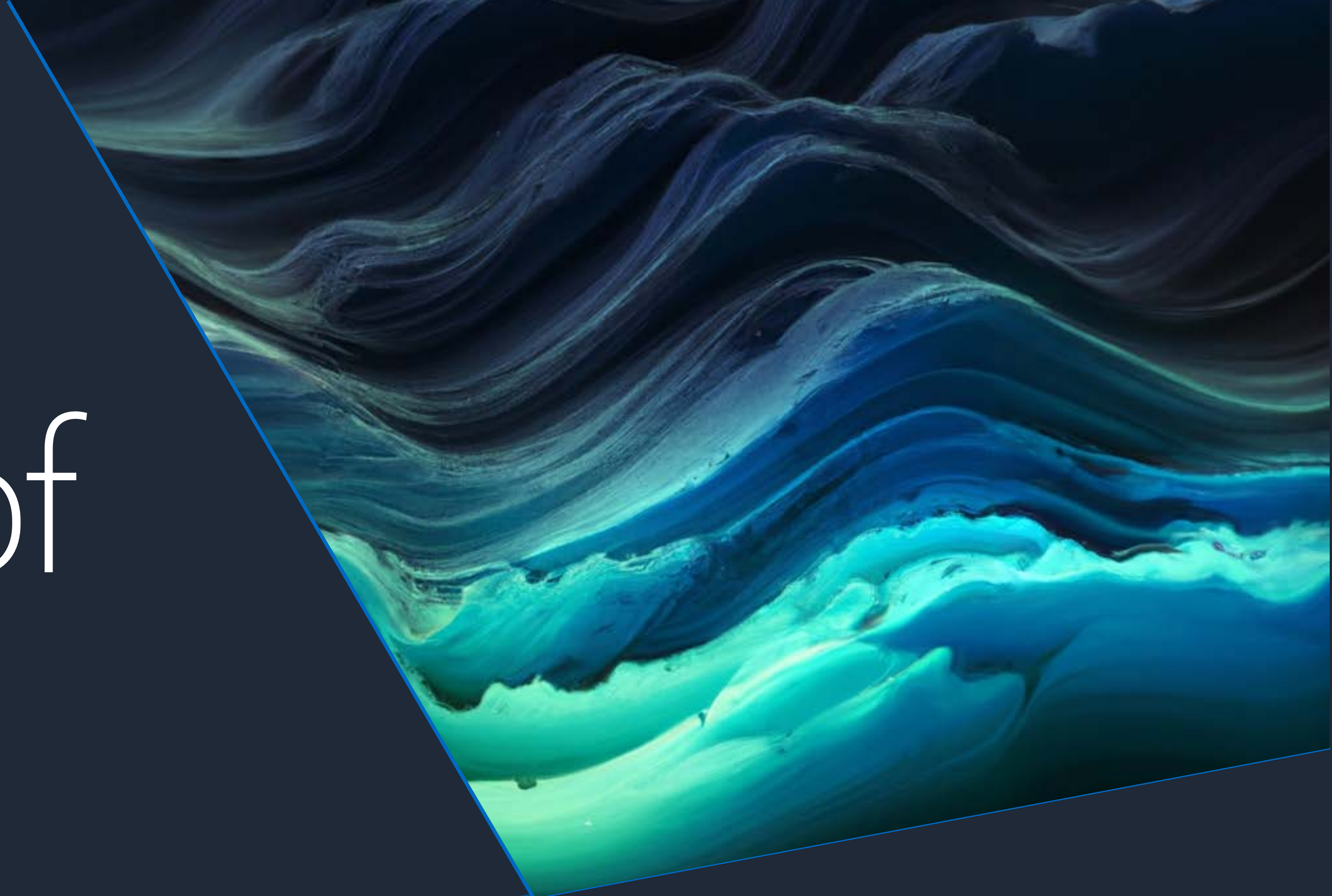


RBC^x

The State of AI in Tech

PERCEPTIONS FROM CREATIVES AND
PROFESSIONALS IN THE INDUSTRY



Introduction

We are a team of creatives, strategists and human behaviour researchers who form a part of the Platform Team at RBCx. We hear a lot about how AI is transforming work (and human existence itself). We asked our peers in various industries how they perceive the threats and opportunities associated with this new technology.

Our interview respondents for qualitative research were comprised of creatives, researchers and strategists who work in tech or tech-adjacent fields. We also interviewed a couple of academics and commentators who study the state of AI in Tech. Our quantitative research survey covered a broader set of functions, including IT, Accounting, Analytics, Development, Finance, HR, Operations, Product Management, and Sales. All of the insights in this report are comprised of the opinions shared in qualitative and quantitative research. The broad range of functions in our quantitative research survey allowed us to compare opinions held by those in technical roles with those in non-technical roles.

“AI hype is distinct from crypto because it is a tool not a solution.”

Anthony

ADJUNCT LAW PROFESSOR, UNIVERSITY OF TORONTO

Methodology

QUALITATIVE Interviews

30-60 min interviews, conducted in April & May 2023, with 15 professionals working with AI including:

- Designer/Creatives
- AI Technologists
- Consultants
- Market Researchers
- Marketers
- Prompt Engineers

QUANTITATIVE Survey

Research data is based on the results of a survey conducted by RBCx and distributed by Cint between June 22-26 2023, via an online panel. In total, there were **510** completed responses of **Canadian technology workers** (18+). No margin of error can be associated with a non-probability survey, but for comparative purposes a probability sample of this size would have a margin of error of +/- 3 per cent with a 95 per cent confidence level.

Insights Summary

We mapped our insights along a time axis, based on perceptions that surfaced in our research. This is how our respondents anticipated AI's impact over time.

AI's Uses

How do humans use AI?

What are limitations and possibilities?

TODAY

- AI has changed tasks, roles remain consistent
- AI's logic requires guidance
- Current uses are to execute over strategize
- Trained creatives find AI augments abilities
- Disclosing AI use risks minimizing human input
- Risk guided by misleading outputs, sharing, ethics
- Democratization through open source
- Startup workers turn to AI more often
- Critical thinking vs. speed and efficiency trade-off
- Quality and quantity of work increase with AI

IN A LITTLE WHILE

- "HITL" is minimized through training cycle
- AI democratizes creativity
- Breadth, strategic thinking, curation = key skills

*HITL or Human-In-The-Loop refers to the human role in AI's task completion.

IN THE FUTURE

- Art vs. profit defines creativity trade-off
- Critical thinking vs. speed and efficiency

AI has changed tasks within jobs, but for many, roles remain the same

AI's impact has yet to be seen relative to past historical transformations like the Industrial Revolution. Respondents indicated that current limitations may mean adoption will be dispersed across industries and the felt change in aggregate will be difficult to perceive.

Research shows that while a majority of Canadian Tech workers are using AI tools in some form or another, the changes feel incremental. The way we do tasks may be changing, but we have not yet seen substantive changes to roles. The exception may be entry-level positions, where repetitive tasks can be automated.

The potential is clear, but it remains to be seen whether or not its outputs will be acceptable to humans.

And of the 23% who don't use AI, the majority claim the tools are not helpful to their day to day tasks.

77%

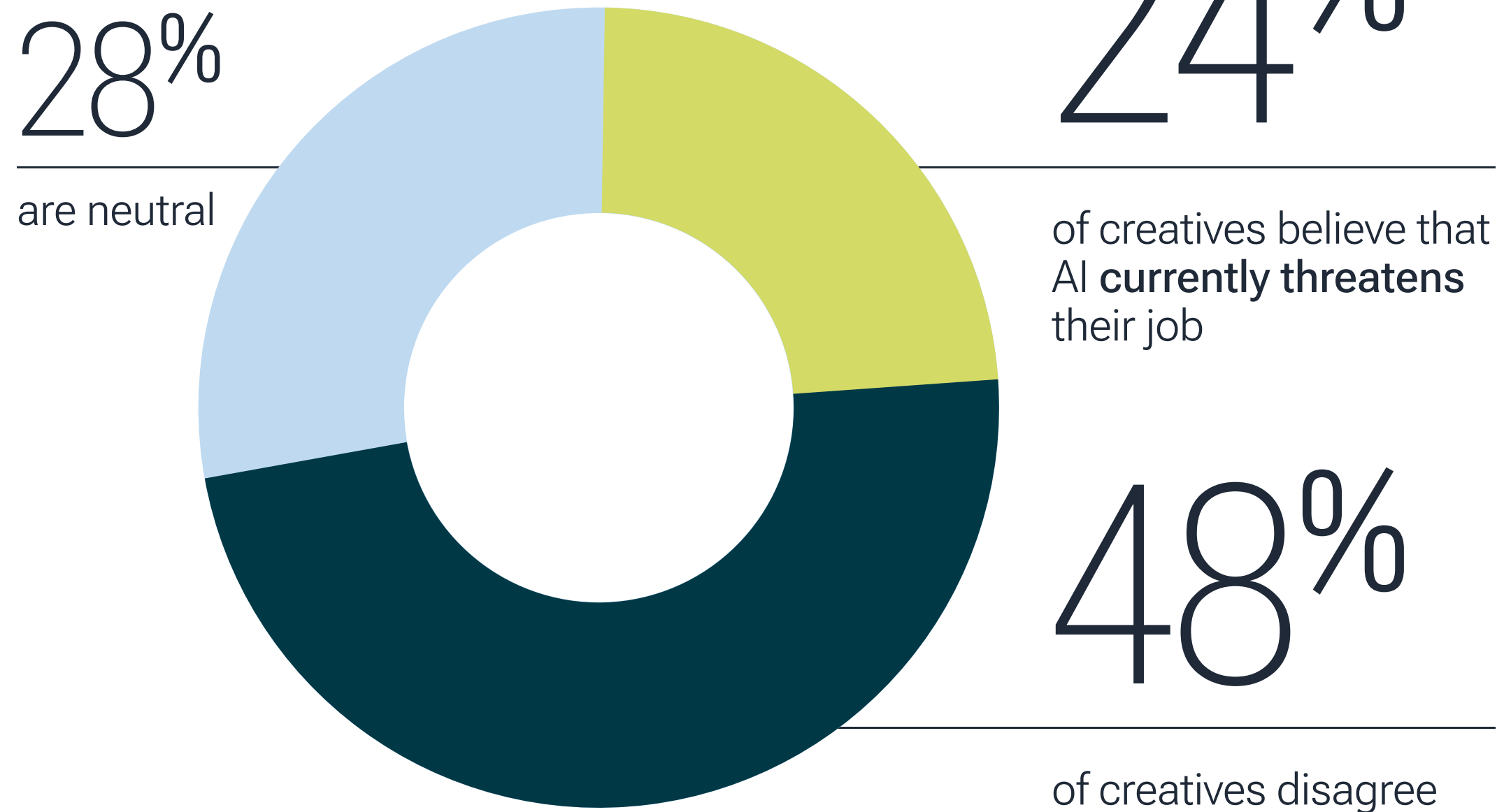
of professionals working in tech companies responded that **AI is used with some frequency in their jobs**

15%

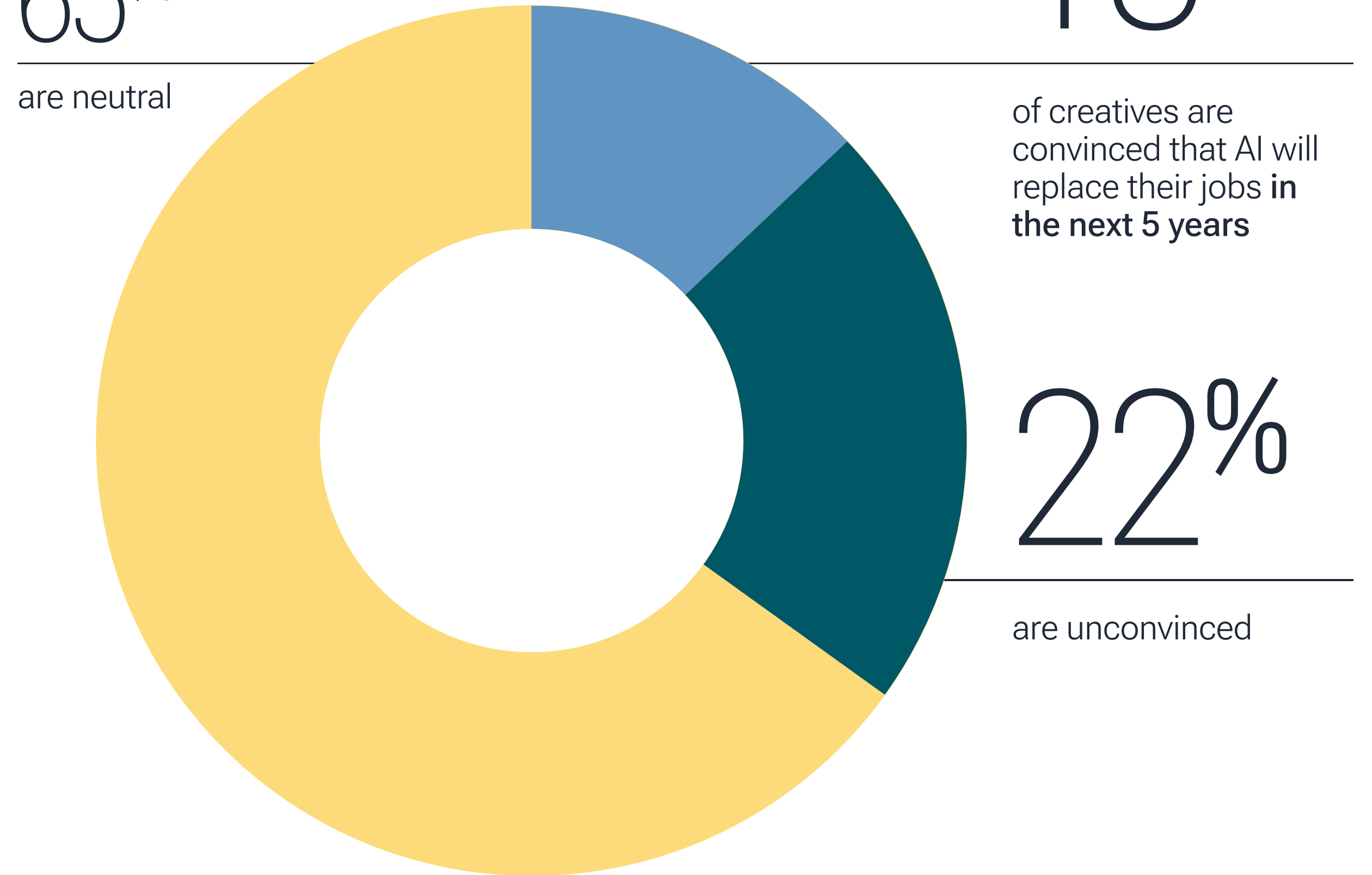
of tech company workers responded that they **use AI nearly every day**

Majority of creatives do not perceive AI as a threat to their job

Creatives are workers who conduct tasks such as design, marketing, writing, and research, and are employed in the tech industry.



65%
are neutral



Our research indicates that function and age impact how AI is received. Functions like sales and engineering are eager to integrate the tool. Content creation functions express greater worry. Similarly, older workers may be less eager to embrace the new changes (and have fewer incentives, as their jobs require less future-proofing).

“[AI] won’t mean we will conduct less work, it’s just a level up for everyone. It’s so gradual it won’t even be really noticeable.”

Steve

MARKET RESEARCHER

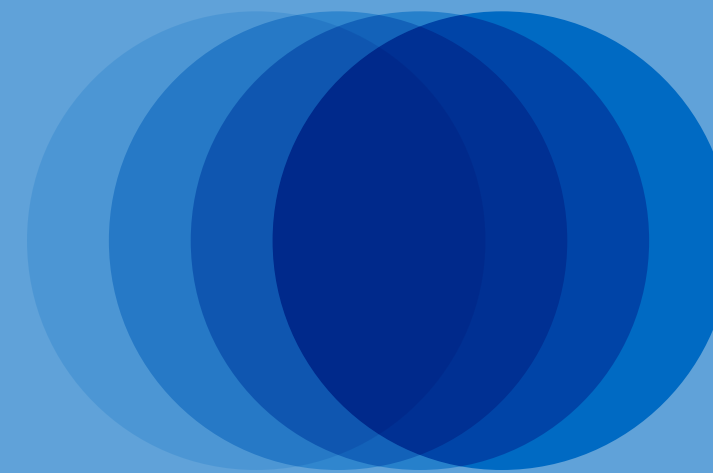
“I don’t think we’ve had [AI] for long enough for me to see that I spend less time with my clients.”

Sarah

PROMPT ENGINEER, SECURITY & INTELLIGENCE

Open Source AI democratizes tech beyond large companies

Open source technology has made the outputs and development of AI accessible beyond large companies. In a startup, workers are using AI more often and more likely to use AI for a wide variety of tasks. This adds additional capabilities in smaller company teams across business needs.



Outputs

Functions that were once the exclusive purview of large companies are increasingly available for startups and individuals to use. This allows startups to move faster, and individual freelancers and professionals to be more efficient.



Development

Open source software allows anyone to assist in the development and advancement of AI. That means things move faster in part because participation can come from anywhere.

Open source technology allows for tech democratization beyond the giants.

“Paying \$40 a month [for my AI tool] shouldn’t be a problem because I used to hire students help with captioning and content calendars...I don’t need that kind of help anymore...Last month I invoiced more than I ever have before.”

Elaine

FREELANCE MARKETING CONSULTANT

STARTUP COMPANIES

12.3% NOT AT ALL

88%

16% ONCE A MONTH OR LESS

of startup workers
use AI tools

23.5% A FEW TIMES A MONTH

Those working at startups turn to AI more often, and for a wider range of tasks.

30.9% A FEW TIMES A WEEK

17.3% NEARLY EVERY DAY

ESTABLISHED COMPANIES

25.9% NOT AT ALL

74%

16.6% ONCE A MONTH OR LESS

of established company
workers use AI

19.6% A FEW TIMES A MONTH

22.6% A FEW TIMES A WEEK

15.4% NEARLY EVERY DAY

Those who use AI more frequently are less concerned, and more optimistic about it

FREQUENT USERS

37.1%

of frequent users are concerned about AI

67.3%

of frequent users are optimistic about AI

INFREQUENT USERS

42.2%

of infrequent users are concerned about AI

50.3%

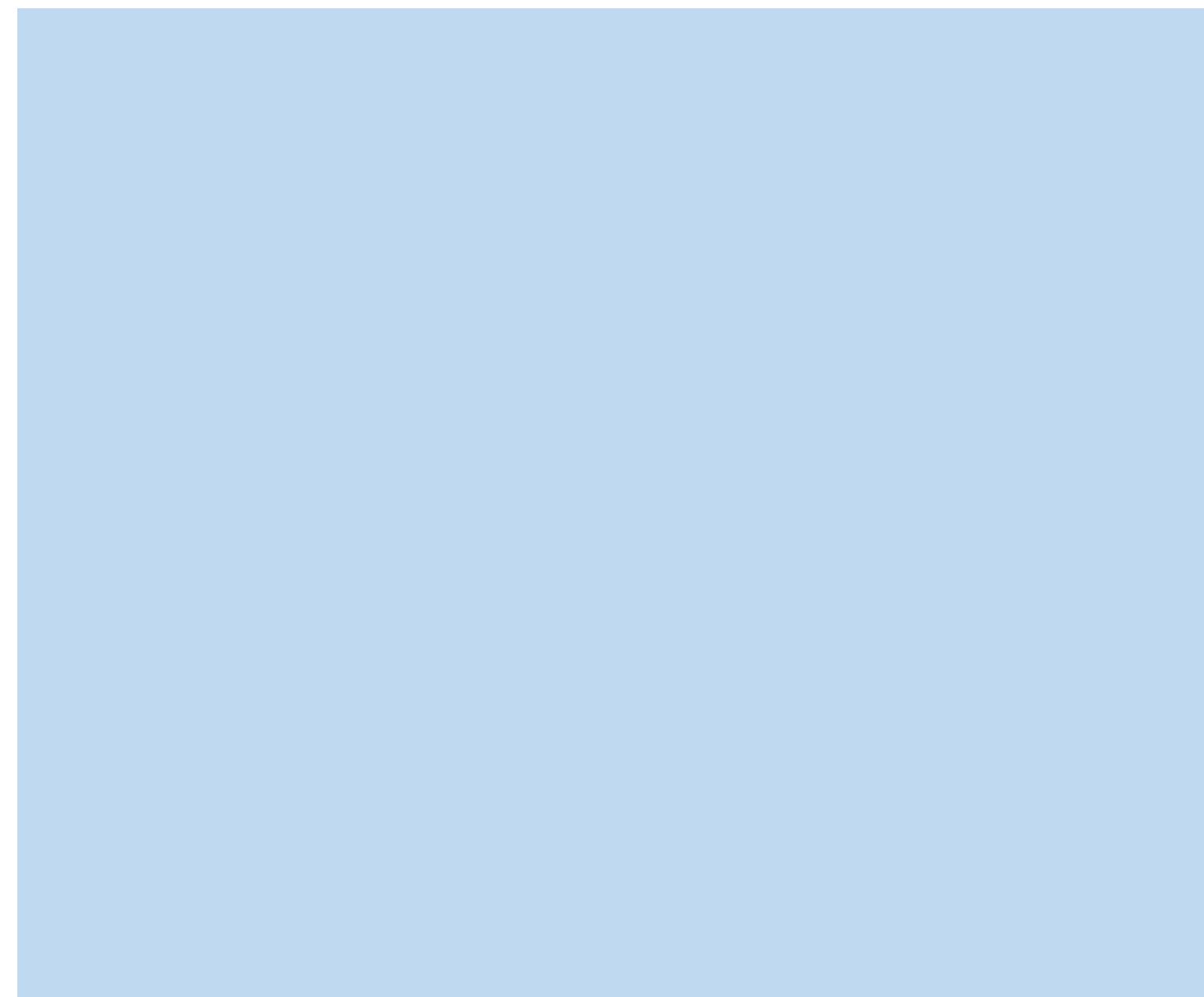
of infrequent users are optimistic about AI

Those in creative roles more often report AI allowing them to be more creative and innovative than non-creative roles

When asked “what has changed since you have started using AI in your work?” those in creative roles agree that AI has allowed more innovation and creativity in their lives by around 10% more.

45.2%

of creatives believe AI has increased their creativity and innovation



34.5%

of non-creatives believe AI has increased their creativity and innovation



Generative AI models need Humans in the Loop

Our respondents advised caution against blindly trusting the outputs of AI. AI is designed to give plausible answers that are not always accurate; extensive editing and fact-checking are necessary when using AI's outputs.

Professionals report using AI to help start or execute a project, but **strategic thinking must be done by humans.**

One thing cannot be underestimated: **the importance of the right prompt.** The AI needs to be restrained through context-setting (AKA prompts) to arrive at a useful creative output.

Interacting with a Large Language Model

INPUT

1. **Role**
Identify what role the AI will take on (eg. marketer, therapist, journalist).
2. **Task**
Identify what is being created (eg. headline, social media post).
3. **Format**
Identify the format of the output (e.g. HTML, CSV file, table).

OUTPUT

The most plausible response:

Generative AI is designed for plausibility, not accuracy.

“Understanding how to prompt [AI] or give good direction is like working with other people. You need to be clear with people and with ChatGPT.”

John

PRODUCT MARKETING

“It’s not a fact checker but it’s a good thinker; prompt it with enough info and it can operate on that very well.”

Brenden

VP, MARKET RESEARCHER

“If you never learned how to interpret data, you’re not going to be able to teach a software to do it better [...]”

Sarah

PROMPT ENGINEER, SECURITY AND INTELLIGENCE

AI is currently used to execute instead of strategize

Our respondents were of the opinion that AI is there for the repetitive tasks, but humans are needed to move through complexity and solve 'hard problems.'

The prevailing impression is that **this will affect 'grey-collar' workers the most:** those who are relied on to execute on broader strategy.

70%

of tech workers use AI in the background or as part of an existing tool.

COMMON USES

Communication

- Summarize long working documents (proposals)
 - Create /improve/reply to emails
 - Create/improve long working documents
 - Writing social media captions
 - Content calendars
-

Advising

- Get perspective of different user groups/ experts
 - Quickly size target population
 - How to recruit certain user groups
-

Secondary Research

- Summarize main points on specific problem space, actor
 - Quickly get up to speed on a new subject area
-

Quick Analysis

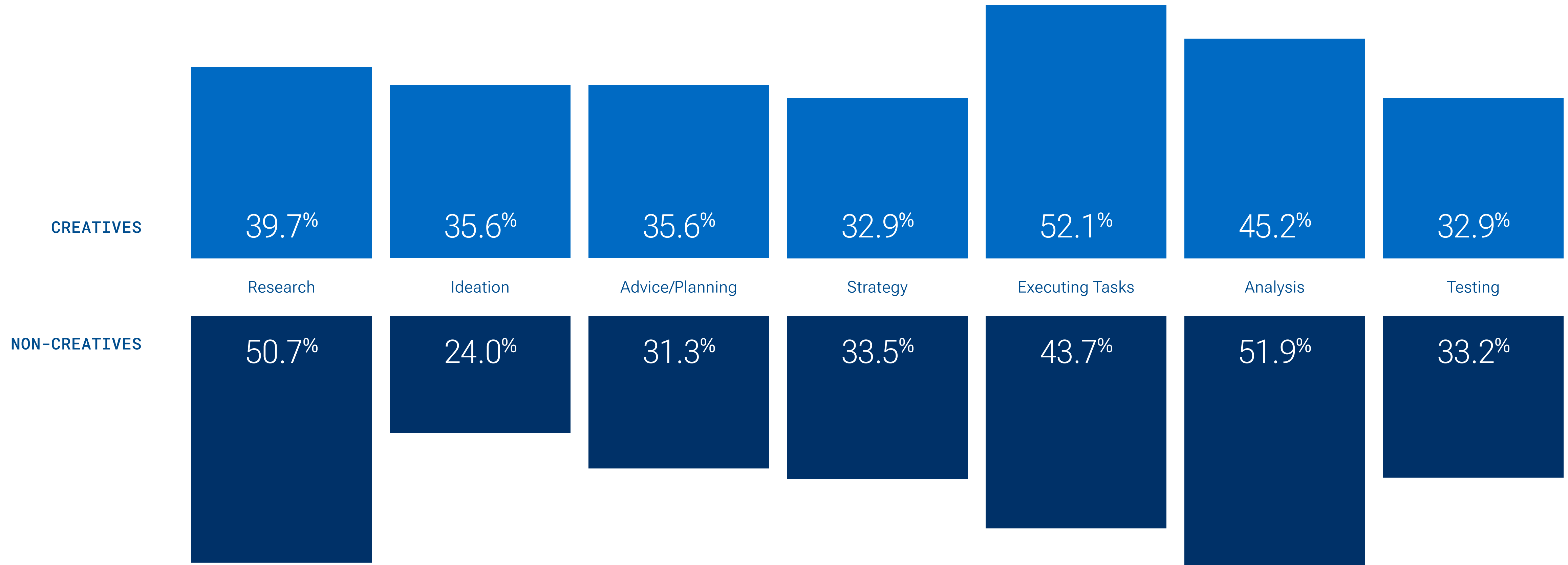
- Coding of qualitative research
-

Content Creation

- Generating creative prototypes
 - Marketing assets
-

The tasks and projects that most frequently use AI:

Research, data analysis, and execution are tools outsourced more frequently to AI, versus strategy or planning. Creatives in tech are more likely to use AI for execution (like mocking up video ideas) whereas others use these tools for research and analysis.



Human-in-the-Loop (HITL) trains AI, which lessens AI's need for HITL

Today, human intervention, known as Human-in-the-Loop (HITL) is still needed for most jobs AI can complete. HITL trains the AI further, which could allow AI to gradually replace these HITL moments.

There are vast differences in the quality of output between a expert HITL versus an amateur using AI. Marketing this difference will become an ongoing challenge for organizations. It is increasingly crucial for organizations to provide adequate training to those in junior positions on how to identify quality outputs and contextualize them.

"It's not going to replace [humans in the] workplace, but [will allow us] to use it more efficiently."

PK

DESIGNER, RBCX



"6 months / a year from now, we won't have a coding department because chat will do it for us."

Steve

MARKET RESEARCHER

"There is more responsibility than ever on leaders and mentors right now because of the slippery slope of just letting anyone to use AI, which is tempting. So if we're going to survive and do good work, we need to do the hard work to address the risks."

Brenden

VP, MARKET RESEARCHER

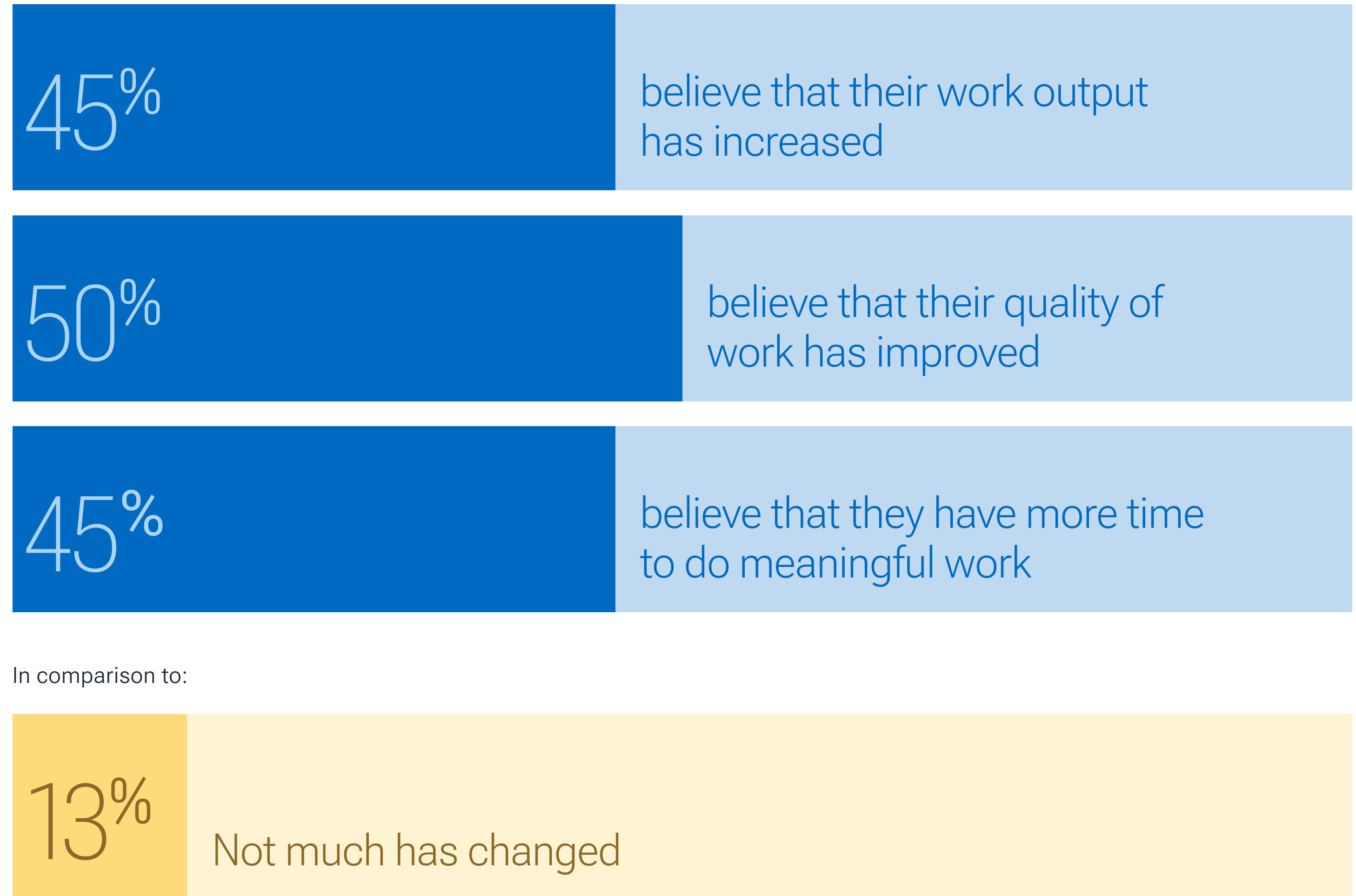


Despite 'takeover' fears, trained creatives find AI augmenting their abilities

Creatives and marketers we interviewed and surveyed reported that AI enables them to do more with less time, money, and resources. Instead of investing considerable effort in exploring various directions for an ad campaign or video, for instance, AI can be used to mock up many options with minimal effort. This enables faster and more informed creative direction and decision-making with less hassle.

Respondents indicated that AI gives a starting point to get over creative humps. AI helps with initial creation, but humans come in as complexity increases. The up-front process of idea generation, ideation, or inspiration is greatly assisted by AI, which shortens time frames before diving into a creative process.

When asked about what aspects of work have changed with the use of AI, here are the top 3 aspects tech workers believe AI has changed:



“This is like when Photoshop got introduced... AI is a tool that is ready to manifest into different programs. A lot of production-heavy work will benefit greatly from AI tools in general.”

Wai

CREATIVE DIRECTOR, RBCX

“Sometimes I struggle to be creative and then to code a website... [AI tools] help me with brain switching.”

Elaine

FREELANCE MARKETING CONSULTANT

"I don't think AI can capture your essence - what you really are and what you can give to somebody."

Clara

PROFESSIONAL PHOTOGRAPHER

"[What do you do with the extra time you have because of AI?]
I make more AI-generated stuff!"

Andrew

MEDIA DESIGNER

Professionals worry that disclosing AI use could minimize human contributions to work

Consultants and other service providers note that clients might be impressed that AI is being used...or wonder why they are paying so much for a service if machines are doing the work. Clients can also decide the tasks cannot be too complicated if AI can be used to complete them, and take the work in house. As AI becomes more widespread, disclosing its use may inspire greater confidence. The same professionals who are reluctant to disclose AI use noted that they would want transparency from others.

Confusion persists around explaining what 'AI use' means, so many professionals find it easier not to disclose AI use. (The market has not yet caught up.) Those who are able to quantify the advantage that comes from using AI, and have taken security measures, might be more inclined to disclose it.

40%

of tech company workers disclose AI use to their clients

Human Contributions

Relevance and Efficiency

THE BALANCE OF DISCLOSING AI USE

Those working in startups are more likely to disclose AI use, compared to those working in established companies.

45%

of startup workers disclose AI use

36%

of established company workers disclose AI use

THE TOP REASONS STARTUPS DISCLOSE AI:

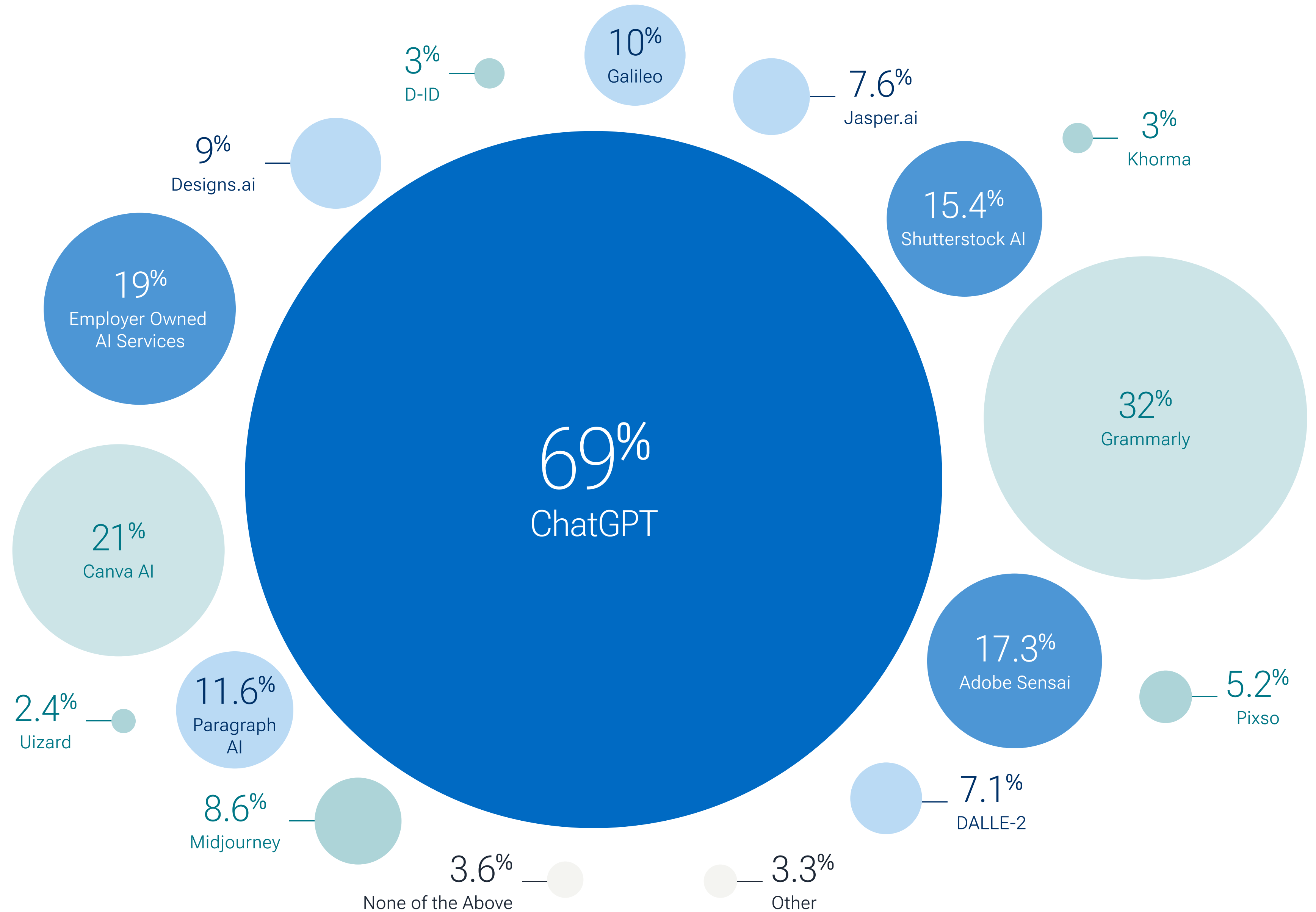
1. 55% do so to be fully transparent
2. 46% think clients perceive AI as modern
3. 40% clients see the value of using AI in a product or service

THE TOP REASONS ESTABLISHED COMPANIES DISCLOSE AI:

1. 58% do so to be fully transparent
2. 39% think clients see the value of using AI in a product or service
3. 36% think clients perceive AI as modern

What are the most important AI tools or programs for your job?

ChatGPT is the most important AI tool, by a large margin.



Misleading outputs, data sharing and ethics guide early risk mitigation

Our respondents in qualitative and quantitative research indicated several factors which they see as guiding early risk mitigation.

1. Misleading Outputs or inaccuracies

AI can produce 'hallucinations,' comprised of claims which sound logical but are entirely made up. AI also has acute limitations when interpreting bias. Our respondents indicated that its outputs may be read as objective due to missing context and human perceptions around the infallibility of computer-generated data.

2. Data sharing

Open-source software users run the risk of their prompts revealing information about them to other users. Companies mitigate this by paying for (licensing) walled-off use of softwares such as ChatGPT so inputs do not patch back into OpenAI.

3. Ethics (incl. Copyright issues)

Creatives express concern over accreditation for their work. In some cases, copyright infringement might make an output unusable.

Our research indicates that knowledge of ethical concerns is universal, including among C-suite executives and junior prompt engineers. How these concerns restrict use varies widely, however.

Becoming dependent on AI is also a major concern.

“You can teach a machine to weed out bias, but sometimes bias is the whole point. I don’t know how you get a machine to do that perfectly.

You have to tell the machine to think one thing or the other, but as humans we can [see multiple perspectives]...If I gave the machine tweets [from a politician] it would summarize those accurately but would not be unbiased.”

Sarah

PROMPT ENGINEER, SECURITY & INTELLIGENCE

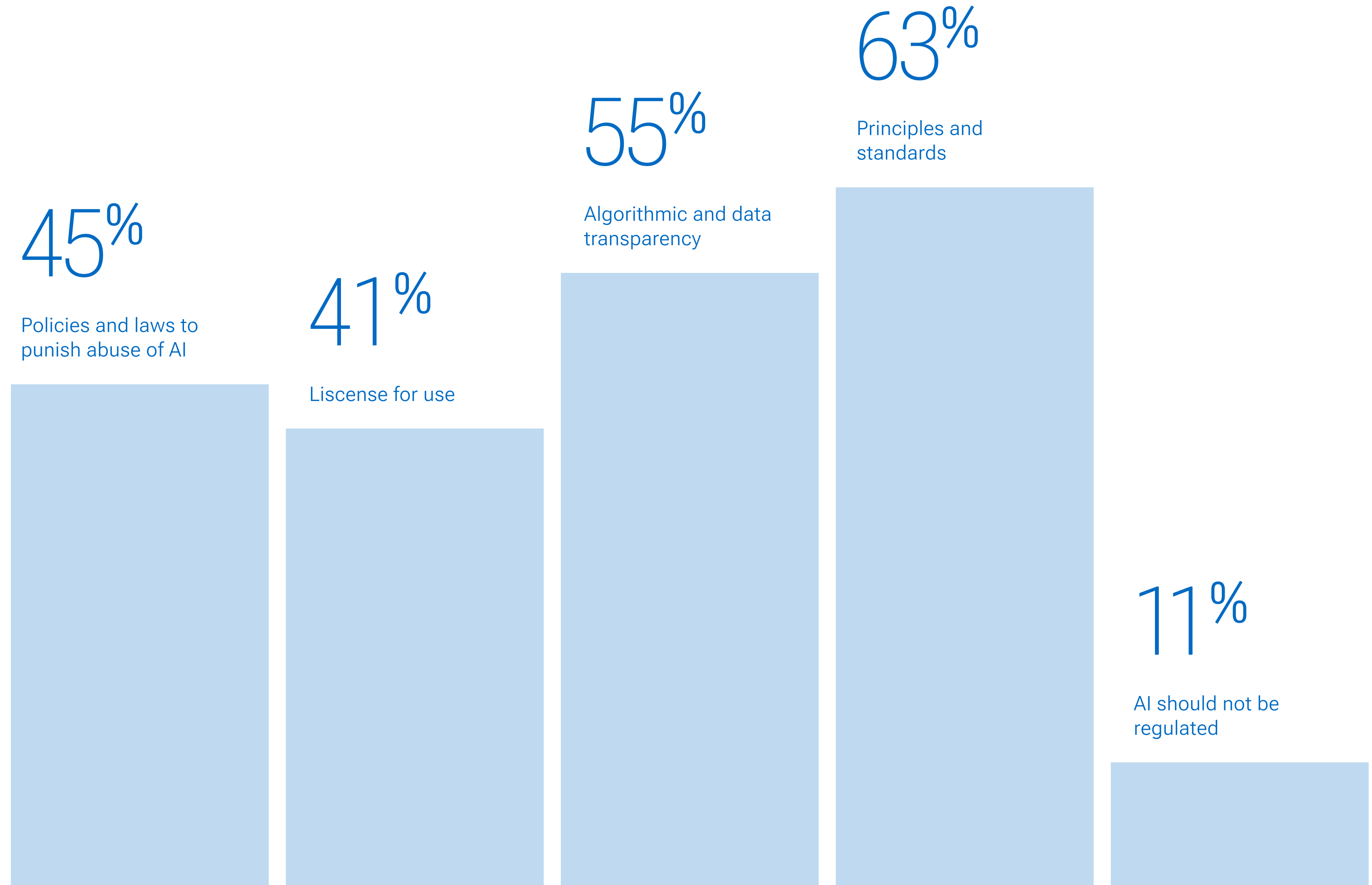
“There are huge applications [of AI] in Healthcare but like other industries, it’s a very highly regulated industry with slow adoption cycles.”

Joshua

PROFESSOR STRATEGIC MANAGEMENT, ROTMAN SCHOOL OF MANAGEMENT, UOFT

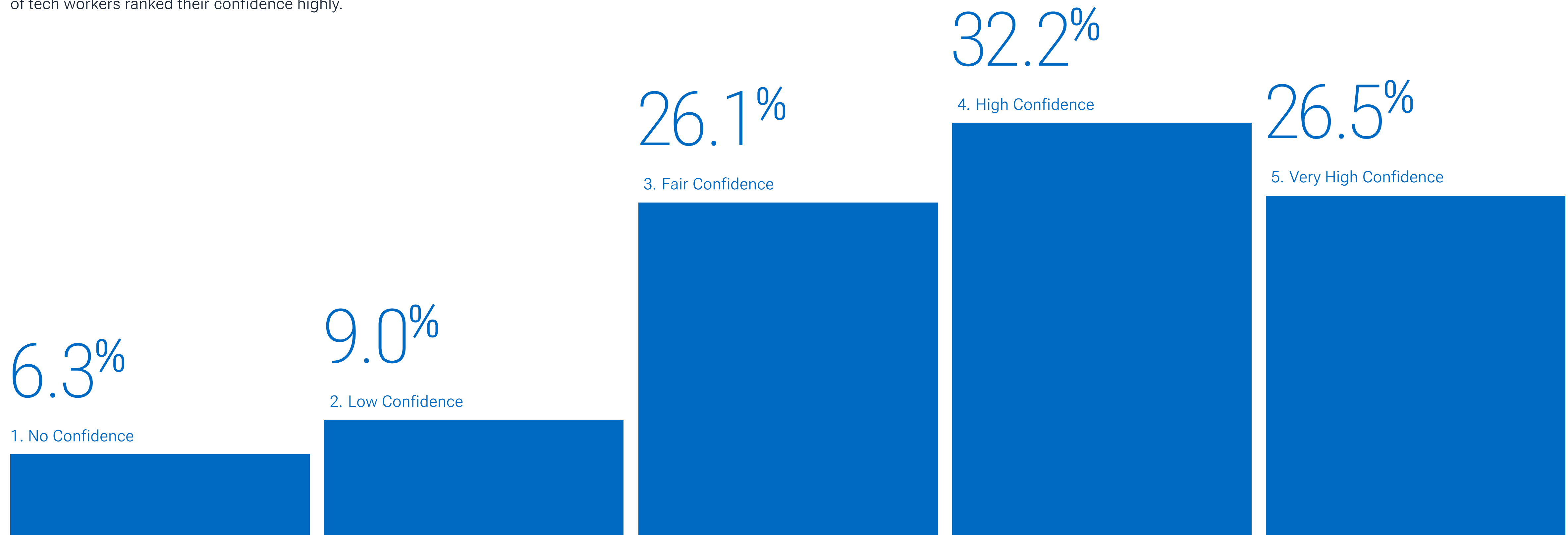
How should AI be regulated?

The majority of respondents believed that AI should be regulated in some capacity while only 11% believed in no regulations at all.



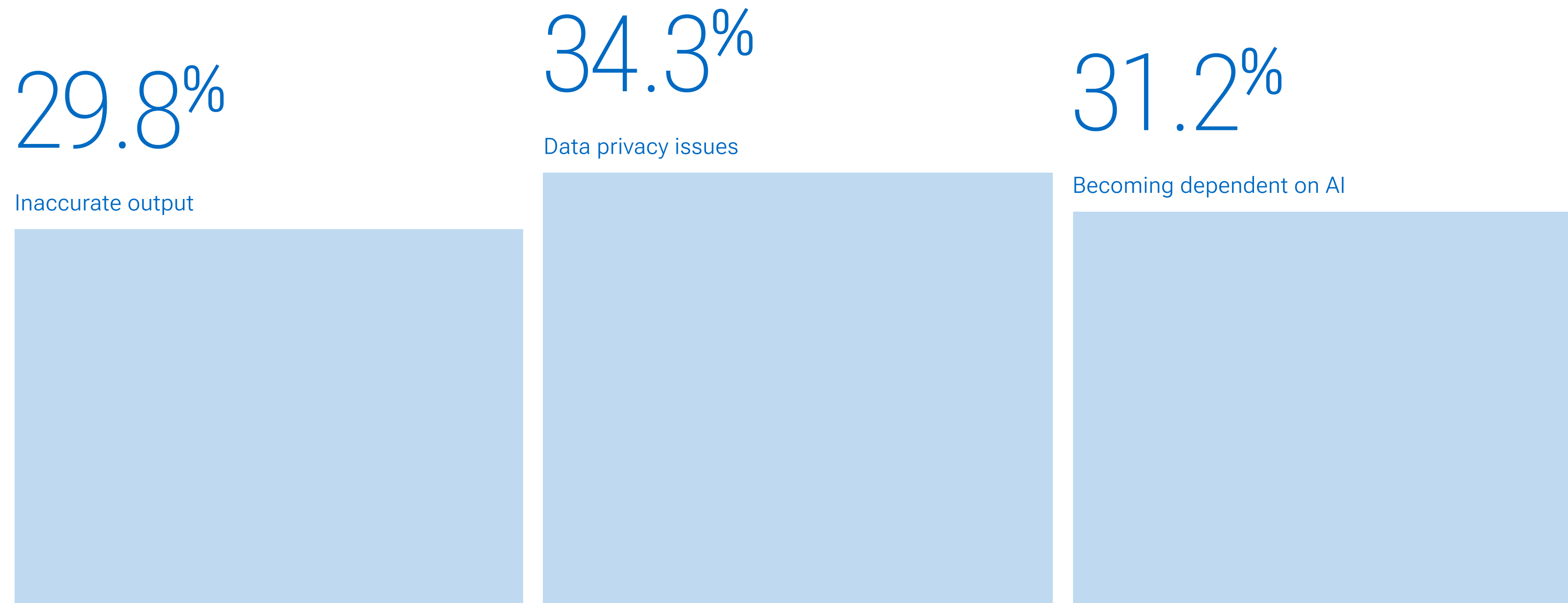
Confidence is relatively high that risk-prevention measures have been adequately implemented

When scoring their confidence in their organization's implementation of adequate responsible AI use measure, majority of tech workers ranked their confidence highly.



The majority of tech workers have concerns about AI

The top concerns include data privacy issues, becoming to dependent on AI, and inaccurate outputs.



Less than

6%

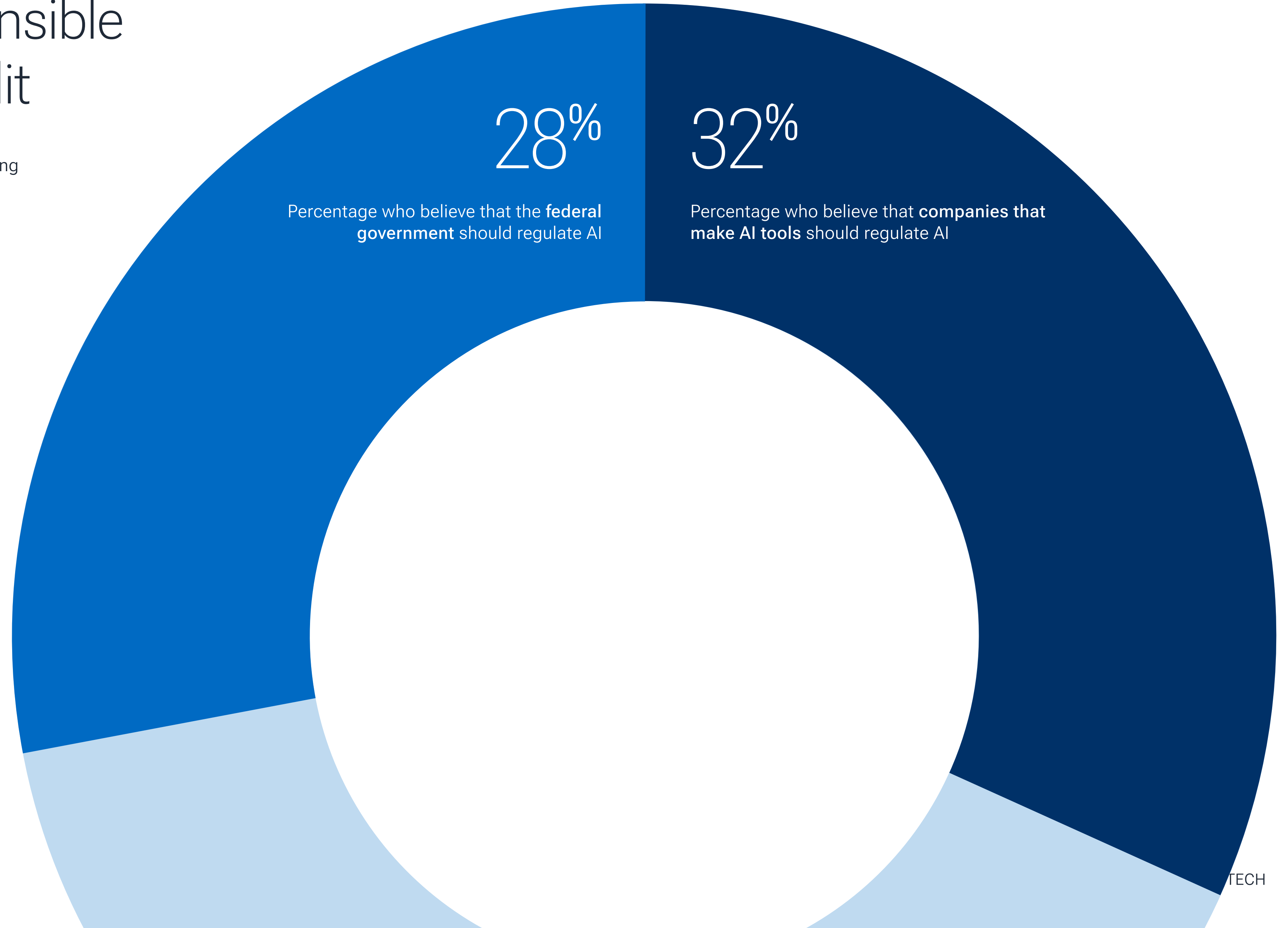
have no concerns about AI

Belief in who is responsible for regulating AI is split

Companies and the federal government perceived as bearing the highest responsibility.

Other options included:

- International governing bodies - 13%
- Companies that use AI - 12%
- Province or state government - 11%
- No one should regulate it - 4%



Creative motivations guide engagement

Questions about entertainment, and what matters when it comes to creative output, are becoming critically important. For instance: Does it feel the same to watch a movie made by an AI? What about the connection between an author and a reader?

Our research revealed that the motivation behind creative expression is a key question which guides engagement when it comes to AI.

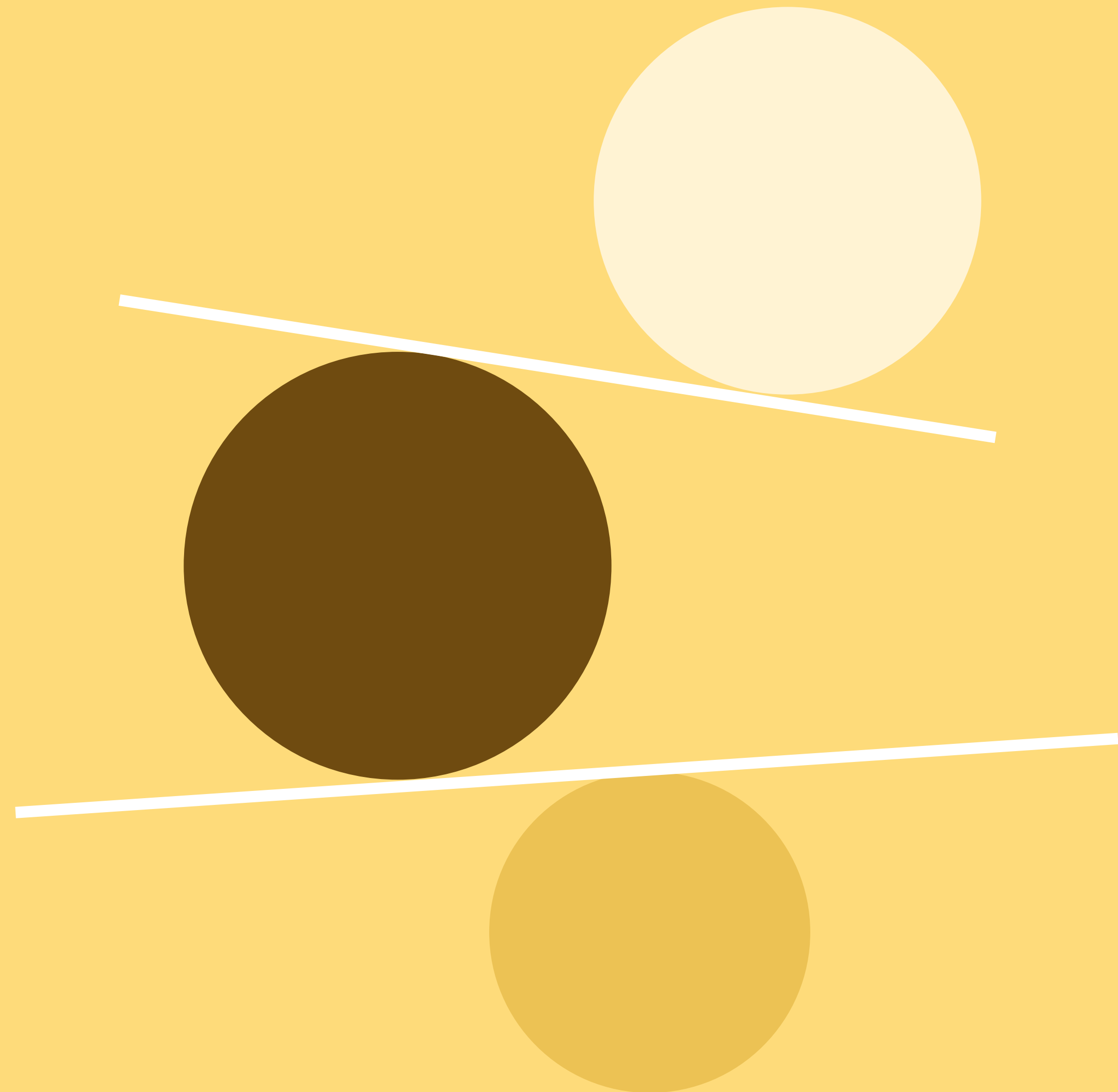
What is the most important aspect of
creativity for tech workers?



AI has affected creativity

Our respondents noted that instead of requiring a lifetime of training to hone skills, style and craft, even amateurs are now able to build on top of what has already been done. Arguably, a much broader base of users are now able to create whatever they imagine with little training required.

At the same time, humans must prompt AI well in order to generate compelling creative outputs, so people trained in creative thinking still have an advantage. Our respondents also recognized the ethical concerns around intellectual property which need to be considered when AI is used to generate art.



“What can children do if they can create the environment [using AI] that they see fit? It opens doors and possibilities that aren’t a reality right now [...] It’s the democratization of creation.”

Wai

CREATIVE DIRECTOR, RBCX

“Access to tech is access to empowerment.”

Alexis

ASSISTANT PROFESSOR, DIGITAL FUTURES, OCAD

“I’m a little afraid of what it can do. I create images with a camera, now people can create images without cameras.”

Clara

PROFESSIONAL PHOTOGRAPHER

Professionals note a critical thinking vs. speed and efficiency trade-off

Our respondents noted that work can be executed constantly by machines. Machines don't need rest, nourishment, or time off to take care of their mental health. It can be tempting to over-value this efficiency without appreciating the trade-offs required.

Our respondents noted that in many cases, critical thinking is imperative to contextualize and ensure quality of AI outputs. Overlooking this need, either because AI's ability is overestimated or because efficiency is over-valued, results in reduced quality outputs.

Our research suggested that there is a risk that the value of critical thinking could be denigrated, leading to a reduction in the quality of human work. Critics are concerned about the outcomes, which could range from inarticulate novels to crumbling infrastructure.

“You have this thing that never gets tired, never needs to go on vacation. Yeah that’s super disruptive to the labour market. That’s disruptive to how companies think about staffing.”

Anthony

ADJUNCT LAW PROFESSOR, UNIVERSITY OF TORONTO

“Maybe my grand kids will learn calculus faster because there is an AI that maps how their brain works or something like that [...] but I don’t think it’s going to organically enhance the human race [...] I think critical thinking is the big thing we could miss out on.”

Sarah

PROMPT ENGINEER, SECURITY & INTELLIGENCE

“Sometimes we’re trying to solve problems really quickly and we don’t always pay attention [...] sometimes I forget to read the paragraph and pump out things too quickly [...] it might lose the edge that captures people’s attention.”

Elaine

FREELANCE MARKETING CONSULTANT

Breadth, critical thinking, and creative curation will be key skills as we move toward working with AI

Our research indicates that as we move towards integrating AI tools into our daily work, AI literacy will become even more important. This means humans need to better understand what AI can do well - and what its limitations are.

Our research indicates that workplaces of the future will require us to be well-rounded workers and lean into what makes us human: critical thinking, imagination, empathy and compassion to see broadly. These human skills will be important as our jobs change; we must learn how to give good direction and recognize quality output.

“...don't educate yourself towards a very specialized niche job. Instead, try to learn how to learn, try to learn critical judgment, skills, general knowledge, so that if the job market changes in unexpected ways (and it will), you can more easily shift jobs.”

Yoshua

LEADING EXPERT ON AI IN A CBC RADIO INTERVIEW

“As AI democratizes knowledge, we should ask ourselves if dumping information in our heads is worth it when information is so readily available.

We want to know if this form of education is the right one [...] Instead we should focus on critical thinking and empathy.”

Sarah

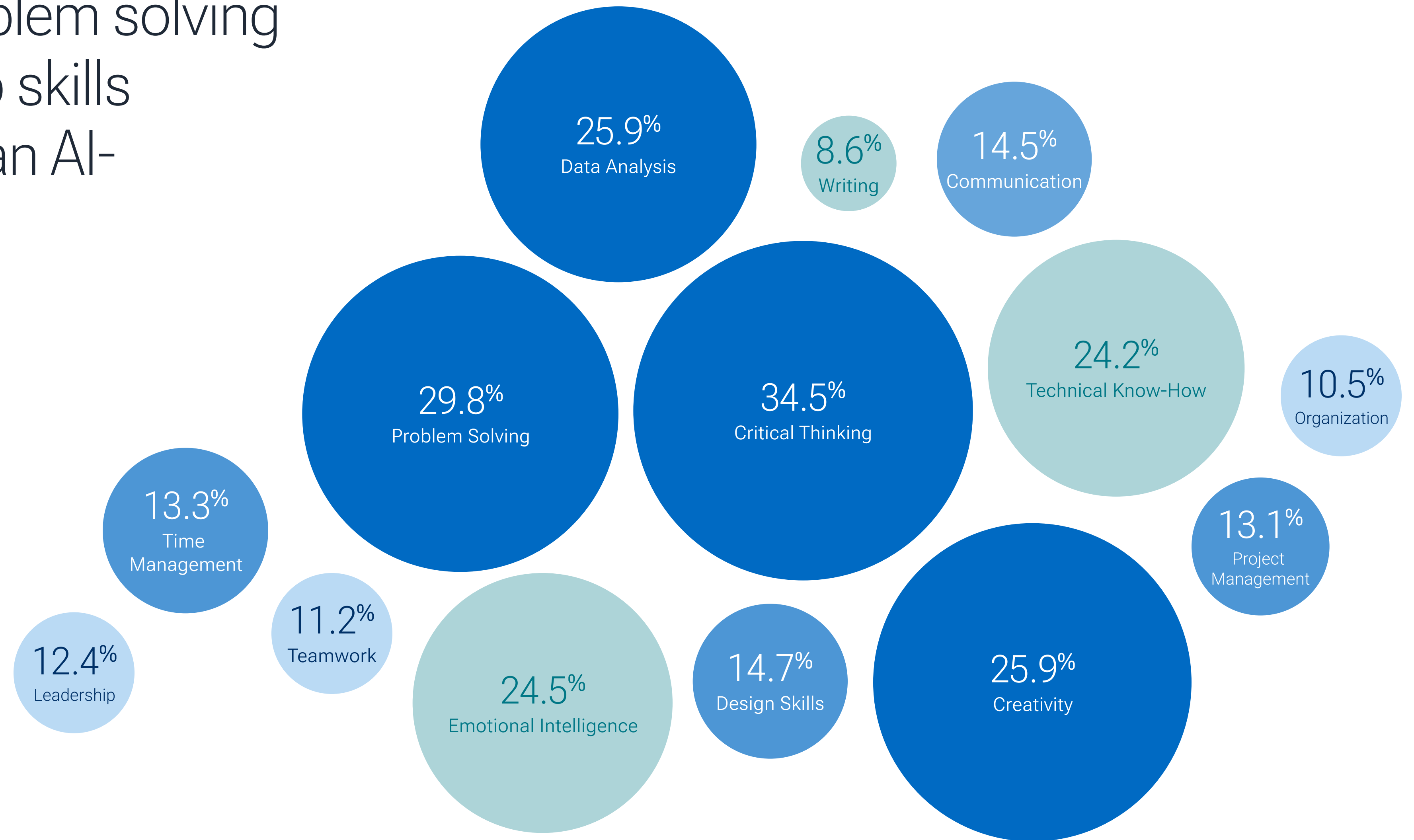
PROMPT ENGINEER, SECURITY & INTELLIGENCE

“We need to get people more AI literate in order to improve input, curation, and recognize AI generation.”

Alexis

ASSISTANT PROFESSOR, DIGITAL FUTURES, OCAD

Critical thinking, problem solving and creativity are top skills required for work in an AI-dominated future.



Conclusion

1. Overall, tech workers are curious and optimistic about what AI can bring. Concerns about AI are real and present, often wrapped up in worries about data privacy issues, inaccuracies and becoming dependent on AI. Concerns lessen with more frequent use.
2. Creatives in tech are using AI more frequently than those in non-creative roles, using it to execute tasks. Creatives that use it find AI strengthens their creative and innovative thinking.
3. Algorithmic and data transparency is seen as an important step for AI regulation. The biggest responsibility for regulating the AI space is placed on companies that make AI tools available.
4. We see democratizing effects of AI, with startups using AI more frequently and in more varied ways to expand their capabilities. Startups are more open to disclosing AI as they are more inclined to place a high value on seeming innovative.
5. Humans are still needed in assessing quality of AI output. It is increasingly crucial for organizations to provide adequate training to those in junior positions on how to identify quality outputs and contextualize them.

“We should get ahead of this, because this isn’t going to stop. This is one thing that I don’t think will stop. There’s so much utility with this subject matter... It’s kind of hard to not be part of this at this time.”

Wai

CREATIVE DIRECTOR, RBCX