunities and strategies.

Contents

This study's global survey, developed and conducted by Economist Impact and commissioned by Databricks, polled 1,100 respondents across the following backgrounds. It was fielded between July and August 2024.

The survey respondents work in large enterprises (annual revenue of US$500m or greater) or public sector organisations, located in 19 countries across North America, Europe and Asia-Pacific (including ASEAN).

Respondents' job titles:

- Chief information officer
- Chief technology officer
- Chief data/analytics officer
- Chief data specialist
- Chief enterprise/data architect
- SVP/VP/head of IT/data/engineering
- Data scientists (or similar)
- Data engineers (or similar)
- Enterprise architects (or similar)

Respondents' industries:

- Financial services, banking and insurance
- Public sector
- Healthcare, pharmaceuticals and life sciences
- Retail and consumer goods
- Manufacturing (including automotive)
- Media and entertainment
- Energy, oil and gas
- Telecommunications

Respondents' locations:

Americas
- United States

Asia-Pacific
- Australia
- India
- Japan
- Malaysia
- Philippines
- Singapore
- South Korea
- Thailand

Europe
- Denmark
- Finland
- France
- Germany
- Italy
- Netherlands
- Norway
- Spain
- Sweden
- United Kingdom

ECONOMIST IMPACT

Section 1: AI adoption trends

Data by region and country

Firms are mixing and matching various AI technologies and data formats

Many companies are actively looking to expand their AI and data capabilities in the near future (light blue) rather than remaining static with their current technology stacks.

The survey data suggest a gradual shift towards a variety of data solutions, while maintaining a balance between open- and closed-source technologies.

Planned and current usage of AI technologies and data formats (US respondents)

- 🟧 Not using now and not planning to use in the next three years
- 🟦 Not using now but planning to use in the next three years
- 🟦 Currently using
- ⬜ Don't know

Category	Not using now and not planning	Not using now but planning	Currently using
Closed-source AI technology (proprietary or private source code)	21%	17%	63%
Open-source AI technology (publicly available source code)	8%	23%	69%
Closed-source data formats (Amazon Redshift, SAP HANA, Teradata Vantage, etc)	18%	26%	56%
Delta Lake (open-source data format)	13%	39%	47%
Apache Iceberg (open-source data format)	40%	31%	28%
Apache Hudi (open-source data format)	47%	23%	28%
Other open-source data formats	46%	24%	22%

Question: Does your organisation currently use (or plan to use) the following? Select one answer in each row.
Sample pool: US respondents

ECONOMIST IMPACT
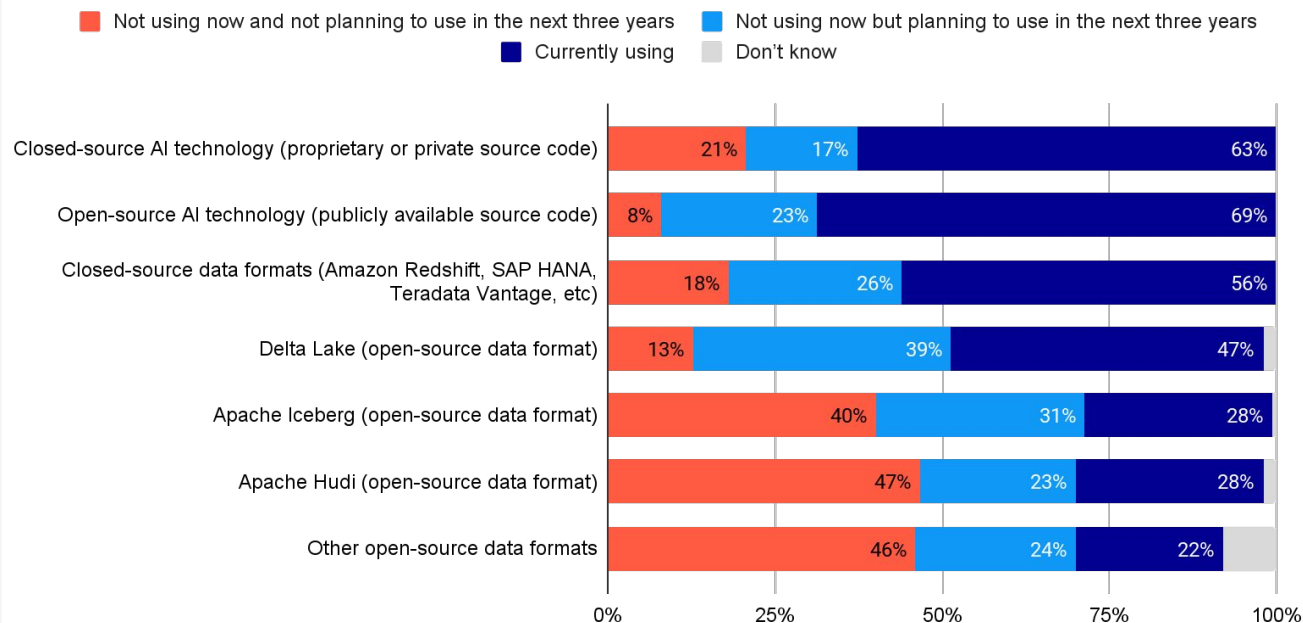
Firms are mixing and matching various AI technologies and data formats

Many companies are actively looking to expand their AI and data capabilities in the near future (light blue) rather than remaining static with their current technology stacks.

The survey data suggest a gradual shift towards a variety of data solutions, while maintaining a balance between open- and closed-source technologies.

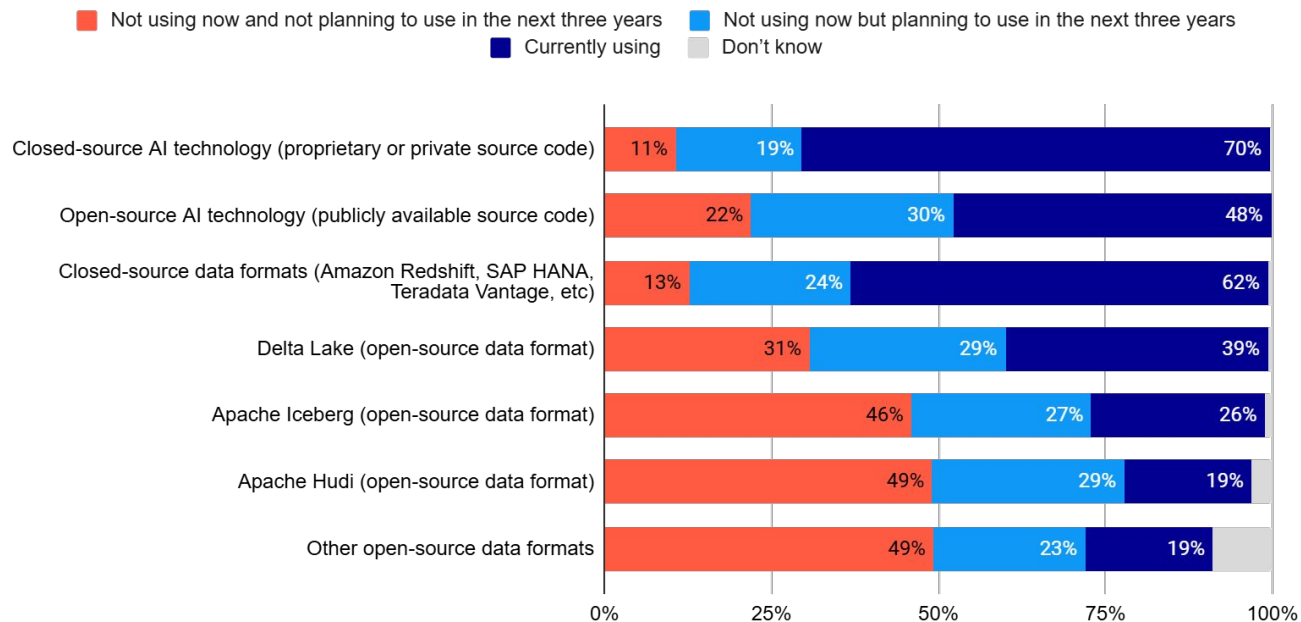**Planned and current usage of AI technologies and data formats** (European respondents)

- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Currently using
- Don't know

Technology	Not using now and not planning	Not using now but planning	Currently using
Closed-source AI technology (proprietary or private source code)	11%	19%	70%
Open-source AI technology (publicly available source code)	22%	30%	48%
Closed-source data formats (Amazon Redshift, SAP HANA, Teradata Vantage, etc)	13%	24%	62%
Delta Lake (open-source data format)	31%	29%	39%
Apache Iceberg (open-source data format)	46%	27%	26%
Apache Hudi (open-source data format)	49%	29%	19%
Other open-source data formats	49%	23%	19%

Question: Does your organisation currently use (or plan to use) the following? Select one answer in each row.
Sample pool: European respondents

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Firms are mixing and matching various AI technologies and data formats

Many companies are actively looking to expand their AI and data capabilities in the near future (light blue) rather than remaining static with their current technology stacks.

The survey data suggest a gradual shift towards a variety of data solutions, while maintaining a balance between open- and closed-source technologies.

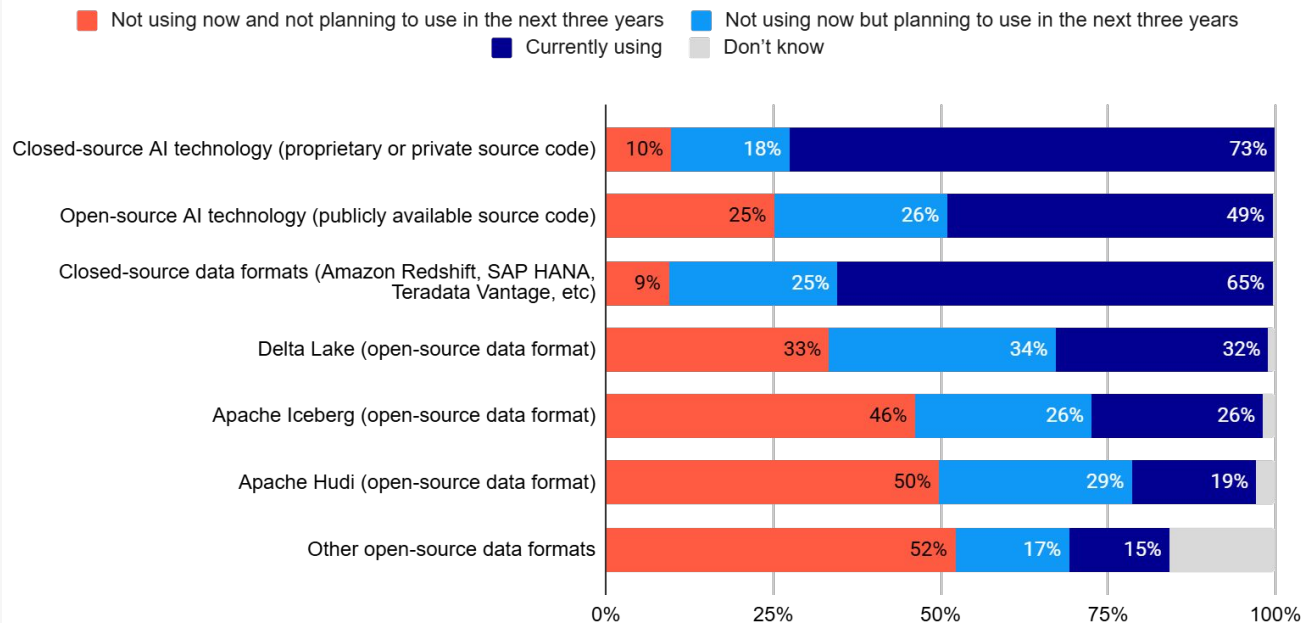**Planned and current usage of AI technologies and data formats** (APAC respondents, incl. ASEAN)

- ■ Not using now and not planning to use in the next three years
- ■ Not using now but planning to use in the next three years
- ■ Currently using
- ■ Don't know

Technology	Not using / not planning	Not using but planning	Currently using	Don't know
Closed-source AI technology (proprietary or private source code)	10%	18%	73%	
Open-source AI technology (publicly available source code)	25%	26%	49%	
Closed-source data formats (Amazon Redshift, SAP HANA, Teradata Vantage, etc)	9%	25%	65%	
Delta Lake (open-source data format)	33%	34%	32%	
Apache Iceberg (open-source data format)	46%	26%	26%	
Apache Hudi (open-source data format)	50%	29%	19%	
Other open-source data formats	52%	17%	15%	

Question: Does your organisation currently use (or plan to use) the following? Select one answer in each row.
Sample pool: APAC respondents (incl. ASEAN)

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Current architecture is insufficient to support AI workloads and connections

"My organisation's current architecture supports the unique demands of AI workloads"

- ■ Yes, it is fully capable of doing this
- ■ Yes, it partially does this, but it needs some modifications
- ■ It doesn't do this, but we are planning upgrades to meet this demand
- ■ It doesn't do this
- □ Don't know / not applicable

	Yes, fully	Yes, partially	Planning upgrades
Global	22%	59%	18%
APAC (incl. ASEAN)*	14%	63%	20%
Europe**	21%	61%	18%
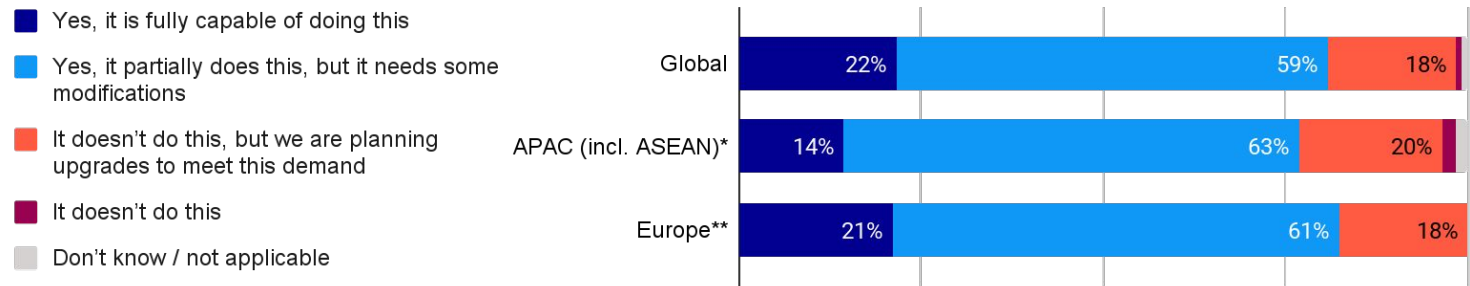
"My organisation's current architecture connects AI applications to relevant business data"
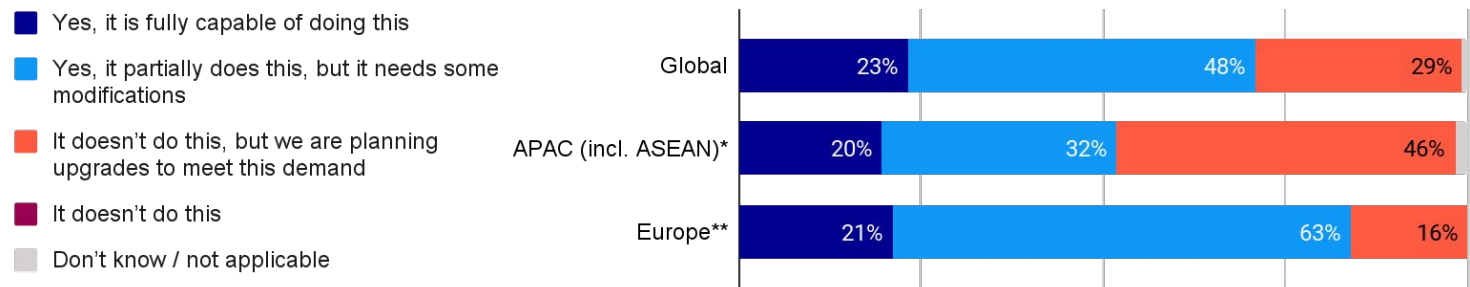
- ■ Yes, it is fully capable of doing this
- ■ Yes, it partially does this, but it needs some modifications
- ■ It doesn't do this, but we are planning upgrades to meet this demand
- ■ It doesn't do this
- □ Don't know / not applicable

	Yes, fully	Yes, partially	Planning upgrades
Global	23%	48%	29%
APAC (incl. ASEAN)*	20%	32%	46%
Europe**	21%	63%	16%

Question: How capable is your organisation's current architecture in supporting AI workloads and connections to relevant data? Select one answer for each question.
Sample pool: Enterprise architects
* Sample size = 56; insights are suggestive/directional only
** Sample size = 62; insights are suggestive directional only

ECONOMIST IMPACT

Adoption of GenAI models in the US

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

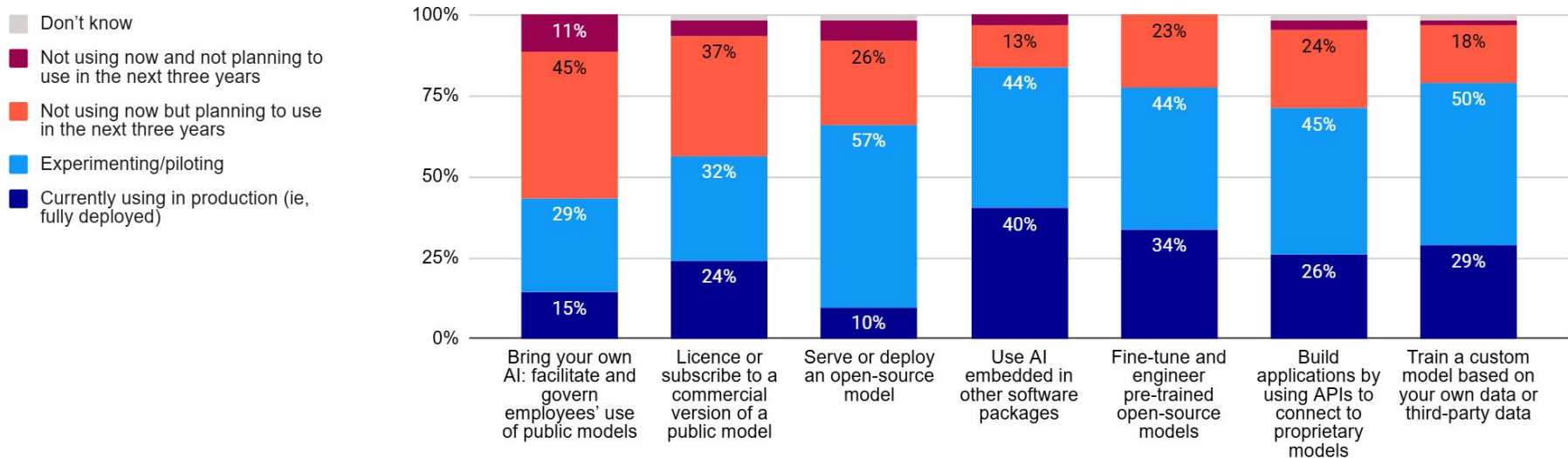| Strategy	Bring your own AI: facilitate and govern employees' use of public models	Licence or subscribe to a commercial version of a public model	Serve or deploy an open-source model	Use AI embedded in other software packages	Fine-tune and engineer pre-trained open-source models	Build applications by using APIs to connect to proprietary models	Train a custom model based on your own data or third-party data
Not using now and not planning	20%	13%			12%		
Not using now but planning	36%	35%	26%	19%		19%	15%
Experimenting/piloting	34%	21%	44%	40%	59%	49%	52%
Currently using in production	10%	31%	29%	40%	25%	32%	32%

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
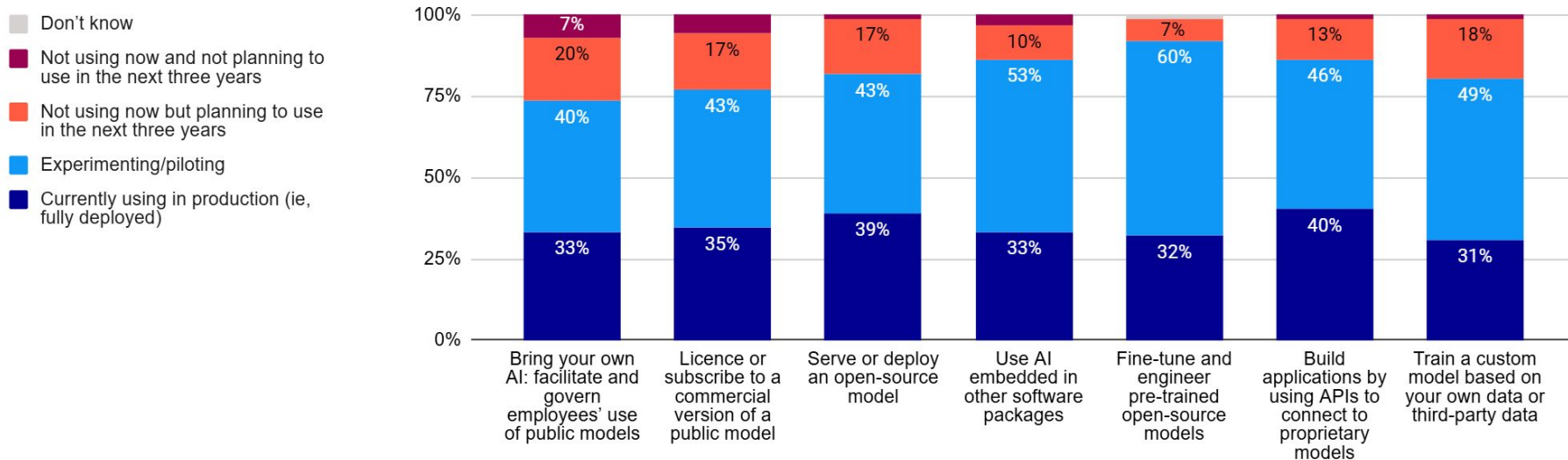*Sample pool: Technical executives in the US; n=100*

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Adoption of GenAI models **in Australia**

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know (light grey)
- Not using now and not planning to use in the next three years (dark magenta)
- Not using now but planning to use in the next three years (orange)
- Experimenting/piloting (light blue)
- Currently using in production (ie, fully deployed) (dark blue)

Category	Currently using in production	Experimenting/piloting	Not using now but planning to use	Not using now and not planning to use
Bring your own AI: facilitate and govern employees' use of public models	15%	29%	45%	11%
Licence or subscribe to a commercial version of a public model	24%	32%	37%	
Serve or deploy an open-source model	10%	57%	26%	
Use AI embedded in other software packages	40%	44%	13%	
Fine-tune and engineer pre-trained open-source models	34%	44%	23%	
Build applications by using APIs to connect to proprietary models	26%	45%	24%	
Train a custom model based on your own data or third-party data	29%	50%	18%	

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in Australia; n=62 (data are suggestive/directional only)

ECONOMIST IMPACT

Adoption of GenAI models in India

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

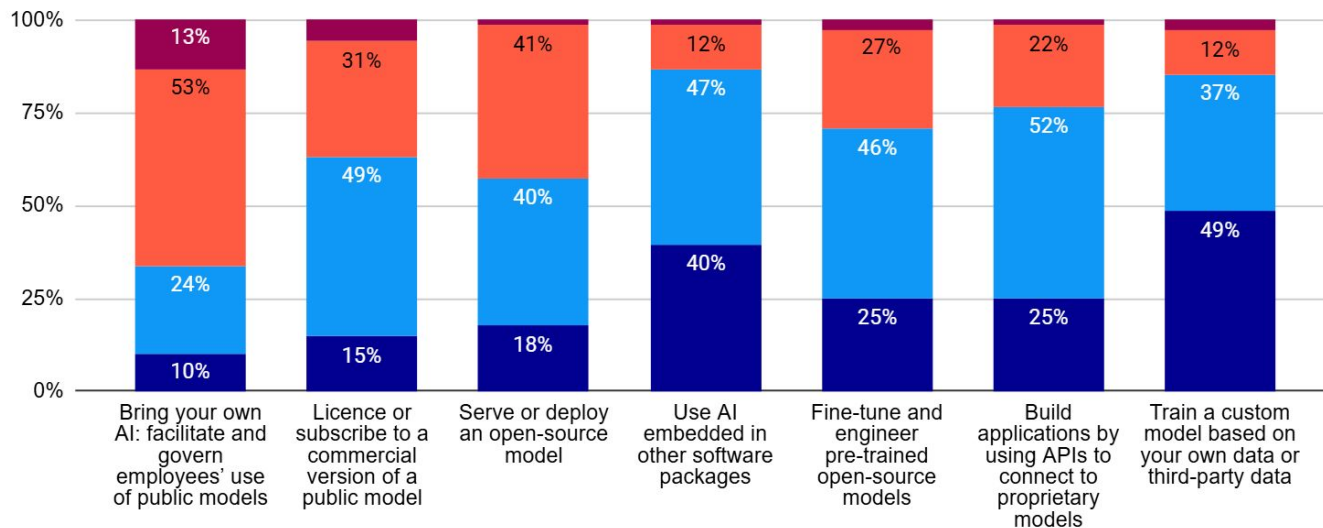| Category	Bring your own AI: facilitate and govern employees' use of public models	Licence or subscribe to a commercial version of a public model	Serve or deploy an open-source model	Use AI embedded in other software packages	Fine-tune and engineer pre-trained open-source models	Build applications by using APIs to connect to proprietary models	Train a custom model based on your own data or third-party data
Not using now and not planning to use	7%						
Not using now but planning to use	20%	17%	17%	10%	7%	13%	18%
Experimenting/piloting	40%	43%	43%	53%	60%	46%	49%
Currently using in production	33%	35%	39%	33%	32%	40%	31%

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in India; n=87 (data are suggestive/directional only)

ECONOMIST IMPACT

Adoption of GenAI models in Japan

To what extent is your organisation using the following GenAI acquisition strategies?
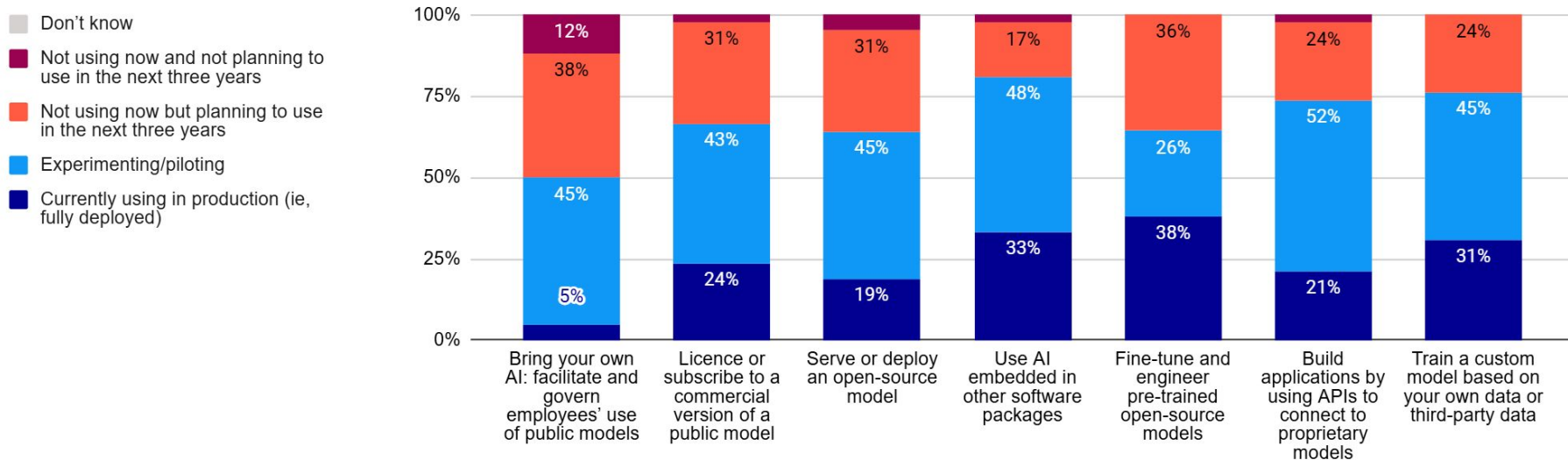
Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

Category	Bring your own AI: facilitate and govern employees' use of public models	Licence or subscribe to a commercial version of a public model	Serve or deploy an open-source model	Use AI embedded in other software packages	Fine-tune and engineer pre-trained open-source models	Build applications by using APIs to connect to proprietary models	Train a custom model based on your own data or third-party data
Not using now and not planning to use	13%	31%	41%	12%	27%	22%	12%
Not using now but planning to use	53%						
Experimenting/piloting	24%	49%	40%	47%	46%	52%	37%
Currently using in production	10%	15%	18%	40%	25%	25%	49%

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in Japan; n=68 (data are suggestive/directional only)

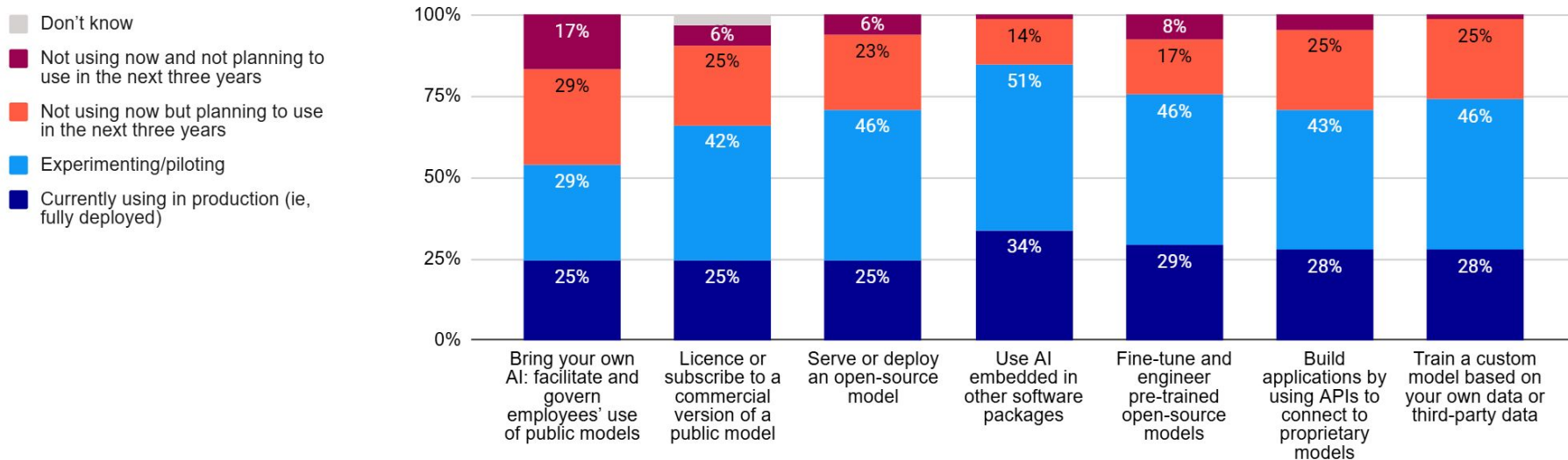ECONOMIST IMPACT

Adoption of GenAI models in South Korea

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

Strategy	Currently using in production	Experimenting/piloting	Not using now but planning to use in the next three years	Not using now and not planning to use in the next three years
Bring your own AI: facilitate and govern employees' use of public models	5%	45%	38%	12%
Licence or subscribe to a commercial version of a public model	24%	43%	31%	
Serve or deploy an open-source model	19%	45%	31%	
Use AI embedded in other software packages	33%	48%	17%	
Fine-tune and engineer pre-trained open-source models	38%	26%	36%	
Build applications by using APIs to connect to proprietary models	21%	52%	24%	
Train a custom model based on your own data or third-party data	31%	45%	24%	

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in South Korea; n=42 (data are suggestive/directional only)

ECONOMIST IMPACT

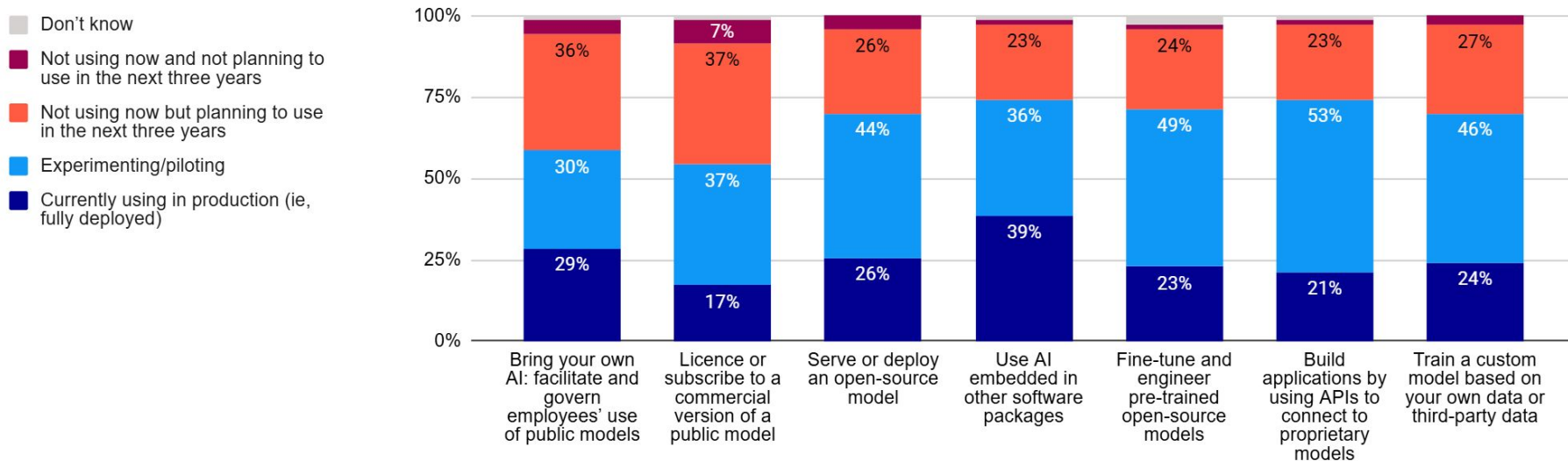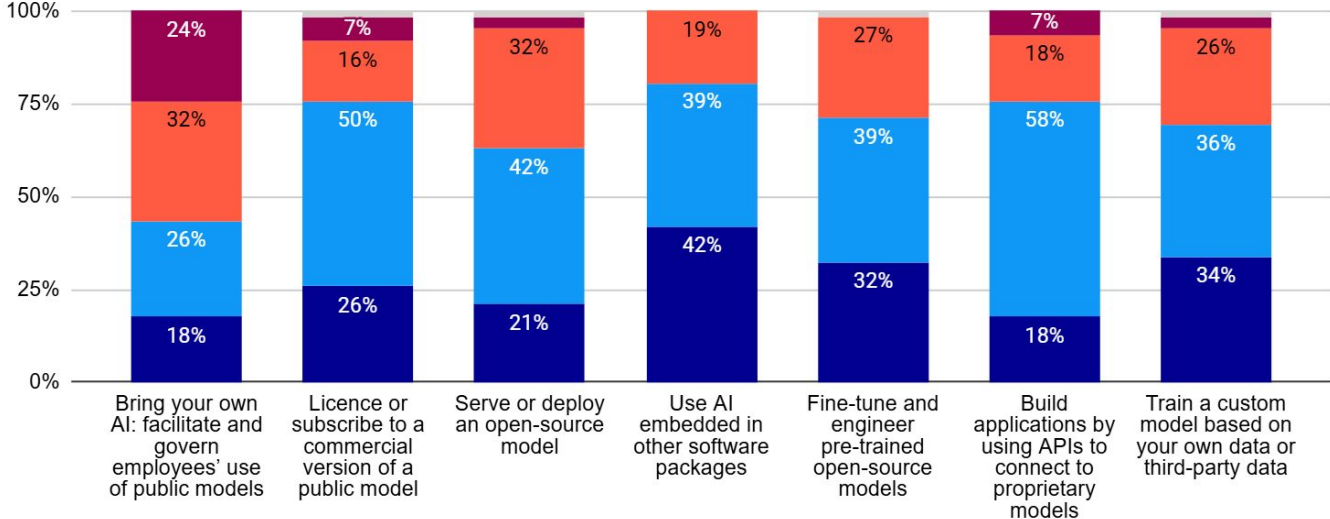# Adoption of GenAI models **in ASEAN** (Malaysia, Philippines, Singapore and Thailand)

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

Strategy	Currently using in production	Experimenting/piloting	Not using now but planning to use	Not using now and not planning to use	Don't know
Bring your own AI: facilitate and govern employees' use of public models	25%	29%	29%	17%	
Licence or subscribe to a commercial version of a public model	25%	42%	25%	6%	
Serve or deploy an open-source model	25%	46%	23%	6%	
Use AI embedded in other software packages	34%	51%	14%		
Fine-tune and engineer pre-trained open-source models	29%	46%	17%	8%	
Build applications by using APIs to connect to proprietary models	28%	43%	25%		
Train a custom model based on your own data or third-party data	28%	46%	25%		

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in Malaysia, Philippines, Singapore and Thailand; n=65 (data are suggestive/directional only)

ECONOMIST IMPACT

Adoption of GenAI models in France

To what extent is your organisation using the following GenAI acquisition strategies?
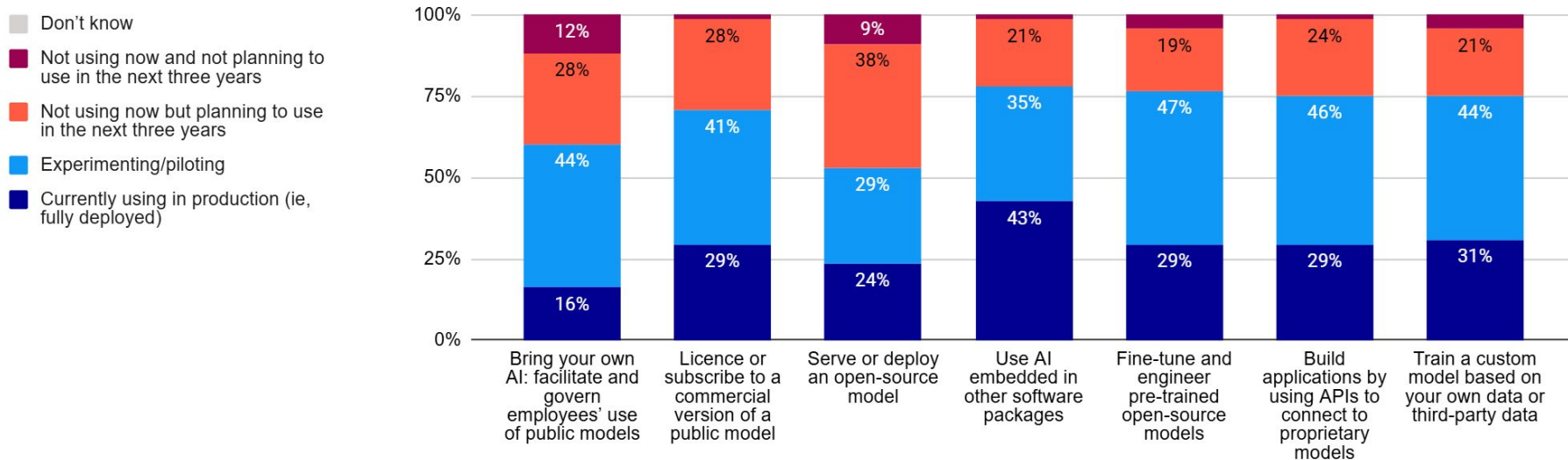
Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

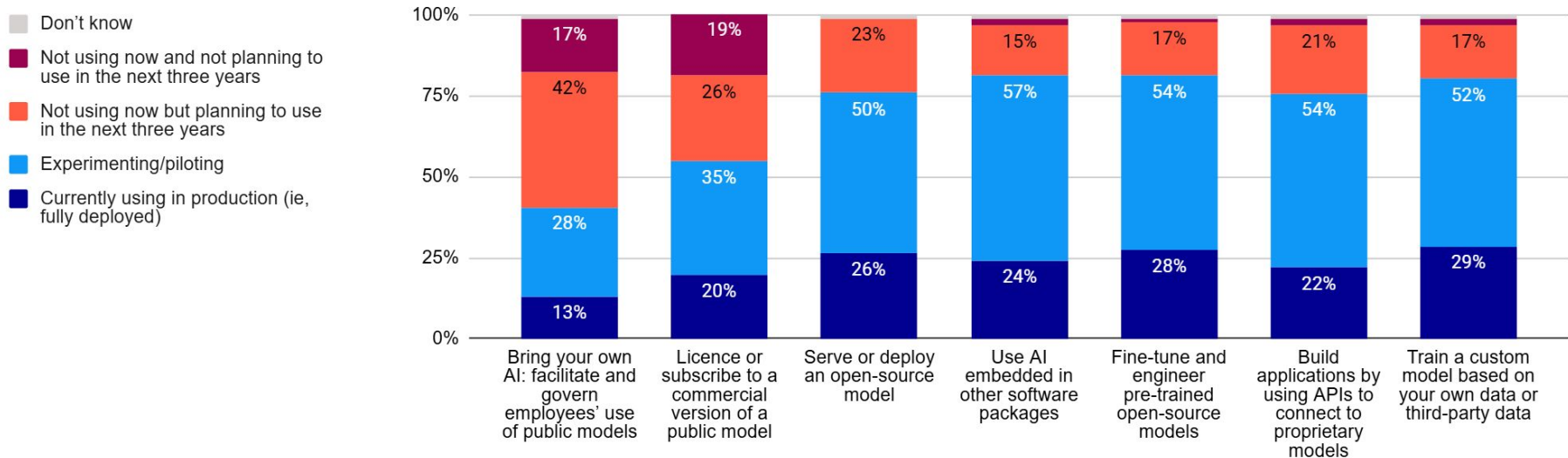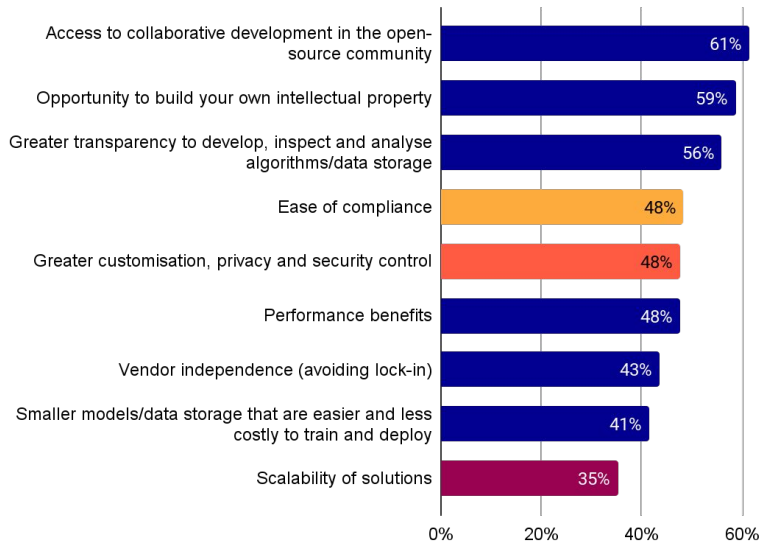|	Bring your own AI: facilitate and govern employees' use of public models	Licence or subscribe to a commercial version of a public model	Serve or deploy an open-source model	Use AI embedded in other software packages	Fine-tune and engineer pre-trained open-source models	Build applications by using APIs to connect to proprietary models	Train a custom model based on your own data or third-party data
Not using now and not planning		7%	26%				27%
Not using now but planning	36%	37%		23%	24%	23%	
Experimenting/piloting	30%	37%	44%	36%	49%	53%	46%
Currently using in production	29%	17%	26%	39%	23%	21%	24%

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in France; n=70 (data are suggestive/directional only)

ECONOMIST IMPACT

Adoption of GenAI models in Germany

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

Strategy	Currently using in production	Experimenting/piloting	Not using now but planning to use	Not using now and not planning to use
Bring your own AI: facilitate and govern employees' use of public models	18%	26%	32%	24%
Licence or subscribe to a commercial version of a public model	26%	50%	16%	7%
Serve or deploy an open-source model	21%	42%	32%	
Use AI embedded in other software packages	42%	39%	19%	
Fine-tune and engineer pre-trained open-source models	32%	39%	27%	
Build applications by using APIs to connect to proprietary models	18%	58%	18%	7%
Train a custom model based on your own data or third-party data	34%	36%	26%	

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in Germany; n=62 (data are suggestive/directional only)

ECONOMIST IMPACT

Adoption of GenAI models in the UK

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

Strategy	Currently using in production	Experimenting/piloting	Not using now but planning to use	Not using now and not planning to use
Bring your own AI: facilitate and govern employees' use of public models	16%	44%	28%	12%
Licence or subscribe to a commercial version of a public model	29%	41%	28%	
Serve or deploy an open-source model	24%	29%	38%	9%
Use AI embedded in other software packages	43%	35%	21%	
Fine-tune and engineer pre-trained open-source models	29%	47%	19%	
Build applications by using APIs to connect to proprietary models	29%	46%	24%	
Train a custom model based on your own data or third-party data	31%	44%	21%	

ECONOMIST IMPACT

Adoption of GenAI models in other European countries (Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden)

To what extent is your organisation using the following GenAI acquisition strategies?

Legend:
- Don't know
- Not using now and not planning to use in the next three years
- Not using now but planning to use in the next three years
- Experimenting/piloting
- Currently using in production (ie, fully deployed)

Strategy	Not using & not planning	Not using but planning	Experimenting/piloting	Currently using in production
Bring your own AI: facilitate and govern employees' use of public models	17%	42%	28%	13%
Licence or subscribe to a commercial version of a public model	19%	26%	35%	20%
Serve or deploy an open-source model	23%		50%	26%
Use AI embedded in other software packages	15%		57%	24%
Fine-tune and engineer pre-trained open-source models	17%		54%	28%
Build applications by using APIs to connect to proprietary models	21%		54%	22%
Train a custom model based on your own data or third-party data	17%		52%	29%

Question: To what extent is your organisation using the following GenAI acquisition strategies? Select one answer for each type of model.
Sample pool: Technical executives in Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden; n=91 (data are suggestive/directional only)

ECONOMIST IMPACT

Different factors drive open- vs closed-source adoption in the US

American firms are strategically balancing their technology stacks. Open-source tools are prioritised for innovation, collaborative development and customisation. Closed-source tools are prioritised for user-friendly operations, system integration and unique features.

Reasons for using <u>open-source</u> data and AI tools
(non-blue shades denote options that appear in both charts)

Reason	%
Access to collaborative development in the open-source community	61%
Opportunity to build your own intellectual property	59%
Greater transparency to develop, inspect and analyse algorithms/data storage	56%
Ease of compliance	48%
Greater customisation, privacy and security control	48%
Performance benefits	48%
Vendor independence (avoiding lock-in)	43%
Smaller models/data storage that are easier and less costly to train and deploy	41%
Scalability of solutions	35%

Reasons for using <u>closed-source</u> data and AI tools
(non-blue shades denote options that appear in both charts)

Reason	%
User-friendly interfaces and/or documentation	59%
Ease of integration with existing proprietary systems	59%
Unique features that are unavailable elsewhere	58%
Greater customisation, privacy and security control	50%
Access to dedicated vendor support and maintenance	50%
Ease of compliance	44%
Scalability of solutions	37%
Reliance on vendor-provided security measures	33%
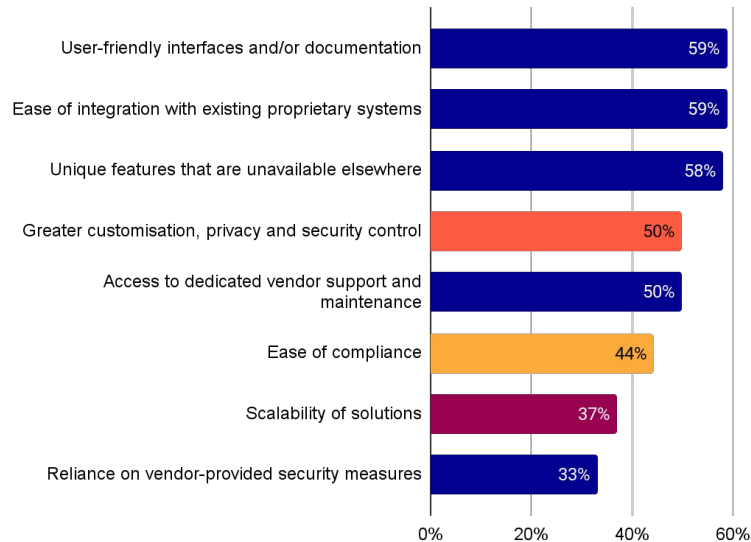
Question: Which of the following reasons does your organisation have for using (or planning to use) open-source/closed-source AI technology or data formats? Select all that apply.
Sample pool: For each chart, US respondents who use that type of data/AI tool.

ECONOMIST IMPACT

Section 2: Perceptions about AI

Data by country and industry

Perceptions about AI's hype, by country

Respondents in India felt the strongest that AI is over-hyped—more than twice as much as those in the next highest country.

By contrast, respondents in the UK and Australia were the most optimistic, with 82% and 77%, respectively, disagreeing with the sentiment that AI is over-hyped.

"I tend to view AI as over-hyped"
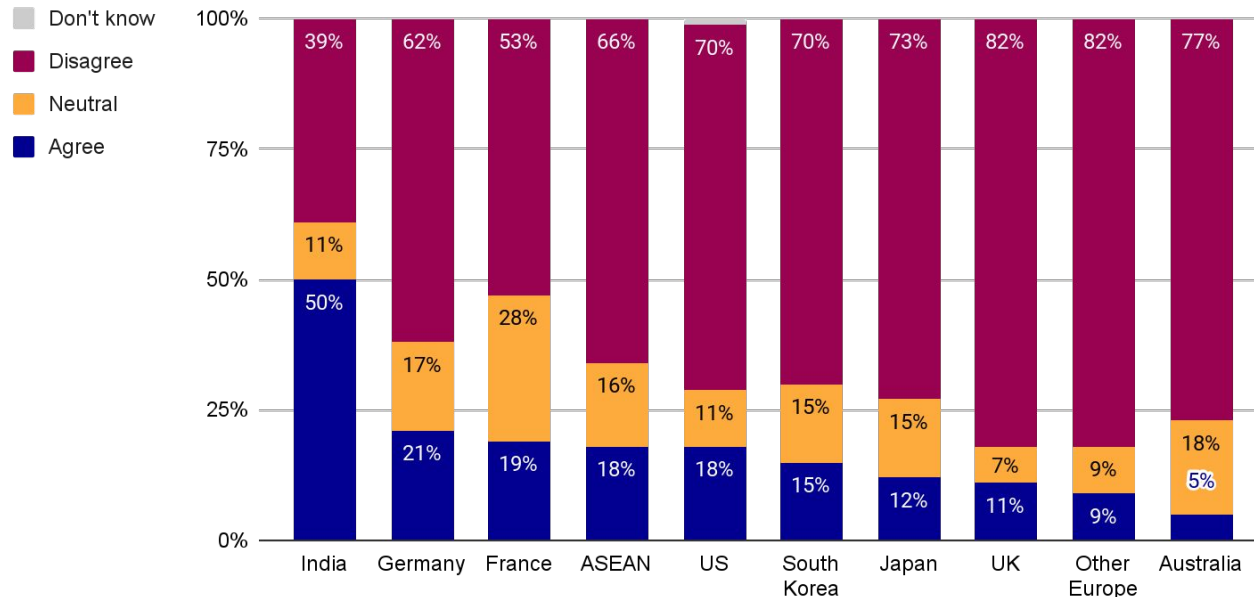
Legend:
- Don't know
- Disagree
- Neutral
- Agree

Country	Agree	Neutral	Disagree
India	50%	11%	39%
Germany	21%	17%	62%
France	19%	28%	53%
ASEAN	18%	16%	66%
US	18%	11%	70%
South Korea	15%	15%	70%
Japan	12%	15%	73%
UK	11%	7%	82%
Other Europe	9%	9%	82%
Australia	5%	18%	77%

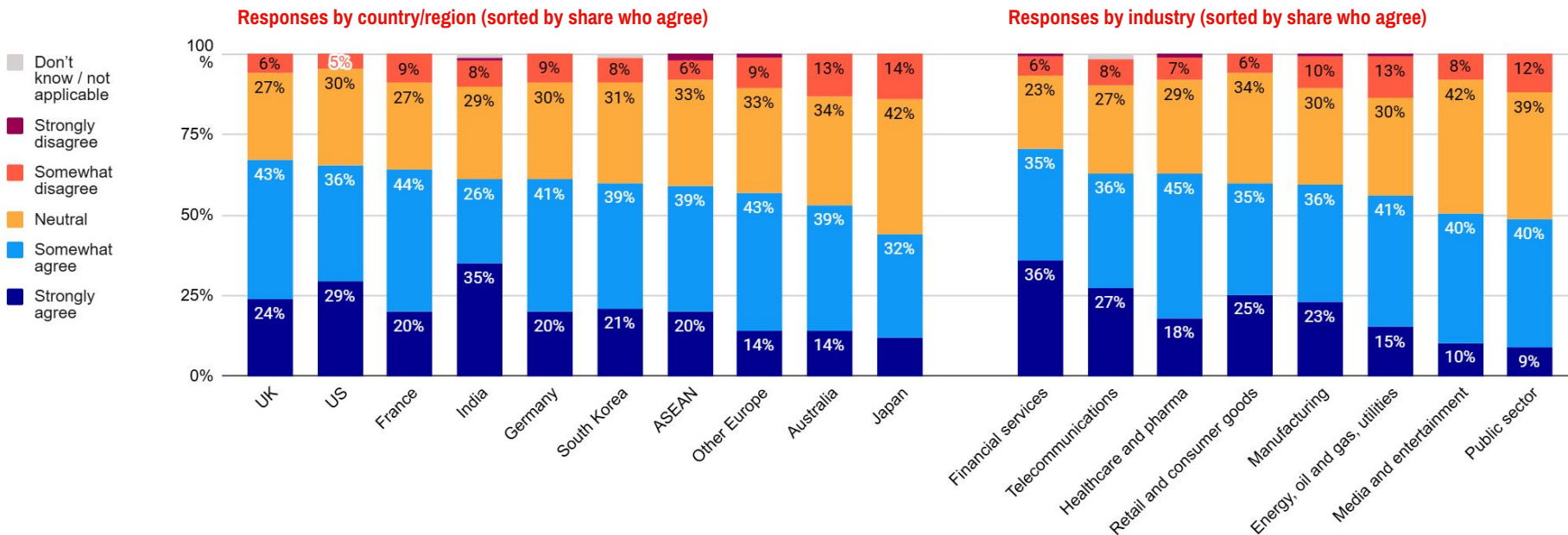*Question: To what extent do you agree or disagree with the following statements about AI and generative AI (GenAI) at your organisation? (Statement: "I tend to view AI as over-hyped")*
Sample pool: All respondents
ASEAN includes Malaysia, Philippines, Singapore and Thailand. Other Europe includes Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden.

ECONOMIST IMPACT

Countries around the world see GenAI as strategically important

The UK and Japan show the strongest conviction about GenAI's strategic importance, with over 80% of respondents considering it critical to their organisation's long-term goals.

Notably, most Indian respondents *do* consider GenAI to be a critical part of their long-term business strategy, despite being the most likely say that AI is over-hyped (see previous slide).

"I consider GenAI applications critical to my organisation's long-term strategic goals"
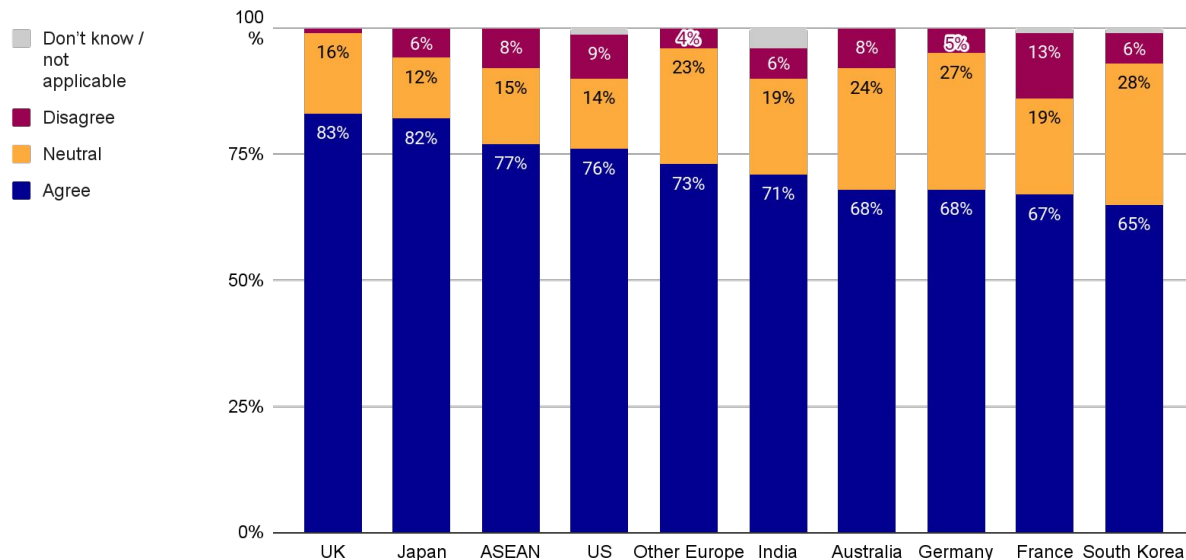
Legend:
- Don't know / not applicable
- Disagree
- Neutral
- Agree

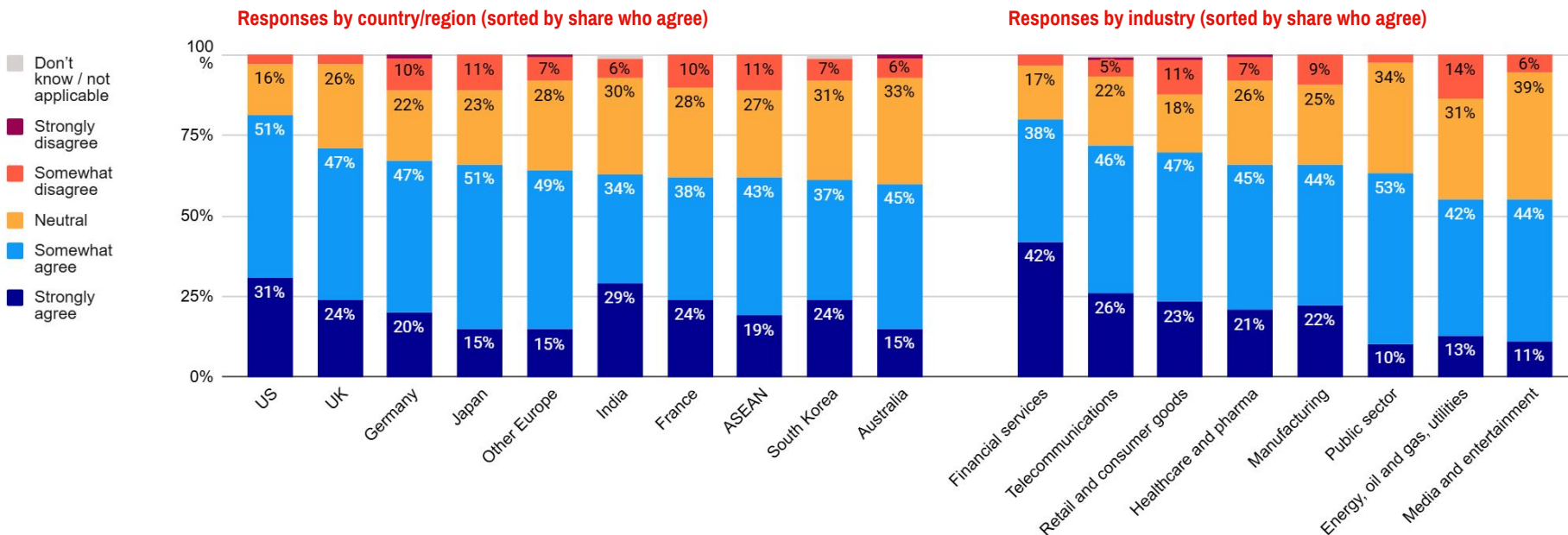| Country	Agree	Neutral	Disagree	Don't know
UK	83%	16%		
Japan	82%	12%	6%	
ASEAN	77%	15%	8%	
US	76%	14%	9%	
Other Europe	73%	23%	4%	
India	71%	19%	6%	
Australia	68%	24%	8%	
Germany	68%	27%	5%	
France	67%	19%	13%	
South Korea	65%	28%	6%	

Question: To what extent do you agree or disagree with the following statements about AI and generative AI (GenAI) at your organisation? (Statement: "I consider GenAI applications critical to my organisation's long-term strategic goals")
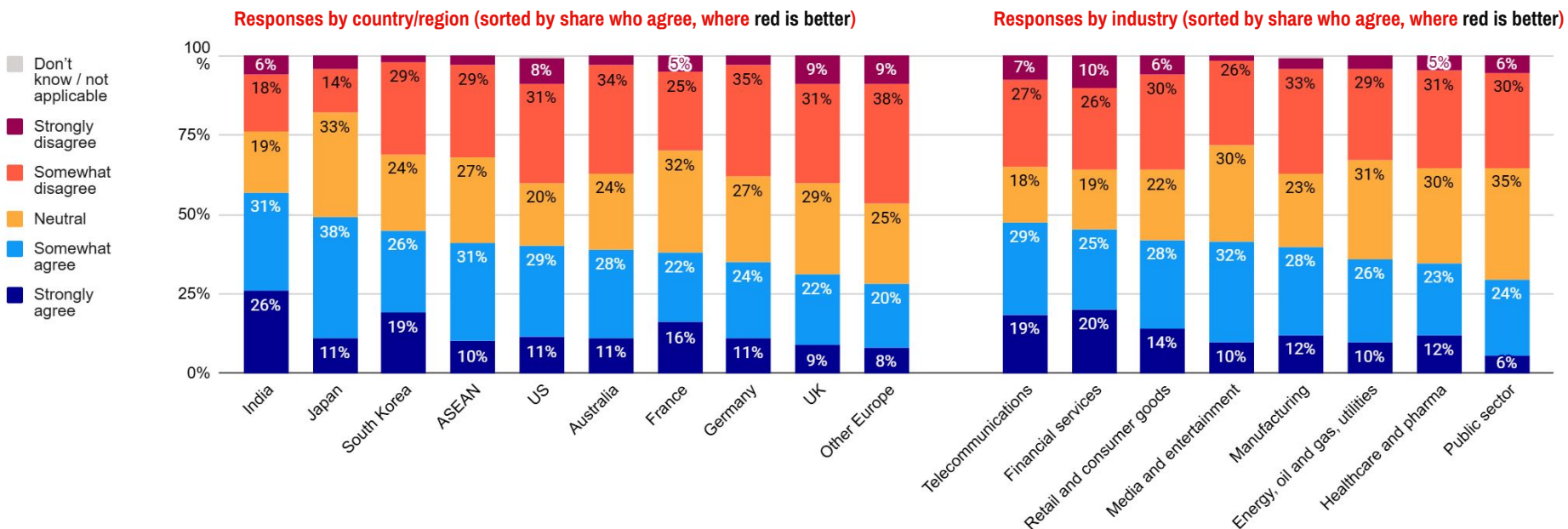*Sample pool: All respondents*
ASEAN includes Malaysia, Philippines, Singapore and Thailand. Other Europe includes Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden.

ECONOMIST IMPACT

Most organisations see challenges in securing AI-related talent

"My organisation is able to secure the AI talent that it needs"

Responses by country/region (sorted by share who agree)

Responses by industry (sorted by share who agree)

Legend:
- Don't know / not applicable
- Strongly disagree
- Somewhat disagree
- Neutral
- Somewhat agree
- Strongly agree

Responses by country/region:

	India	US	South Korea	ASEAN	UK	France	Other Europe	Australia	Germany	Japan
Don't know	6%	7%	7%	12%	14%	11%	14%	14%	19%	18%
Neutral	25%	27%	31%	33%	31%	36%	36%	35%	38%	50%
Somewhat agree	38%	42%	52%	36%	27%	31%	39%	38%	26%	28%
Strongly agree	29%	23%	9%	18%	26%	22%	11%	11%	17%	

Responses by industry:

	Financial services	Manufacturing	Retail and consumer goods	Telecommunications	Energy, oil and gas, utilities	Public sector	Healthcare and pharma	Media and entertainment
Don't know	7%	16%	10%	6%	18%	13%	15%	13%
Neutral	20%	23%	31%	36%	28%	42%	40%	56%
Somewhat agree	43%	41%	35%	34%	43%	34%	33%	23%
Strongly agree	28%	19%	24%	22%	10%	10%	9%	8%

Question: To what extent do you agree or disagree with the following statements about AI and generative AI (GenAI) at your organisation? (Statement: "My organisation is able to secure the AI talent that it needs")
Sample pool: All respondents
ASEAN includes Malaysia, Philippines, Singapore and Thailand. Other Europe includes Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden.

ECONOMIST IMPACT

Most organisations see room to improve their AI governance

"My organisation has implemented sufficient processes to ensure AI safety and compliance"

Responses by country/region (sorted by share who agree)

Legend:
- Don't know / not applicable
- Strongly disagree
- Somewhat disagree
- Neutral
- Somewhat agree
- Strongly agree

	UK	US	France	India	Germany	South Korea	ASEAN	Other Europe	Australia	Japan
Somewhat disagree	6%	5%	9%	8%	9%	8%	6%	9%	13%	14%
Neutral	27%	30%	27%	29%	30%	31%	33%	33%	34%	42%
Somewhat agree	43%	36%	44%	26%	41%	39%	39%	43%	39%	32%
Strongly agree	24%	29%	20%	35%	20%	21%	20%	14%	14%	

Responses by industry (sorted by share who agree)

	Financial services	Telecommunications	Healthcare and pharma	Retail and consumer goods	Manufacturing	Energy, oil and gas, utilities	Media and entertainment	Public sector
Somewhat disagree	6%	8%	7%	6%	10%	13%	8%	12%
Neutral	23%	27%	29%	34%	30%	30%	42%	39%
Somewhat agree	35%	36%	45%	35%	36%	41%	40%	40%
Strongly agree	36%	27%	18%	25%	23%	15%	10%	9%

ECONOMIST IMPACT

Most organisations want to incorporate their data into GenAI models

"My organisation sees **significant potential** in integrating GenAI models **with its own proprietary data**"

Responses by country/region (sorted by share who agree)

Responses by industry (sorted by share who agree)

Legend:
- Don't know / not applicable (grey)
- Strongly disagree (dark red)
- Somewhat disagree (red)
- Neutral (orange)
- Somewhat agree (light blue)
- Strongly agree (dark blue)

Responses by country/region:

	US	UK	Germany	Japan	Other Europe	India	France	ASEAN	South Korea	Australia
Somewhat disagree			10%	11%	7%	6%	10%	11%	7%	6%
Neutral	16%	26%	22%	23%	28%	30%	28%	27%	31%	33%
Somewhat agree	51%	47%	47%	51%	49%	34%	38%	43%	37%	45%
Strongly agree	31%	24%	20%	15%	15%	29%	24%	19%	24%	15%

Responses by industry:

	Financial services	Telecommunications	Retail and consumer goods	Healthcare and pharma	Manufacturing	Public sector	Energy, oil and gas, utilities	Media and entertainment
Somewhat disagree	17%	5%	11%	7%	9%		14%	6%
Neutral		22%	18%	26%	25%	34%	31%	39%
Somewhat agree	38%	46%	47%	45%	44%	53%	42%	44%
Strongly agree	42%	26%	23%	21%	22%	10%	13%	11%

Question: To what extent do you agree or disagree with the following statements about AI and generative AI (GenAI) at your organisation? (Statement: "My organisation sees significant potential in integrating GenAI models with its own proprietary data")
Sample pool: All respondents
ASEAN includes Malaysia, Philippines, Singapore and Thailand. Other Europe includes Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden.

ECONOMIST IMPACT

Few respondents are confident about the quality of their GenAI models

"I have concerns that GenAI applications at my organisation are not production-quality ready"

Responses by country/region (sorted by share who agree, where red is better)

Responses by industry (sorted by share who agree, where red is better)

Legend:
- Don't know / not applicable (grey)
- Strongly disagree (dark red)
- Somewhat disagree (orange/red)
- Neutral (yellow/orange)
- Somewhat agree (light blue)
- Strongly agree (dark blue)

Responses by country/region

	India	Japan	South Korea	ASEAN	US	Australia	France	Germany	UK	Other Europe
Strongly disagree	6%				8%		5%		9%	9%
Somewhat disagree	18%	14%	29%	29%	31%	34%	25%	35%	31%	38%
Neutral	19%	33%	24%	27%	20%	24%	32%	27%	29%	25%
Somewhat agree	31%	38%	26%	31%	29%	28%	22%	24%	22%	20%
Strongly agree	26%	11%	19%	10%	11%	11%	16%	11%	9%	8%

Responses by industry

	Telecommunications	Financial services	Retail and consumer goods	Media and entertainment	Manufacturing	Energy, oil and gas, utilities	Healthcare and pharma	Public sector
Strongly disagree	7%	10%	6%	26%	33%	29%	5%	6%
Somewhat disagree	27%	26%	30%	30%			31%	30%
Neutral	18%	19%	22%	30%	23%	31%	30%	35%
Somewhat agree	29%	25%	28%	32%	28%	26%	23%	24%
Strongly agree	19%	20%	14%	10%	12%	10%	12%	6%

Question: To what extent do you agree or disagree with the following statements about AI and generative AI (GenAI) at your organisation? (Statement: "My organisation sees significant potential in integrating GenAI models with its own proprietary data")
Sample pool: All respondents
ASEAN includes Malaysia, Philippines, Singapore and Thailand. Other Europe includes Denmark, Finland, Italy, Netherlands, Norway, Spain and Sweden.

ECONOMIST IMPACT

Section 3: Scaling GenAI and choosing models

Data by company size and country

The largest companies are poised to catch up at scaling GenAI

"Very large" companies (US$10bn+ revenue) have been outpaced by "large" companies (US$1bn-10bn) when it comes to expanding and scaling GenAI.

This may reflect very large companies' (i) organisational inertia and/or (ii) preference for more complex models (see next slide).

However, this is set to change over the next three years, as very large companies plan to build up momentum and scale the massive number of new GenAI projects that they are currently deploying.

Current status of GenAI, by company size

■ Exploring/piloting ■ Deployment and productionising ■ Expanding and scaling production

Medium orgs	49%	34%	17%
Large orgs	23%	40%	37%
Very large orgs	9%	64%	27%

0% 25% 50% 75% 100%
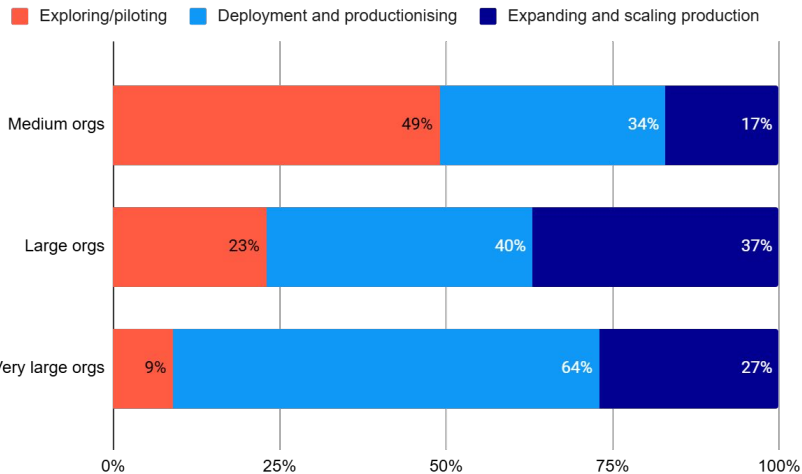
Predicted status in three years, by company size
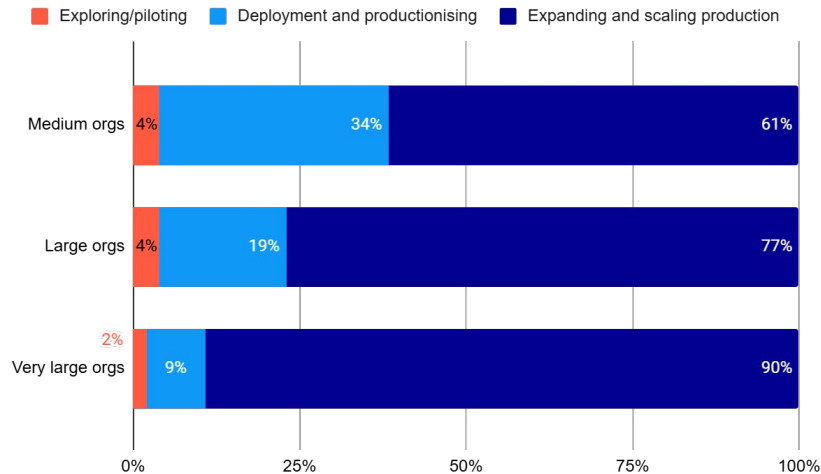
■ Exploring/piloting ■ Deployment and productionising ■ Expanding and scaling production

Medium orgs	4%	34%	61%
Large orgs	4%	19%	77%
Very large orgs	2%	9%	90%

0% 25% 50% 75% 100%

ECONOMIST IMPACT

Question: How far along is your organisation in its use of GenAI across internal and external use cases? Select one answer in each row.
Sample pool: Technical executives

The largest companies are the most likely to integrate their data into GenAI models

Larger companies are usually more likely to use GenAI, regardless of the acquisition strategy.

However, they are *significantly* more likely to integrate their data and know-how into these models—whether through fine-tuning pre-trained models or by training their own custom model.

Smaller organisations show a preference for GenAI embedded in other software packages.

GenAI acquisition strategies

Share of organisations currently using (in production) each type of GenAI model	Organisation size		
	Medium	**Large**	**Very large**
Bring your own AI: facilitate and govern employees' use of public models	14%	22%	16%
Licence or subscribe to a commercial version of a public model	18%	29%	29%
Serve or deploy an open-source model	18%	28%	29%
Use AI embedded in other software packages	31%	39%	41%
Fine-tune and engineer pre-trained open-source models	21%	29%	40%
Build applications by using APIs to connect to proprietary models	22%	32%	27%
Train a custom model based on your own data or third-party data	22%	32%	44%

Medium orgs: US$500m-1bn in revenue
Large orgs: US$1bn-10bn in revenue
Very large orgs: US$10bn+ in revenue

Question: To what extent is your organisation using the following GenAI acquisition strategies?
Sample pool: Technical executives

ECONOMIST IMPACT

The scaling up of GenAI is occurring at different rates around the world

Across countries, about 70% of organisations have moved past the pilot stage.

Progress is much more varied when it comes to scaling up GenAI.

In India, the majority of companies (56%) are scaling up GenAI, often adopting public models (see next slide).

In Japan, just 6% are scaling up, which may reflect the country's preference for customised models (see next slide).

Stage of GenAI implementation, by country
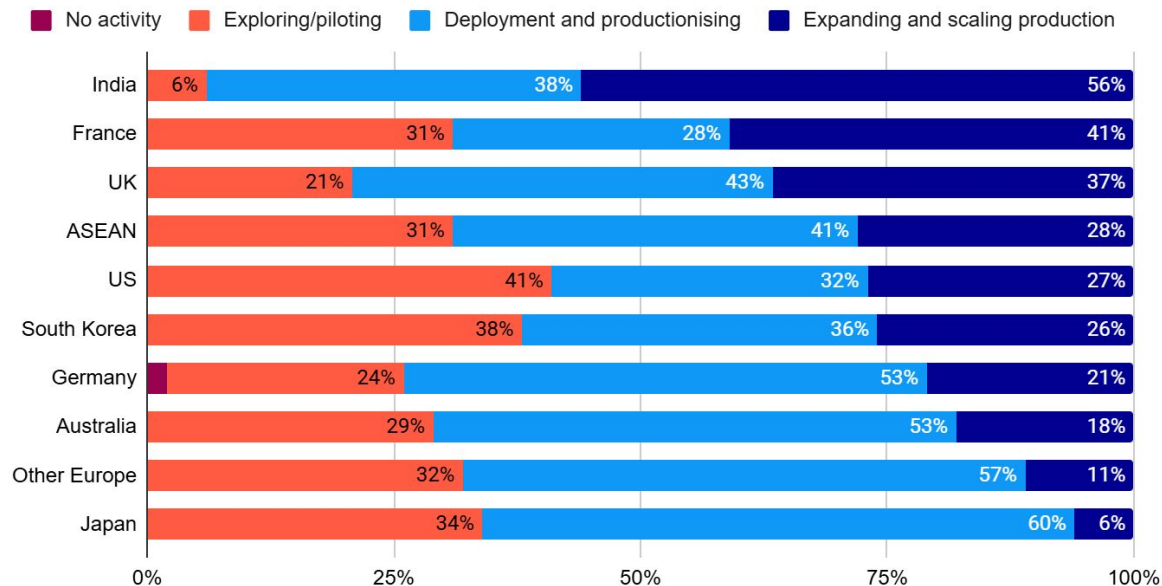
Legend: No activity · Exploring/piloting · Deployment and productionising · Expanding and scaling production

Country	Exploring/piloting	Deployment and productionising	Expanding and scaling production	No activity
India	6%	38%	56%	
France	31%	28%	41%	
UK	21%	43%	37%	
ASEAN	31%	41%	28%	
US	41%	32%	27%	
South Korea	38%	36%	26%	
Germany	24%	53%	21%	
Australia	29%	53%	18%	
Other Europe	32%	57%	11%	
Japan	34%	60%	6%	

Question: How far along is your organisation in its use of GenAI across internal and external use cases?
Sample pool: Technical executives

ECONOMIST IMPACT

GenAI model preferences vary across countries

Most countries are taking advantage of AI embedded in existing software as a way to scale up GenAI.

Emerging markets in ASEAN and India are frequently taking advantage of public and open-source models.

Japan stands out for its heavy use (49%) of custom models based on proprietary data.

Share of organisations currently using (in production) each type of GenAI model	N. America	Asia-Pacific					Europe			
	US	Australia	India	Japan	South Korea	ASEAN	France	Germany	UK	Other Europe
Bring your own AI: facilitate and govern employees' use of public models	10%	15%	33%	10%	5%	25%	29%	18%	16%	13%
Licence or subscribe to a commercial version of a public model	31%	24%	35%	15%	24%	25%	17%	26%	29%	20%
Serve or deploy an open-source model	29%	10%	39%	18%	19%	25%	26%	21%	24%	26%
Use AI embedded in other software packages	40%	40%	33%	40%	33%	34%	39%	42%	43%	24%
Fine-tune and engineer pre-trained open-source models	25%	34%	32%	25%	38%	29%	23%	32%	29%	28%
Build applications by using APIs to connect to proprietary models	32%	26%	40%	25%	21%	28%	21%	18%	29%	22%
Train a custom model based on your own data or third-party data	32%	29%	31%	49%	31%	28%	24%	34%	31%	29%

Question: To what extent is your organisation using the following GenAI acquisition strategies?
Sample pool: Technical executives

ECONOMIST IMPACT

Key performance indicators (KPIs) and post-impact evaluations are the most common ways to build a case for AI investment

KPIs are cited as the most frequent contributing factor by most companies.

Larger companies are relatively more likely to use post-impact evaluations to justify further AI investment.

Smaller companies—which may not have as much experience with AI—are relatively more likely to weigh alignment with strategic goals or run advanced modelling/scenarios.

Actions used when building a business case to justify further AI investment		Organisation size		
		Medium	Large	Very large
1	Tracking key performance indicators (eg, revenue per worker, customer retention, operational costs)	63%	50%	69%
2	Conducting post-impact evaluations (ie, assessing the impact after deployment)	55%	53%	66%
3	Assessing alignment with strategic goals	51%	49%	48%
4	Assessing the scope of executive sponsorship for AI	35%	44%	38%
5	Benchmarking against industry or other established standards	35%	38%	43%
6	Assessing the potential for competitive differentiation	35%	38%	37%
7	Conducting pre-impact evaluations (ie, estimating potential benefits before deployment)	37%	39%	31%
8	Running advanced modelling, scenarios or simulations	38%	35%	32%
9	Assessing external demand for AI (eg, from suppliers, partners, regulators)	33%	38%	35%

Medium orgs: US$500m-1bn in revenue
Large orgs: US$1bn-10bn in revenue
Very large orgs: US$10bn+ in revenue

Question: Which of the following actions does your organisation take when building a business case to justify further investment in AI projects? Please select all that apply.
Sample pool: Technical executives

ECONOMIST IMPACT

Section 4: Practitioner insights

Views from data scientists, enterprise architects and data engineers

Cost and talent shortages are holding back enterprise GenAI

For smaller organisations, quality/accuracy is the overriding concern

Biggest limitations/challenges in your organisation's current approach to GenAI	Organisation size		
	Medium	Large	Very large
1 Cost of building GenAI solutions	36%	46%	46%
2 Shortage of talent and expertise in GenAI solutions	31%	46%	46%
3 Quality and accuracy of the output	49%	29%	29%
4 Governance and risks to data security	31%	34%	34%
5 Integrating GenAI solutions with existing systems and workflows	28%	27%	27%
6 Access to high-quality training data	23%	29%	29%
7 Bias of the output	21%	20%	20%
8 Scalability of GenAI solutions	28%	17%	17%
9 Demonstrating clear value (return on investment) of GenAI projects	21%	20%	20%
10 Methods for evaluating GenAI models or apps	13%	12%	12%

Medium orgs: US$500m-1bn in revenue; n=39 respondents (insights are directional only)
Large orgs: US$1bn-10bn in revenue; n=40 respondents (insights are directional only)
Very large orgs: US$10bn+ in revenue; n=41 respondents (insights are directional only)

Question: What are the biggest limitations/challenges of your organisation's current approach to GenAI? Select up to three.
Sample pool: Data scientists who use or plan to use GenAI

Among data scientists at large and very large companies, the biggest challenges for GenAI are centred around cost and talent.

Quality/accuracy of GenAI output is less of a challenge for larger companies, but it remains a significant limitation for 49% of smaller organisations. Scalability also presents outsize challenges.

Organisations of all sizes report concerns about AI and data governance.

ECONOMIST IMPACT

Larger firms are somewhat likelier to customise LLMs with their data

Smaller organisations pre-train LLMs more often

Nature of current GenAI projects among data scientists	Organisation size		
	Medium	Large	Very large
1 Augmenting an LLM's data source with enterprise/proprietary data (eg, RAG)	46%	75%	51%
2 Fine-tuning the parameters of an LLM with enterprise data	49%	40%	59%
3 Using an LLM as it is (without contextual enterprise data)	49%	43%	44%
4 Pre-training an LLM from scratch using enterprise data	41%	35%	29%
5 Other (eg, augmenting with synthetic data or other novel tools/functions)	0%	13%	10%

Medium orgs: US$500m-1bn in revenue; n=39 respondents (insights are directional only)
Large orgs: US$1bn-10bn in revenue; n=40 respondents (insights are directional only)
Very large orgs: US$10bn+ in revenue; n=41 respondents (insights are directional only)

Data scientists' typical GenAI projects do not vary substantially by organisation size.

However, larger organisations do show a somewhat greater tendency to either fine-tune a large language model's (LLM) parameters or augment its data source with their proprietary data.

Meanwhile, smaller organisations are slightly more likely to pre-train an LLM from scratch.

Question: Which of the following are the key components of the GenAI project(s) that you personally are working on? Select all that apply.
Sample pool: Data scientists who use or plan to use GenAI

ECONOMIST IMPACT

More than 80% of data science teams are using AI for coding

Use of AI assistants for coding

■ No ■ No, but planning to explore it ■ Yes, occasionally ■ Yes, frequently ■ Don't know / not applicable

Do you or your team use any kind of AI assistant for code generation when writing code?
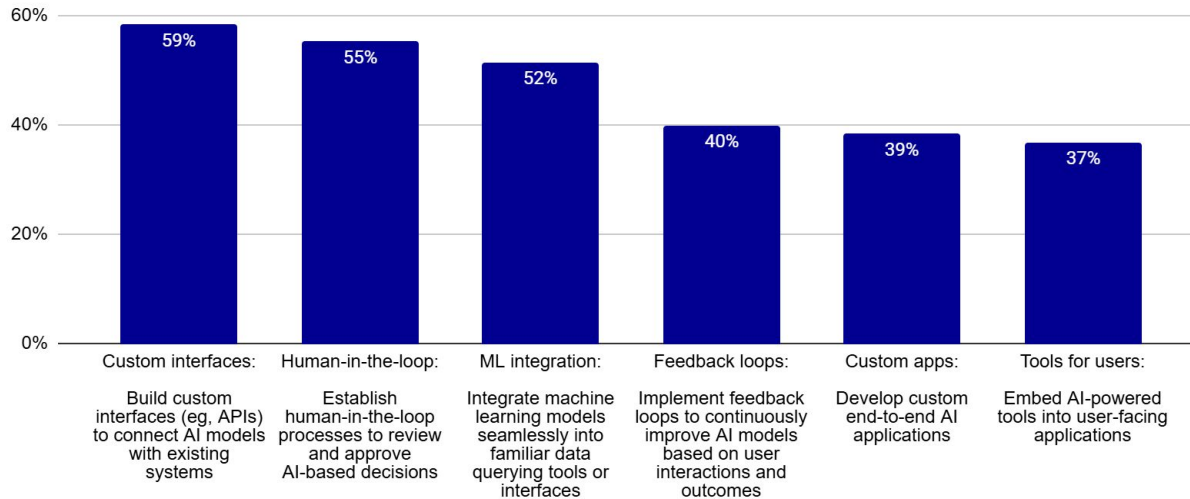
2% | 12% | 54% | 28% | 4%

0%   25%   50%   75%
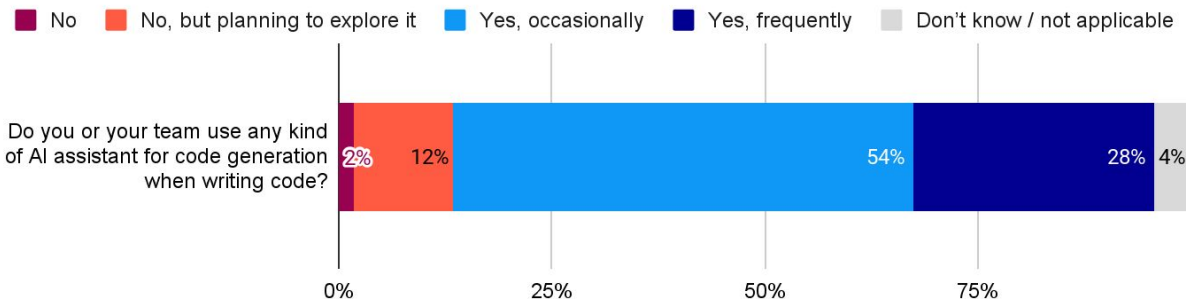
Data scientists and their teams have already widely adopted AI assistants for coding.

Nearly all respondents are planning to explore this in the future.

Question: Do you or your team use any kind of AI assistant for code generation when writing code?
Sample pool: Data scientists who use or plan to use GenAI

ECONOMIST IMPACT

Nearly 60% of organisations plan to build custom interfaces to integrate AI insights across the business

Plans for integrating AI-generated insights across the business

How, if at all, does your organisation plan to integrate AI-generated insights and decisions into its existing business processes and workflows?
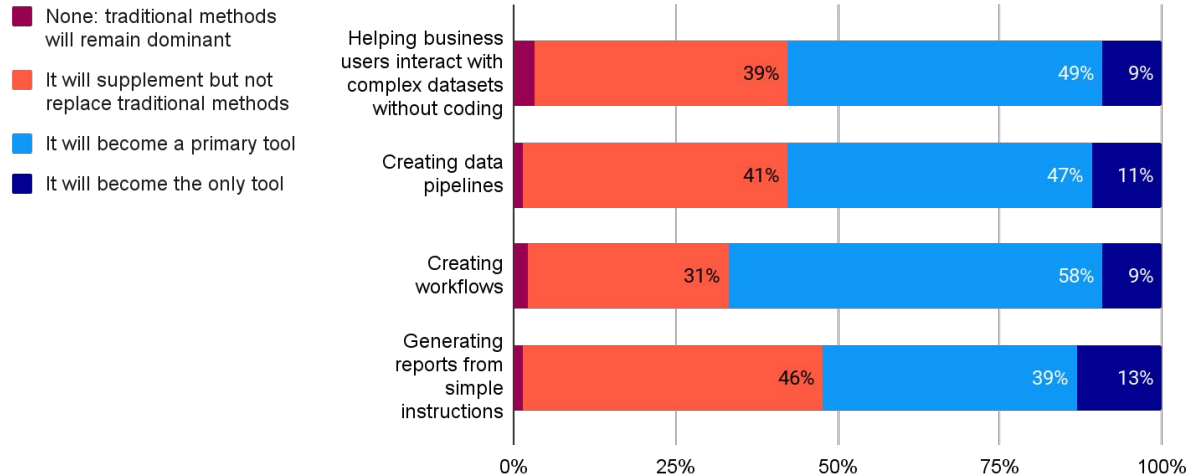

Bar chart showing:
- Custom interfaces: Build custom interfaces (eg, APIs) to connect AI models with existing systems — 59%
- Human-in-the-loop: Establish human-in-the-loop processes to review and approve AI-based decisions — 55%
- ML integration: Integrate machine learning models seamlessly into familiar data querying tools or interfaces — 52%
- Feedback loops: Implement feedback loops to continuously improve AI models based on user interactions and outcomes — 40%
- Custom apps: Develop custom end-to-end AI applications — 39%
- Tools for users: Embed AI-powered tools into user-facing applications — 37%

To make it easier for business users to access AI-generated insights, enterprise architects say that their organisations are prioritising custom interfaces (eg, through APIs) and direct integration of machine learning models into data tools.

In addition, human-in-the-loop processes are becoming a common way for businesses to keep an eye on AI-based decisions.

Question: How, if at all, does your organisation plan to integrate AI-generated insights and decisions into its existing business processes and workflows? Select all that apply.
Sample pool: Enterprise architects

ECONOMIST IMPACT

Natural language processing (NLP) is expected to revolutionise data intelligence and data architecture
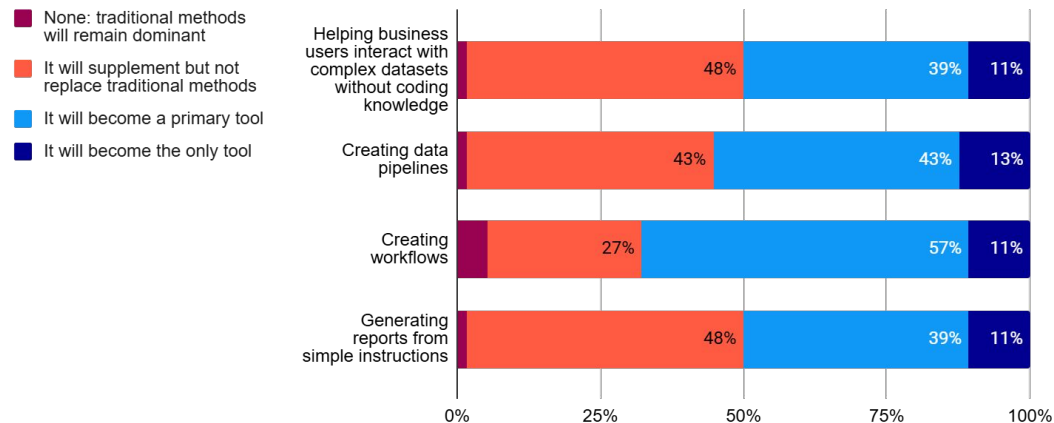
Expected role of NLP in key business functions

- None: traditional methods will remain dominant
- It will supplement but not replace traditional methods
- It will become a primary tool
- It will become the only tool

Helping business users interact with complex datasets without coding: 39% | 49% | 9%

Creating data pipelines: 41% | 47% | 11%

Creating workflows: 31% | 58% | 9%

Generating reports from simple instructions: 46% | 39% | 13%

0% 25% 50% 75% 100%

Enterprise architects predict that NLP will become the primary (or only) tool that employees rely on to engage in key functions related to data intelligence and data architecture.

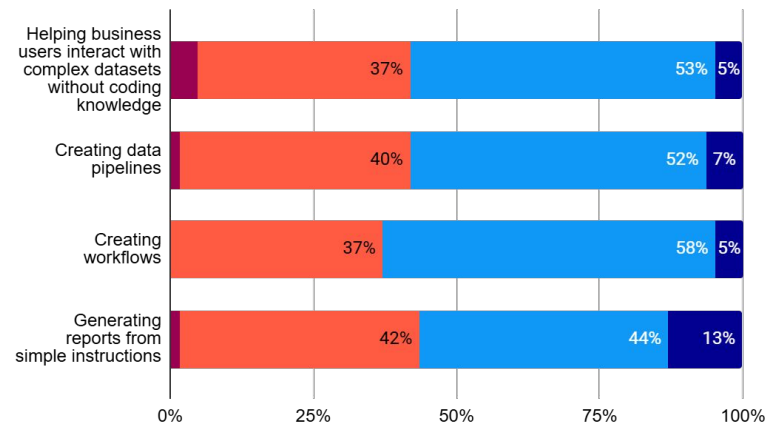In all cases, only a small sliver of respondents think traditional methods will remain dominant.

Question: Over the next three years, what role do you believe natural language processing will play in the following areas?
Sample pool: Enterprise architects

ECONOMIST IMPACT

Natural language processing (NLP) is expected to revolutionise data intelligence and data architecture [regional findings]

Expected role of NLP in key business functions

APAC respondents (incl. ASEAN)*

European respondents**

Legend:
- None: traditional methods will remain dominant
- It will supplement but not replace traditional methods
- It will become a primary tool
- It will become the only tool

APAC respondents (incl. ASEAN)*

Function	It will supplement but not replace traditional methods	It will become a primary tool	It will become the only tool
Helping business users interact with complex datasets without coding knowledge	48%	39%	11%
Creating data pipelines	43%	43%	13%
Creating workflows	27%	57%	11%
Generating reports from simple instructions	48%	39%	11%

European respondents**

Function	It will supplement but not replace traditional methods	It will become a primary tool	It will become the only tool
Helping business users interact with complex datasets without coding knowledge	37%	53%	5%
Creating data pipelines	40%	52%	7%
Creating workflows	37%	58%	5%
Generating reports from simple instructions	42%	44%	13%

Question: Over the next three years, what role do you believe natural language processing will play in the following areas?
Sample pool: Enterprise architects
* Sample size = 56; insights are suggestive/directional only
** Sample size = 62; insights are suggestive directional only

ECONOMIST IMPACT

Security and governance are the top challenges for data engineers

Most challenging aspects of data engineering	Organisation size		
	Medium	Large	Very large
1 Security and governance	50%	42%	57%
2 Ensuring high data quality	41%	40%	48%
3 Observability and monitoring	39%	36%	44%
4 Troubleshooting data pipeline issues	32%	38%	41%
5 Deployment, continuous integration and continuous delivery/deployment, and automation	41%	33%	35%
6 Dealing with stream data and/or real-time data processing	34%	40%	28%
7 Data orchestration	21%	27%	15%
8 Data ingestion	23%	20%	20%

Medium orgs: US$500m-1bn in revenue; n=44 respondents (insights are directional only)
Large orgs: US$1bn-10bn in revenue; n=45 respondents (insights are directional only)
Very large orgs: US$10bn+ in revenue; n=46 respondents (insights are directional only)

Regardless of company size, data engineers say that security/ governance is the most challenging aspect of data engineering.

It presents particular difficulties at the "very large" firms.

Issues faced by "large" and "medium" organisations can vary slightly, but all companies largely share the same types of data engineering challenges.

Question: Which of the following are the most challenging aspects of data engineering at your organisation? Select up to three.
Sample pool: Data engineers

ECONOMIST IMPACT

Larger organisations are highly dependent on data engineers

Dependence on data engineers to prepare data and manage pipelines, by organisation size

■ **Very little dependency:**

Every data practitioner (eg, data analysts or data scientists) can manage the data pipelines they use or self-serve through an automated system without the direct involvement of a data engineer.

■ **Some dependency:**

Data engineers or a data engineering team are involved in at least some aspects of data pipeline creation or management.

■ **Significant dependency:**

Data engineers or a data engineering team fully own every aspect of data pipeline creation and management. Other practitioners must request the creation of pipelines.
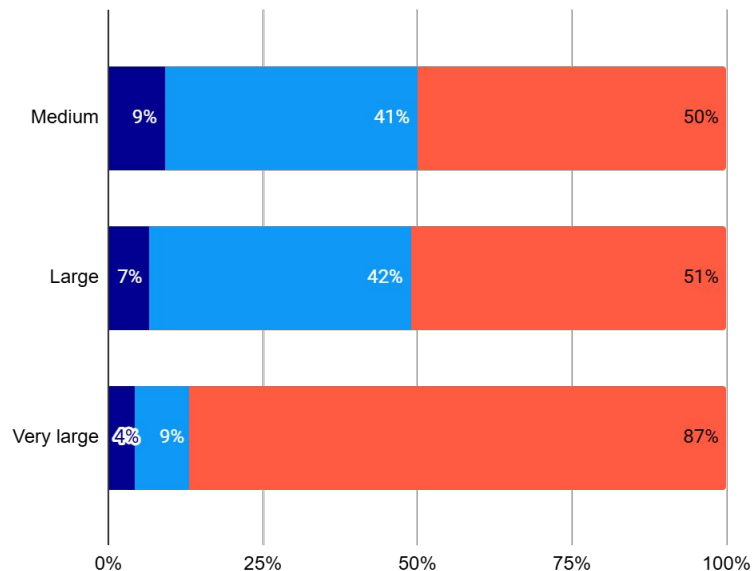
Medium: 9% | 41% | 50%
Large: 7% | 42% | 51%
Very large: 4% | 9% | 87%

Medium orgs: US$500m-1bn in revenue; n=44 respondents (insights are directional only)
Large orgs: US$1bn-10bn in revenue; n=45 respondents (insights are directional only)
Very large orgs: US$10bn+ in revenue; n=46 respondents (insights are directional only)

Question: How much does your organisation depend upon data engineers to prepare data and manage data pipelines (eg, extract, transform, load)?
Sample pool: Data engineers

Nearly 90% of "very large" organisations cite significant dependency on data engineering teams, which fully own every aspect of pipeline creation and management.

Meanwhile, among "medium" and "large" organisations, data engineering teams are more likely to be only somewhat involved, with data practitioners responsible for managing or self-serving in some cases.

ECONOMIST IMPACT

The best ways to improve productivity among data engineers differ for larger vs smaller organisations

Which of the following do you believe will have the biggest benefits for your data engineering team's productivity?	Organisation size		
	Medium	Large	Very large
1 Simplifying data source connections for ingesting data	57%	49%	33%
2 Using GenAI tools for coding assistance	55%	40%	41%
3 Using a single unified solution instead of multiple tools	46%	40%	50%
4 Better visibility into data pipelines to find and fix issues	46%	47%	44%
5 Implementing pipelines that handle batch and stream processing together	32%	38%	41%
6 Using serverless computing to save time when managing compute resources	32%	33%	39%
7 Using low-code or no-code tools for creating and managing data pipelines	21%	31%	28%

Medium orgs: US$500m-1bn in revenue; n=44 respondents (insights are directional only)
Large orgs: US$1bn-10bn in revenue; n=45 respondents (insights are directional only)
Very large orgs: US$10bn+ in revenue; n=46 respondents (insights are directional only)

"Very large" organisations would see the most benefits from single unified solutions and better pipeline visibility.

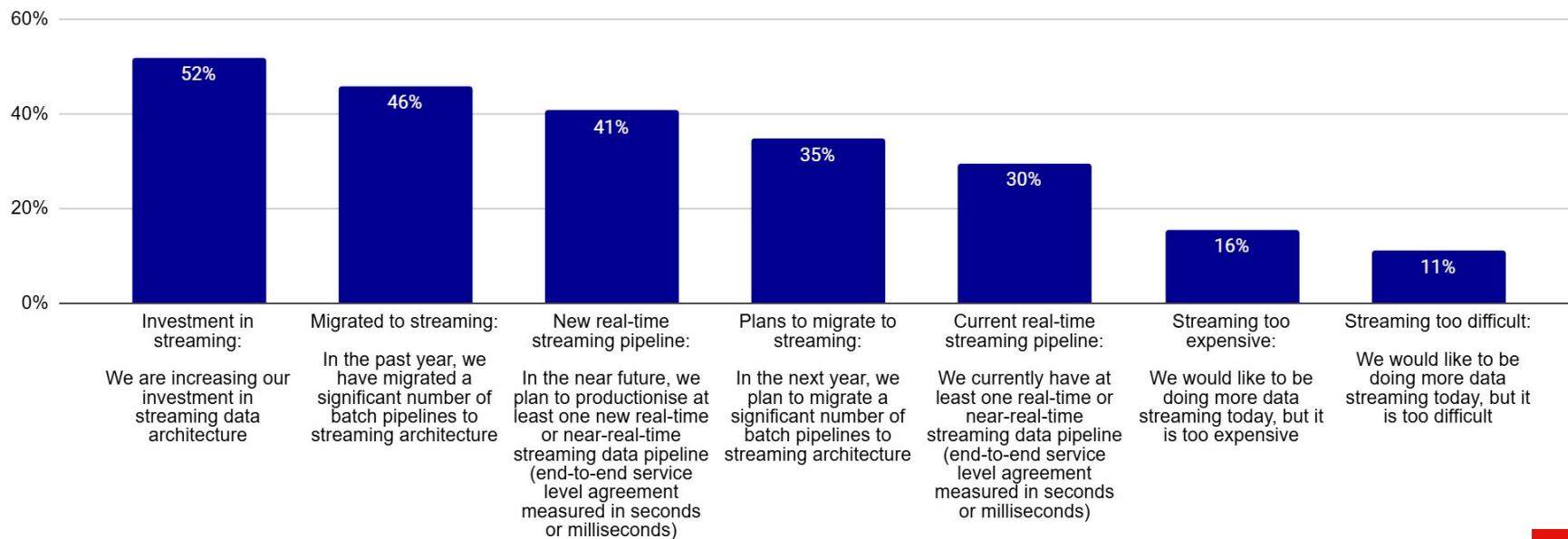"Medium" organisations would see the greatest benefits from simplifying data source connections and integrating GenAI into coding.

"Large" organisations share traits of both and can benefit from a range of solutions across the board.

Question: Which of the following do you believe will have the biggest benefits for your data engineering team's productivity?
Sample pool: Data engineers

ECONOMIST IMPACT

Data engineers are prioritising streaming pipelines

Organisations are investing in, migrating to and building new real-time streaming pipelines

Which of the following statements apply to your team's implementation of data pipelines today with regard to batch vs streaming methods?

Category	Value
Investment in streaming: We are increasing our investment in streaming data architecture	52%
Migrated to streaming: In the past year, we have migrated a significant number of batch pipelines to streaming architecture	46%
New real-time streaming pipeline: In the near future, we plan to productionise at least one new real-time or near-real-time streaming data pipeline (end-to-end service level agreement measured in seconds or milliseconds)	41%
Plans to migrate to streaming: In the next year, we plan to migrate a significant number of batch pipelines to streaming architecture	35%
Current real-time streaming pipeline: We currently have at least one real-time or near-real-time streaming data pipeline (end-to-end service level agreement measured in seconds or milliseconds)	30%
Streaming too expensive: We would like to be doing more data streaming today, but it is too expensive	16%
Streaming too difficult: We would like to be doing more data streaming today, but it is too difficult	11%

Question: Which of the following statements apply to your team's implementation of data pipelines today with regard to batch vs streaming methods?
Sample pool: Data engineers

ECONOMIST IMPACT