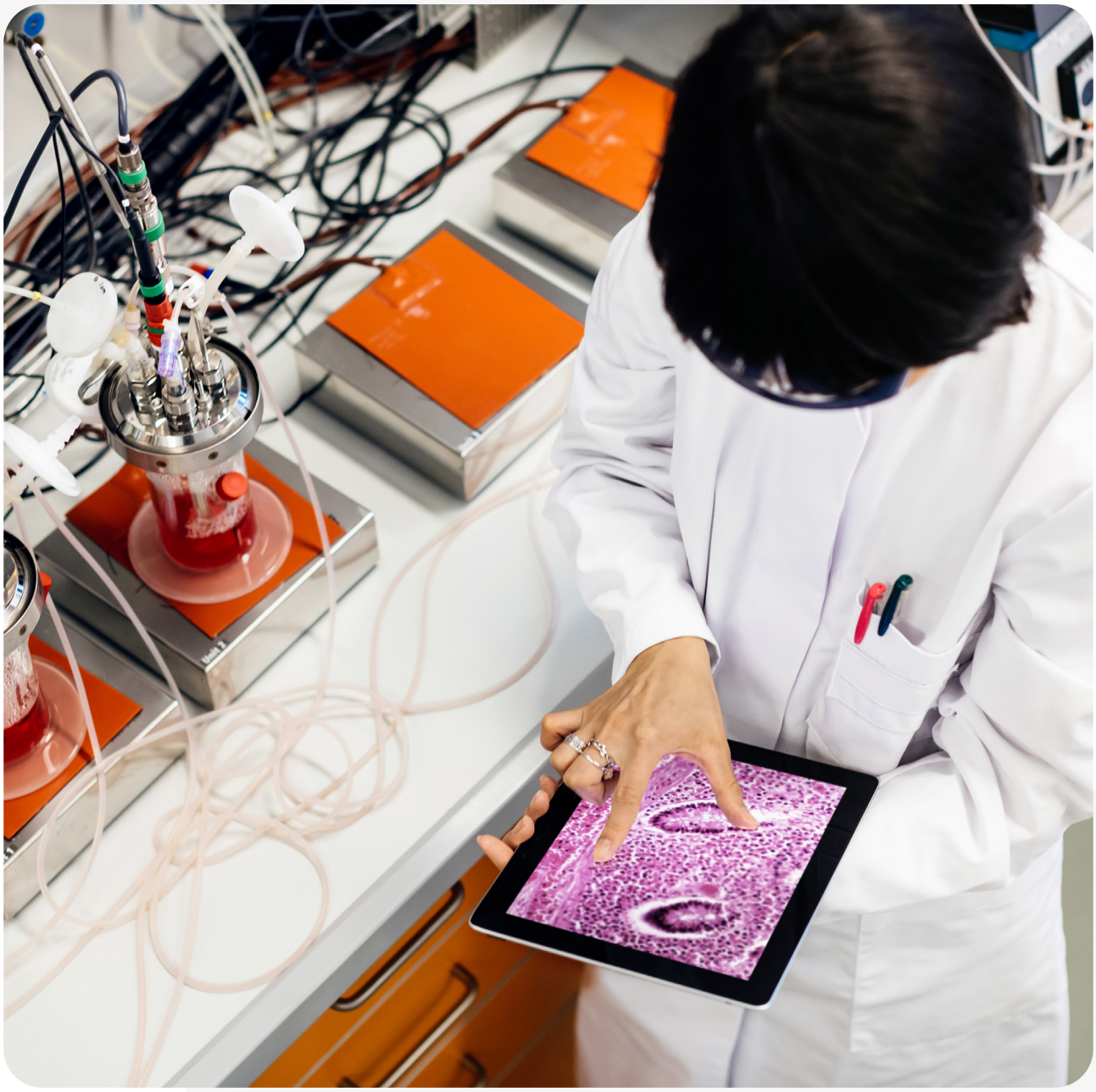
Insights: Corporate researcher attitudes toward AI



Key Findings

ELSEVIER

Contents

Introduction

> "I can't think of anything that's been more powerful since the desktop computer."

Michael Carbin, Associate Professor, MIT, and Founding Advisor, MosaicML[1]

Organizations around the world are already embracing new AI-powered technologies to improve efficiency and boost innovation. According to an MIT Technology Review Insights report, 94% of organizations were using AI in 2022, and 14% aimed to achieve "enterprise-wide" AI by 2025.[1]

What is GenAI?

GenAI, short for generative artificial intelligence, refers to a category of artificial intelligence systems and models that have the ability to generate data, content, or other outputs that are similar to those created by humans. These AI systems are designed to produce new and original content rather than simply process or analyze existing data.[2]

Since the launch of GenAI applications like ChatGPT and Bard in late 2022, the picture is changing rapidly. In order to ensure the technology has a positive impact on corporate research, it's important to monitor the views of those who could be using it.

In the research Insights 2024: Attitudes toward AI, we aimed to do this by surveying nearly 3,000 people working in research (including leaders and corporate researchers) and in health (clinicians) from around the world.

The research examines the attitudes towards artificial intelligence (AI), including generative AI (GenAI), covering its attractiveness, perceived impact, the benefits to them and wider society, the degree of transparency to be comfortable using tools that capitalize on the technology, and the challenges they see with AI. It also looks at the current usage, and what respondents think would help them trust AI tools.

The full report explores these themes across three chapters and covers the views of all respondents. You can read a summary of the corporate researchers' views here.

Online survey

Insights 2024:
Attitudes toward AI

When: December 2023 to February 2024
What: 15-minute online quantitative survey
Who: 2,999 respondents from across 123 countries

Key Findings based on 295 corporate researchers

Results: To improve representativeness of our sample, we weighted responses at the regional level against OECD researcher populations.

Highlights

Corporate researchers are familiar with AI tools, and most have already used them, many for work purposes. Most of those who have not yet used AI expect to do so in the coming few years.

97% Have heard of AI (including GenAI) – subsequent statistics exclude the 3% not familiar with AI

58% Of those aware of AI have used it

38% Have used it for work purposes

16% Are very familiar with AI and have used it a lot

76% Of those who haven't yet used AI expect to do so within two to five years

The overall view is optimistic: corporate researchers believe AI will bring a range of benefits that will help...

96% Accelerate knowledge discovery

95% Increase their work efficiency

93% Provide cost savings to institutions and businesses

Corporate researchers think AI will also...

71% Have a transformative or significant impact on their area of work

Corporate researchers are cautious, however, in many areas; their employers are too, with more than half having restrictions in place.

96% Believe AI could be used for misinformation

85% Concerned about the ethical implications of AI on their area of work

84% Think AI may cause critical errors or mishaps

55% Prohibited by their employers from uploading confidential information to public generative AI platforms

39% Consider the lack of regulation/governance a top-three disadvantage of AI

Specific actions can help increase trust, and by taking and communicating them, providers of AI tools can increase users' comfort.

81% Expect GenAI to always be paired with human expertise

77% Expect to be informed if the tools they use depend on GenAI

60% Say keeping inputs confidential would strongly increase their trust in an AI tool

41% Say robust governance on data would increase their comfort using an AI tool

Future uses of trusted AI tools among those who believe AI can benefit their work: likelihood of using a reliable and secure AI assistant to...

generate a synthesis of research articles in an area (which includes references)
– 98% of corporate researchers

extract and summarize scientific data from different sources (databases, internet, unstructured text)
– 96% of corporate researchers

review prior studies, identify gaps in knowledge and generate a new research hypothesis for testing
– 93% of corporate researchers

Chapter 1:

The current GenAI landscape

Explore the awareness, perceptions and usage of AI (including GenAI) among corporate researchers.

- 97% have heard of AI (including GenAI) – subsequent statistics exclude the 3% not familiar with AI
- 58% of those aware of AI have used it
- 38% have used it for work purposes
- 16% are very familiar with AI and have used it a lot
- 71% believe AI (including GenAI) will have a transformative or significant impact on their area of work
- 42% say AI is a welcome advancement; none say they see mostly drawbacks
- ChatGPT is by far the most well-known AI product (95%)
- 30% have used ChatGPT for work purposes
- 56% of those who have not used AI cite a lack of time as the reason
- 55% are prohibited by their employers from uploading confidential information to public generative AI platforms

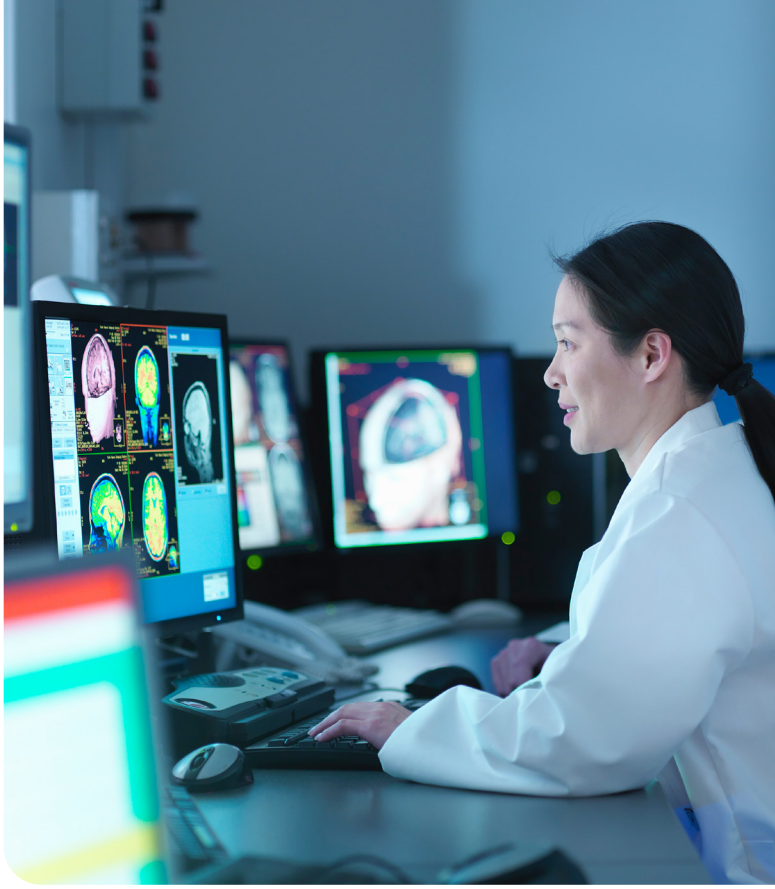
AI has great potential to support many functions in research and business, and corporate researchers and their organizations are harnessing its power. Almost all corporate researchers have heard of AI, and over half have experimented with it, 16% having worked with it a lot. Awareness is high and usage is substantial; corporate researchers now need time and permission to take their AI use to the next level.

Awareness of GenAI tools

Given its potential impact on productivity, AI is of great interest to many corporate research organizations for use in accelerating research and development (R&D). According to a McKinsey report, R&D is one of the four areas likely to account for three-quarters of the added value of GenAI, which could "deliver productivity with a value ranging from 10 to 15 percent of overall R&D costs."[3] The impact is expected to be particularly high in the pharmaceuticals industry, where GenAI could contribute $60 bn to $110 bn a year.[4]

To unlock this potential, organizations and their employees will need to get on board. The current survey shows that corporate researchers are aware and embracing the technology already: 97% have at least heard of AI, and 58% have used AI tools.

Extensive usage is higher among corporate researchers (16%) than other groups, such as clinicians (8%) and researchers more broadly (14%). The rate is highest in APAC (19%) and North America (18%) among corporate researchers. This shows an upward trend: in Elsevier's 2022 *Research Futures 2.0* report, 8% of researchers were already using AI extensively in their research.[4]



Of the corporate researchers who are aware of AI, 95% have heard of ChatGPT, making it the most well-known AI product. This is followed by Bing Chat (58%), Bard (47%), MS Copilot (in Word, Excel, PPT) (35%) and Gemini (31%).

Levels of familiarity with AI (including GenAI)

	Corporate Researchers (n=306)	% Asia Pacific (n=87)	% Europe (n=110)	% North America (n=63)	% South America (n=34)	% Middle East & Africa (n=8)
Not at all familiar (never heard of it)	3	3	4	0	4	*Too few responses to break out*
A little familiar	32	33	30	22	34	
Somewhat familiar	49	44	52	59	47	
Very familiar (used it a lot)	16	19	13	18	15	
Total familiar	97%	97%	96%	100%	96%	-

EU SA

Significantly higher or lower than total

Significantly higher than Region (indicated by first two letters e.g. AP = APAC)

Asia Pacific = AP North America = NA Mid. East & Africa = MEA
Europe = EU South America = SA

Fig 1. **Question:** To what extent are you familiar with AI (including GenAI)?

Perceptions of GenAI

Overall, corporate researchers have a positive to neutral view of AI and GenAI, with none seeing mostly drawbacks. More than two-fifths (42%) see AI positively, ranging from 38% in North America to 50% in South America.

Overall feelings towards AI (including GenAI)

Fig 2. **Question:** What are your overall feelings about the impact of AI on your area of work?

Almost all (98%) corporate researchers think GenAI will have an impact on their work (the remaining 2% don't know). Almost one-third (28%) expect this impact to be transformative and 42% significant. The expectation of a transformative or significant impact is highest in APAC (78%) and lowest in Europe (62%), where 32% of respondents expect a partial change.

Expected level of impact of AI in your area of work

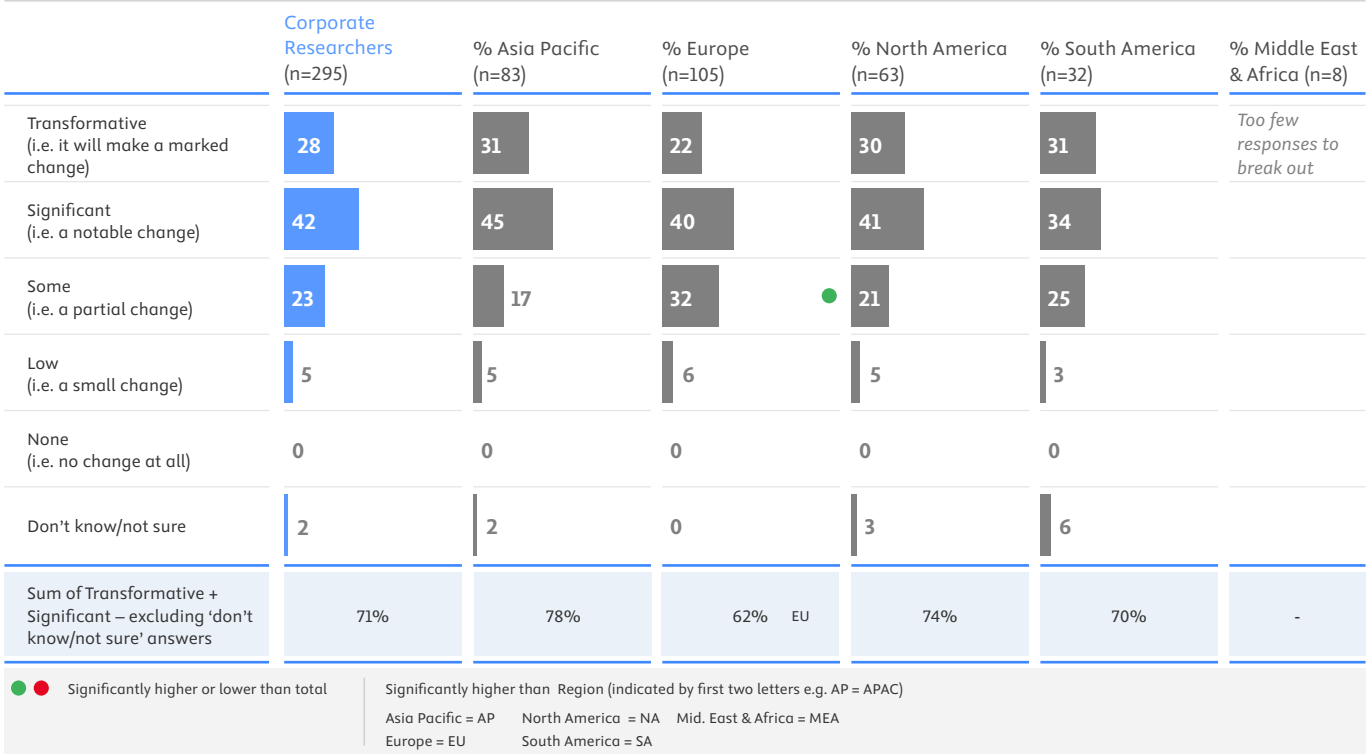


Fig 3. **Question:** What do you think will be the level of impact of AI (including GenAI) in your area of work in the near future?

GenAI in practice

Usage is relatively high among corporate researchers, with 38% globally having used AI for a specific work-related purpose and 20% for a non-work purpose. And 30% have used ChatGPT for work.

Of the corporate researchers who have not yet used AI, 56% say it's because they haven't yet had time to investigate or experiment with it. This is higher in Europe (65%) than APAC (49%). Other reasons include not yet having found a tool that meets their needs (24%) and having concerns about such tools (22%). Lack of budget to pay for AI products or features (19% globally) is least likely to be a problem in Europe (5%) and most likely in South America (28%).

Usage of AI and context for usage

Fig 4. **Question:** Have you used an AI (including generative AI) product or an AI feature on a product you use regularly?

For almost one-quarter (22%), restrictions – including from their organization – have prevented them from using AI tools. Over half (55%) are prohibited from uploading confidential information into public generative AI platforms, 29% are prohibited from using AI for certain purposes and 21% are prohibited from using certain tools. South America is least prohibitive, at 38%, 9% and 13% respectively. Globally, 2% are prohibited from using AI in any way.

This reflects a more general dilemma that businesses face with AI. In a global EY survey of corporate CEOs, 61% shared reservations around GenAI because of "the uncertainties surrounding the formulation and execution of an AI strategy," while 62% acknowledged the urgency of acting on GenAI, in this case to prevent their competitors from "gaining a strategic edge."[5]

Chapter 2:

A future lens on AI

Discover corporate researchers' expectations, including the potential benefits and drawbacks of AI technology.

- 96% think AI will help accelerate knowledge discovery
- 95% think AI will help increase their work efficiency
- 93% think AI will help provide cost savings to institutions and businesses
- 76% of those not using AI expect to use AI in the future AI in the next two to five years
- 39% consider the lack of regulation/governance a top-three disadvantage of AI
- 81% of corporate researchers expect GenAI to always be paired with human expertise
- 77% expect to be informed if the tools they use depend on GenAI

Corporate researchers are positive about the potential of AI tools, and most of those who are not yet using them expect to do so soon. Their positive outlook reflects the benefits they see, such as the impact AI might have on knowledge discovery and productivity. However, corporate researchers see some of the main disadvantages of AI being related to the current lack of governance and accountability, the potential for inaccuracy and the lack of privacy.

Perceived impact and benefits

The largely positive outlook corporate researchers have on AI and GenAI is affected by the benefits of the technology and the positive impact they expect it to have on their work. As we noted in chapter 1, 71% of corporate researchers believe AI will have a transformative or significant impact on their area of work (see figure 3).

Specifically, 96% think AI will accelerate knowledge discovery in the next two to five years. However, they don't expect this to be through the technology's impact on collaboration – nearly one-third don't think AI will increase collaboration at all.

Research: In the current study, 98% of respondents see benefit for AI in research-related activities, and 94% in using scientific content. Nearly all (95%) think AI would bring benefit to completing data science activities. This reflects previous evidence from Elsevier's 2022 *Research Futures 2.0* report, which showed the main use of AI in research was helping with analyzing and processing large data sets.[4]

Increased productivity: Corporate researchers expect AI to increase their work efficiency (95%), free their time for higher value work (85%) and save costs for their organizations (93%). This is reflected in research by Capgemini, in which executives predicted AI leading to operational improvements of 7-9% within three years.[6]

Research infrastructure: Most corporate researchers (91%) believe AI will rapidly increase the volume of scholarly and medical research. While 93% see benefit from AI in publishing and monitoring the impact of their research, fewer (80%) think AI will bring benefit for funding-related activities.

Positive impact of AI in various areas over the next two to five years

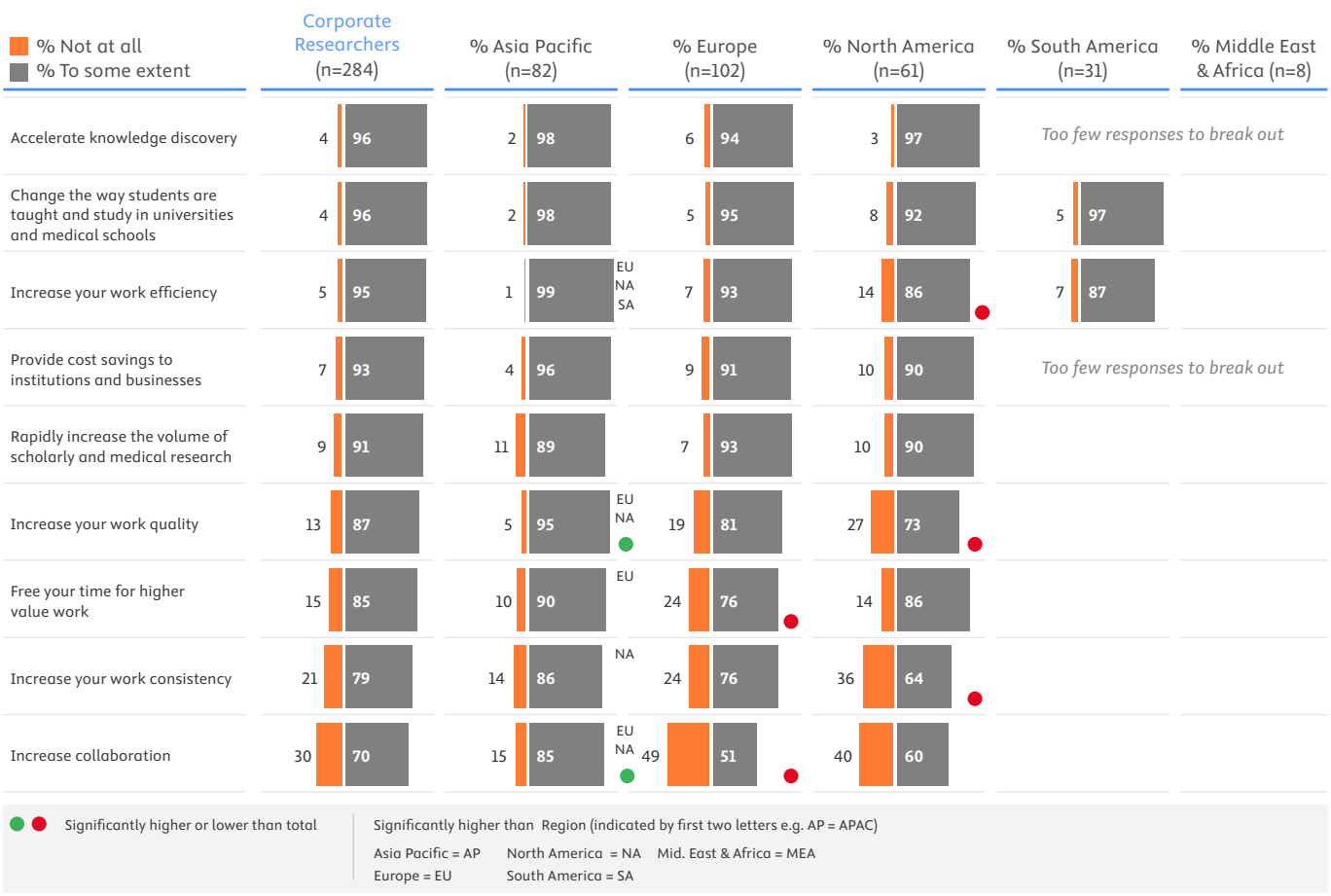


Fig 5. Question: Thinking about the impact AI will have on society and your work, to what extent do you think over the next 2 to 5 years it will...? A great extent, some extent, not at all.

Perceived drawbacks

Although corporate researchers' views are overall positive, they also see disadvantages of AI and GenAI, and they have identified a number of drawbacks of the technology.

Regulation and accountability: The most common top-three disadvantage of AI that corporate researchers see is its lack of regulation or governance (39%). Similarly, 30% consider lack of accountability over the outputs as a top-three disadvantage.

Privacy: Reflecting the current institutional bans on certain AI usage, 14% of corporate researchers consider the lack of confidentiality of GenAI inputs or prompts, and 14% of outputs, as a top-three disadvantage.

The human element: Some concerns are connected with the potential impact of AI on people and their behavior. In the current study, 76% of respondents think GenAI has the potential to erode human critical thinking skills. Over one-third (37%) consider the inability of AI to replace human creativity, judgment or empathy as a top-three disadvantage.

Accuracy and transparency: More than one-quarter (27%) of corporate researchers rank outputs being factually incorrect and/or non-sensical (hallucinations) as a top-three disadvantage of AI. For 23%, being too dependent on outdated data and/or information is a top-three disadvantage. And 16% rank the logic behind an output not being well described as a top drawback.

Perceived top-three disadvantages of AI (of those who have concerns)

	Corporate Researchers (n=253)	% Asia Pacific (n=68)	% Europe (n=93)	% North America (n=56)	% South America (n=27)	% Middle East & Africa (n=6)
Does not have enough regulation or governance	39	35	43	46	*Too few responses to break out*	
Unable to replace human creativity, judgment and/or empathy	37	43	30	36		
Lack of accountability over the use of generative AI outputs	30	34	32	25		
Outputs are factually incorrect and/or non-sensical (hallucinations)	27	29	23	34		
Outputs can be discriminatory or biased	25	18	29	32		
Too dependent on outdated data and/or information	23	25	24	18		
Lack of relevant expertise within organisation	16	18	15	11		
The logic behind an output is not well described	16	12	24	20		
Generative AI inputs/prompts are not confidential	14	13	15	11		
Generative AI outputs are not confidential	14	18	11	5		
Risks homogenizing culture via its use of global models	14	9	19	14		
Requires a lot of computer processing power	12	9	14	9		
Lack of permission to use data or information AI tools are trained on	9	7	9	13		
Generative AI discriminates against non-native English speakers	6	7	5	0		
Don't know/not sure	2	4	0	0		
Other	1	0	2	2		
None of the above	0	0	0	0		

Significantly higher or lower than total

Significantly higher than Region (indicated by first two letters e.g. AP = APAC)

Asia Pacific = AP North America = NA Mid. East & Africa = MEA
Europe = EU South America = SA

Fig 6. Question: What do you think are the top three disadvantages of AI? Select up to three.

Expectations

Corporate researchers are more likely than researchers generally to be aware of and use AI today (see full report for details), and they are also more likely to expect to use it in the near future: 76% of those who have not yet tried AI tools say they will do so in the coming two to five years.

Along with their predictions of future usage come specific expectations of the tools they might use. Corporate researchers' top expectation is that GenAI will always be paired with human expertise, with 81% globally agreeing with this. Most expect to be informed whether the tools they use depend on GenAI (77%) and if the peer review recommendations they receive about their manuscript used GenAI (76%).

As noted in chapter 1, some corporate research organizations have set rules around how employees can use AI in their work. This is just one aspect of their preparation for the continuing growth of AI.

This includes personnel actions. For example, more than one-quarter (26%) of corporate researchers are aware of their employers setting up a community of practice around AI. Fewer are aware of their organizations appointing new operational functions (13%) or new leadership (12%) around AI.

There are also strategic and operational changes happening: 21% say their institutions are building a plan or protocol to evaluate the purchase of tools that include AI and 20% are planning to acquire tools that include AI in 2024. However, communication appears to be lacking: over one-third (36%) of corporate researchers are unsure how their institution is preparing for AI usage

Expectations of AI

Fig 7. **Question:** Thinking about the use of generative AI in your area of work, how much do you agree or disagree with the following either presently or in the near future? By near future, we mean in the next two to five years.

Chapter 3:

Shaping an AI-driven future

- 96% believe AI may be used formisinformation
- 85% have concerns about the ethical implications of AI on their area of work
- 84% are concerned AI may cause critical errors or mishaps
- 60% say keeping inputs confidential would strongly increase their trust in an AI tool
- 41% say robust governance on data would increase their comfort using an AI tool
- 39% consider the lack of regulation/governance a top-three disadvantage of AI

Exploring corporate researchers' concerns about using AI and GenAI tools, alongside the factors that would increase their trust in these tools and their comfort using them, helps identify actions institutions and developers can take. While most are worried about the lack of governance, paying attention to this concern is the best way to increase trust and comfort using AI. Similarly, misinformation is a major concern, and reliability would help increase trust and comfort.

Exploring corporate researchers' concerns

Understanding corporate researchers' concerns around GenAI is an important step in developing tools with minimized risks. Only 1 in 10 have no concerns about the ethical implications of AI on their area of work – 53% have some concerns, 22% have significant concerns and 10% have fundamental concerns.

Some of the biggest concerns are around misinformation and errors. Almost all (96%) believe AI will be used for misinformation, at least to some extent over the next two to five years. And 84% expect that AI has the potential to cause critical errors or mishaps.

Social disruption is a concern for corporate researchers, for example with 74% expecting AI to cause the unemployment of large numbers of people.

Negative impact of AI in various areas over the next two to five years

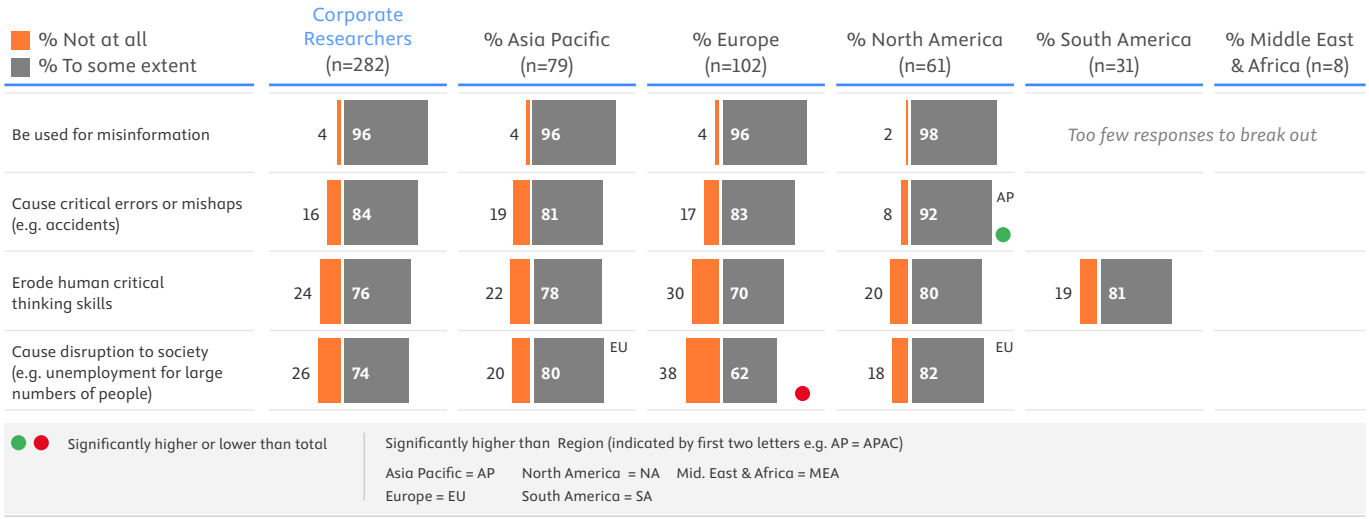


Fig 8. **Question:** Thinking about the impact AI will have on society and your work, to what extent do you think over the next two to five years it will...? Great extent, some extent, not at all.

Factors impacting trust in and comfort using GenAI tools

When combined, the potential GenAI has for misinformation, hallucinations, disruption to society and impact on job security paints a picture for many of a technology that is difficult to trust.[7] Yet surveys show that most people do trust the technology – for example, the Capgemini Research Institute found that 63% of consumers were excited by the prospect of GenAI bolstering drug discovery.[8]

The current study reveals actions that could help increase corporate researchers' trust in AI. Reflecting one of their top concerns, the top factor is privacy: 60% say the keeping the confidentiality of inputs would strongly increase their trust in an AI tool.

Factors that strongly increase trust in AI tools

Fig 9. **Question:** To what extent, if at all, would the following factors increase your trust in tools that utilize generative AI? Scale: Strongly increase my trust, Slightly increase my trust, No impact on my level of trust.

Similarly, concerns around accuracy, governance and transparency are reflected in the trust factors. Citing references by default would strongly increase trust for 58% of corporate researchers, as would training the model to be factually accurate, moral and not harmful (53%), law abiding (53%) and high-quality and coherent (52%).

We asked respondents which information areas would increase their comfort is using the tool:

Governance: Accountability is a top contributor to corporate researchers' comfort using an AI tool: 41% rank robust governance on data and information being used to train the model in their top-three comfort factors, and 32% rank accountability through human oversight as such.

Quality and accuracy: More than one-third (38%) of respondents rank knowing the information the model uses is up to date as one of their top-three comfort factors, and over one-quarter (27%) say an explanation of how the solution worked would make them more comfortable. One-third (33%) say actions being taken to prevent unfair bias would be a top comfort in using AI.

Confidentiality: 38% of corporate researchers say privacy being respected on user inputs is a top-three comfort factor for using AI, as is privacy being respected on outputs generated (23%).

Information areas that would increase comfort in using that tool

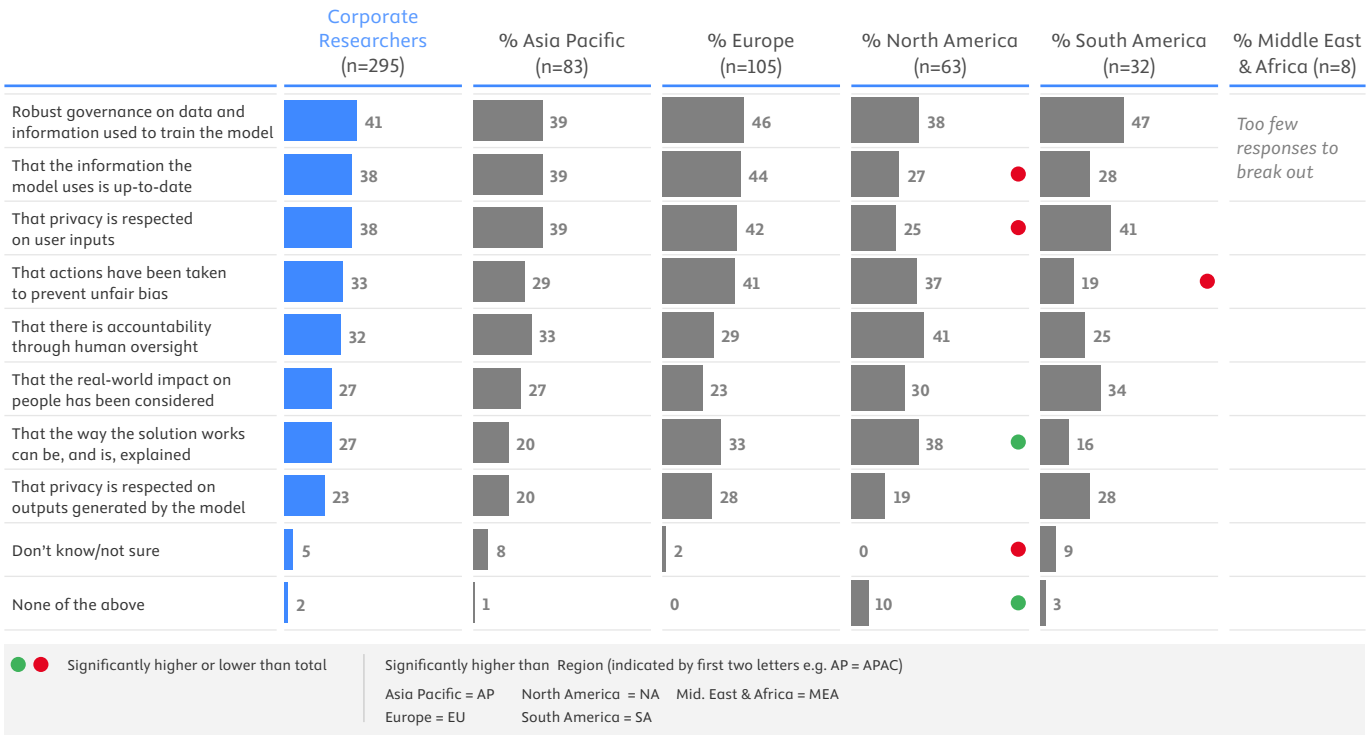


Fig 10. Question: Which information areas about a tool's dependency on generative AI would most increase your comfort in using that tool? Select up to three.

Actions for a GenAI-powered future

Based on the survey findings and secondary research, we recommend actions for technology developers and institutions. (See the full report for details.)

GenAI technology developers can:

- Enhance accuracy and reliability
- Increase transparency
- Strengthen safety and security

Institutions employing researchers can:

- Establish policies and plans and communicate them clearly
- Build governance and expertise
- Provide training and capacity
- Ensure access

References

1. Adam Green. The great acceleration: CIO perspectives on generative AI. MIT Technology Review Insights. July 2023. https://www.databricks.com/sites/default/files/2023-07/ebook_mit-cio-generative-ai-report.pdf

2. OpenAI. ChatGPT. April 2024. https://chat.openai.com/chat

3. McKinsey & Company. The economic potential of generative AI: The next productivity frontier. 14 June 2023. https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier

4. Elsevier. Research Futures 2.0. April 2022. Page 64. https://assets.ctfassets.net/zlnfaxb2lcqx/47ncumZe63BnUGl0PGkQbV/c3b2d1df821ff03c52d8fd4360dd5751/Research-Futures-2_0-Full-Report.pdf

5. Gregory Daco. Catalyze economic growth through capital investment in GenAI. EY Parthenon. 22 March 2024. https://www.ey.com/en_nl/ai/economic-growth-through-capital-investment-in-gen-ai

6. Capgemini Research Institute. Harnessing the Value of Generative AI: Top Use Cases Across Industries. July 2023. https://prod.ucwe.capgemini.com/wp-content/uploads/2023/07/GENERATIVE-AI_-Final-Web-1-1.pdf

7. Portulans Institute. Network Readiness Index 2023. https://download.networkreadinessindex.org/reports/nri_2023.pdf

8. Capgemini Research Institute. Why Consumers Love Generative AI. 7 June 2023. https://prod.ucwe.capgemini.com/wp-content/uploads/2023/06/GENERATIVE-AI_Final_WEB_060723.pdf

Notes

For a detailed methodology, including sample bases by region/country, see the appendices of the full report.

https://tinyurl.com/attitudes-ai

Follow Elsevier Connect on
X (formerly Twitter), Facebook and LinkedIn

Report Authors

Adrian Mulligan (a.mulligan@elsevier.com)

Nicola Mansell

Lucy Goodchild (lead author)

TellLucy.com