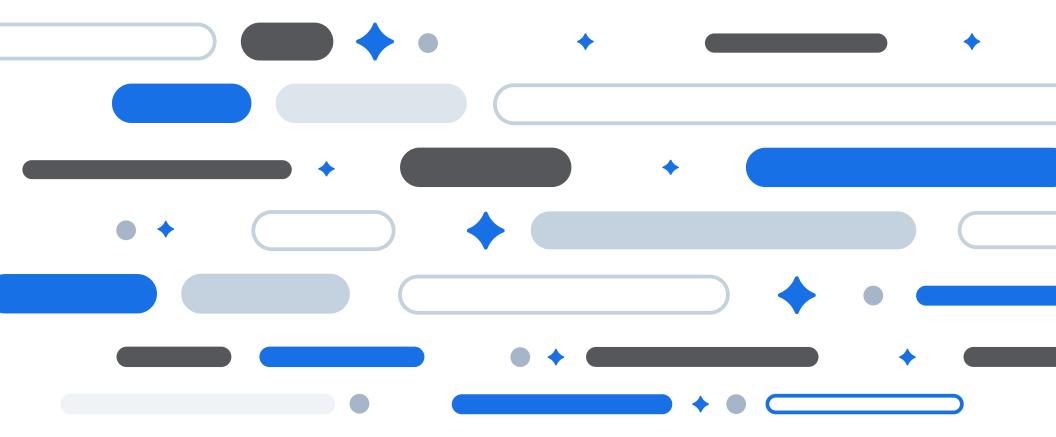


Generative Al Professional Usage and Perception Survey

Amid an emerging gap, knowledge is power



Executive Summary

Generative AI has made quite an impact in the year since OpenAI's ChatGPT gained prominence. But, to paraphrase Jim Collins in *Good to Great*, if generative AI is the bus, business leaders still need to make sure the right people are on it, people are in the right seats, and leaders know where to take it.

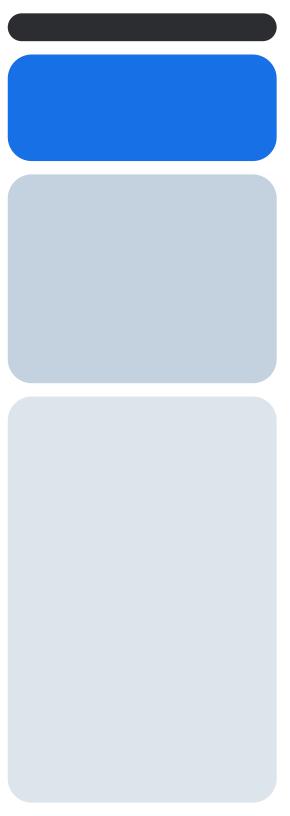
At Contentful, our goal is to put our customers in the best possible position to make use of digital content and any technology that helps them engage and communicate with the audiences they care about. It's clear that generative AI (or genAI, as we'll refer to it) falls into that category. As we continue to anticipate its capabilities and build them into our own product roadmap, we want to better understand the context and attitudes that shape our customers' priorities and usage.

In our first survey of 820 professionals in a range of technical and non-technical roles around the world, we endeavored to understand how those would-be bus riders see the opportunities and potential drawbacks of genAl.

For us, understanding how people across a business feel about genAl provides essential context. Our customer base comprises a wide range of roles and departments: marketers and other business users, designers of various descriptions, digital strategists, developers, and engineers.

We surveyed a diverse range of roles to understand how differences and similarities among them might influence the ways they use genAl. We sought, in particular, the views of people who are experienced enough to have a perspective beyond just their own roles, but who are not so high-ranking that they were removed from the details of day-to-day work going on.

What we found: More than geographic differences or distinctions between those in technical versus non-technical roles, perhaps the significant characteristic that marked the most meaningful differences between respondents was the level of self-reported knowledge of genAI.



There is a significant gap between the people who consider themselves highly knowledgeable on generative AI and everyone else.

Regardless of whether they work in technical or nontechnical roles, the people who consider themselves highly knowledgeable about genAl are the ones working the most with it. They are experimenting and identifying how and where it makes a productive impact on their work and target objectives. This is where the real value of genAl is being uncovered.

Despite the differences, the knows and know-nots strongly agree on several subjects, including the need to disclose use of genAl, that these new tools will require learning new skills, and that they want the ability to turn genAl capabilities on and off. Most people – especially those with less knowledge of genAl – want more guidance on how to use it responsibly.

We're on the cusp of a wave of tailored genAl tools: two-thirds of respondents indicated that their businesses either already have plans for some kind of tailored large language model (LLM) or are considering them. Of those who have or are considering plans, the trend is slightly more in favor of applying an existing LLM rather than training their own.

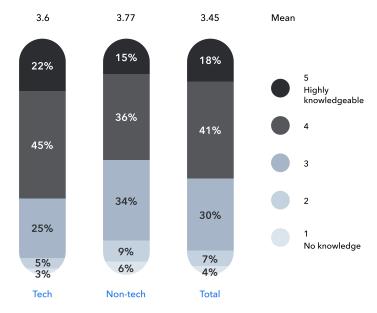
Over three-quarters of respondents have paid access to genAl tools at work. Only 24% of people in our survey don't pay to use genAl tools at work – and nearly as many pay out of their own pockets (either entirely or on top of what their employers fund) to do so. Sticking your head in the sand and hoping genAl will go away is not an effective strategy – for individuals or businesses. The ways in which genAl is already changing how many people work point to a potentially fastgrowing divide between the businesses that empower their employees to make use of these tools and the ones that do not.

Experience, attitudes, and perceptions

Everyone's a genAl expert

There's an inherent bias in our data set – people who feel they understand a subject are more likely to respond to a survey about it – but it's clear that most of our survey respondents feel they have some level of expertise in genAl. Already! Nearly a fifth (18%) rated themselves a "5" in their knowledge (on a scale of 1 to 5) of generative Al and 71% gave themselves a 3 or 4.

Technical respondents are more likely than non-technical respondents to have rated themselves a 4 or 5 in terms of genAl expertise. (Also, Americans and males were more likely to do so – in line with general trends across all kinds of surveys.)



Self-assessed knowledge of genAI

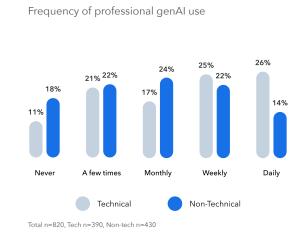
Total n=820, Tech n=390, Non-tech n=430

By role

Technical respondents are more likely to use genAl tools more frequently, specifically on a daily basis, both professionally and personally. Nontechnical respondents are more likely not to have used genAl, to have only tried it a few times for personal use, and to use it several times a month professionally.

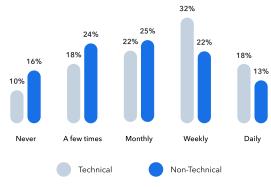
By knowledge

Perhaps unsurprisingly, those who consider themselves extremely knowledgeable about genAI also tend to use it the most often. Similarly, those who profess to have little knowledge of genAI are very likely to say they have either never used it or have only tried it a few times.



Frequency of professional genAl use

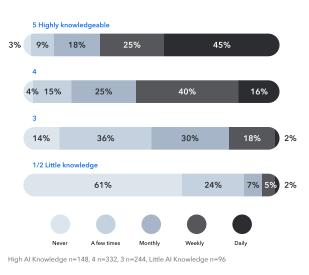
Frequency of personal genAl use



Total n=820, Tech n=390, Non-tech n=430

5 Highly knowledgeable 1% 9% 9% 24% 57% 4 36% 19% 22% 17% 7% 3 17% 32% 34% 2% 1/2 Little knowledge 59% 28% 1% Δ few time Wookly Daily High Al Knowledge n=148, 4 n=332, 3 n=244, Little Al Knowledge n=96

Frequency of personal genAl use



Of those who have not used genAl professionally or personally, we see a mix of skepticism, concern, and lack of knowledge or opportunity

Respondents who said they hadn't used genAl either professionally or personally were asked to explain why in an open-ended response. Of the 159 respondents who indicated they hadn't used genAl either professionally, personally, or at all, the most common reasons include no interest or need, lack of knowledge, concern or fear, and lack of opportunity (see data on page 7).

Another 12% indicated that they had either used genAl in one context or another or that they were about to start using it, typically in a professional context. In this latter group, several indicated that they were waiting for their companies to develop guidelines or policies on how to use genAl. Here's one such example: "We are still in [the] process of finding a proper way of using Al in our work model so that it will be helpful rather than a liability."

A similar proportion of respondents either didn't have a reason or weren't sure why they hadn't yet used genAl. Other reasons included criticism of the capabilities or output, data protection or privacy issues, and lack of guidance.



"We are still in [the] process of finding a proper way of using AI in our work model so that it will be helpful rather than a liability." Most frequent reasons for not using genAl

No interest or need

"Don't need it, believe people are too dependent on it."

"Haven't had the need so far."

"Hasn't occurred to me yet that I wanted to use it, perhaps in the future."

"I don't have a reason to use it as I enjoy writing and coming up with ideas on my own."

"No concerns, I just don't need it. I do things by hand."

Concern or fear

13%

"Haven't gotten around to it yet, lots of concerns too."

"I don't really trust it."

"I don't think it's a good thing."

"I have tried it. I do not like it because it takes creativity away from people."

"I think that they need to be careful with AI. It could take over the world."

"I'm concerned it is not regulated properly."

Lack of knowledge

16%

"Don't know enough about it, or the accessibility of it. Would be open to learning."

"I don't really know how to use it or what it's used for."

"Don't know enough about it."

"I am not familiar enough with it to use it."

Lack of opportunity

11%

"I just haven't found the time to consider useful applications."

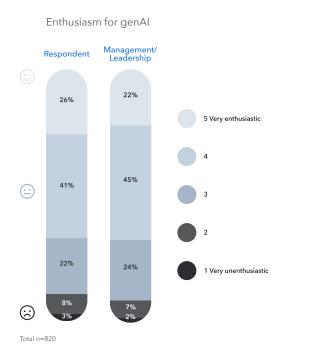
"Firewall issues at the professional level. No issues using personally."

"I just haven't come across it yet, I would try if it came up."

"It hasn't been applicable yet."

Overall, enthusiasm for genAl is strong

Across the entire survey population, our respondents are enthusiastic about genAl (3.79 mean and 4.0 median, SD 1.0) and perceive the enthusiasm of their employers' leadership to be on par with their own (3.77 mean and 4.0 median, SD .94). These top-level results surprised us somewhat – we'd expected that there might be a discernible gap between how individuals feel about genAl and how they rate their company's enthusiasm, but in general there really wasn't one.



We hypothesized that there might be significant variations in enthusiasm for genAl across different geographic regions, but none emerged. Across regions, there were only minor differences between respondents' levels of enthusiasm and perceptions of management's enthusiasm for genAl. Even differences between regions were quite small and could largely be attributed to variations in sample sizes, concentrations of respondent roles, and cultural effects on rating scales.

How enthusastic are you about genAl?

	USA	Canada	Australia	Europe	Total
Mean	3.83	3.73	3.64	3.75	3.79
Median	4.00	4.00	4.00	4.00	4.00
SD	1.01	0.95	0.90	1.01	1.00

Total n=820, USA n=203, Canada n=104, Australia n=102, Europe n=360

How enthusastic do you believe management and/or business leaders are about genAI?

	USA	Canada	Australia	Europe	Total
Mean	3.86	3.64	3.72	3.71	3.77
Median	4.00	4.00	4.00	4.00	4.00
SD	0.95	0.94	0.92	0.89	0.94

Total n=820, USA n=203, Canada n=104, Australia n=102, Europe n=360

By far, the most meaningful differences depend on levels of self-professed genAl knowledge. Those who are most knowledgeable also tend to be most enthusiastic – and they are somewhat more enthusiastic themselves than they perceive their managers or business leaders to be. That relationship flips at the other end of the spectrum. Respondents who indicated a lower level of knowledge perceive management to be more enthusiastic about genAl than they are themselves.

This highlights one of the most important findings throughout this survey: there are significant differences between those who consider themselves more knowledgeable about genAl – especially the highly knowledgeable – and everyone else. As we'll examine further, this emerging gap is one businesses should identify and act on.

How enthusastic are you about genAl?					
	5 High Al knowledge	4	3	1/2 Low AI knowledge	Total
Mean	4.57	4.05	3.36	2.80	3.79
Median	5.00	4.00	3.00	3.00	4.00
SD	0.70	0.80	0.90	0.96	1.00

Total n=820, High Al Knowledge n=148, 4 n=332, 3 n=244, Little Al Knowledge n=96

How enthusastic do you believe management and/or business leaders are about genAl?

	5 High Al knowledge	4	3	1/2 Low AI knowledge	Total
Mean	4.41	3.92	3.38	3.23	3.77
Median	5.00	4.00	3.00	3.00	4.00
SD	0.73	0.79	0.91	1.01	0.94

Total n=820, High AI Knowledge n=148, 4 n=332, 3 n=244, Little AI Knowledge n=96

Perspective from the Prof: Sam Maglio's take



Sam Maglio Professor of Marketing and Psychology, University of Toronto Scarborough

Expertise: The rift between haves and have-nots

It hardly comes as a surprise that technical professionals have higher knowledge about generative AI than their non-technical peers. Their job might demand it. Their personality type might draw them to it. Things get interesting when this gap in knowledge takes them to very different places.

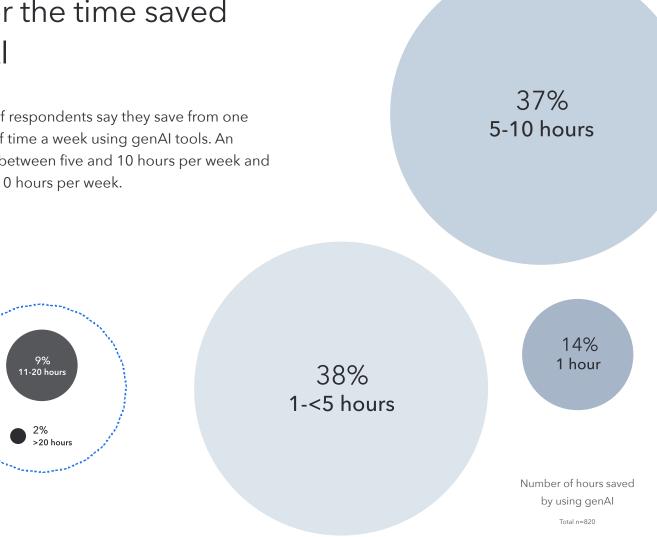
When they think about the future, the same technical professionals who already know a lot are the ones who think they'll need to learn even more skills in the future. It might be tempting to see this as counterintuitive: They already know so much, so the non-technical professionals should be the ones expecting a higher need in order to play catch-up. But that overlooks a snowball effect in the mind. One of the best predictors of future commitment is having made a smaller commitment in the past. Having knowledge fuels the desire to learn more and more.

Technical professionals are a bit more enthusiastic about genAl, non-technical professionals a bit less, and everyone expects that others agree with them. The enthusiastic experts think that business leaders are enthusiastic; those with less enthusiasm believe business leaders share their lukewarm attitudes. This is a perfect example of what psychologists call naïve realism: People think there's an objective world out there, that they themselves see it clearly, and that anyone else with any sense sees things the same way.

This tendency makes technical and non-technical professionals think different things about other people. But who's right? The evidence favors the technical professionals. For proof, look no further than the fact that two-thirds of businesses have a vision for an LLM at their company in the works. We could congratulate the technical professionals for their edge in prognosticating. But we'd be better served as managers in getting the non-technical professionals up to speed. Failing to anticipate the future accurately could find them left behind. Which would be a shame, because new research suggests that they're the ones best poised to reap the benefits of generative AI at work.

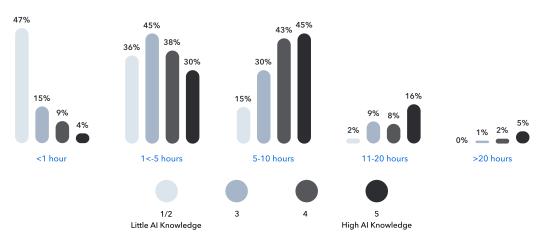
The higher the knowledge, the greater the time saved with genAl

Thirty-eight percent of respondents say they save from one to almost five hours of time a week using genAl tools. An impressive 37% save between five and 10 hours per week and 11% save more than 10 hours per week.



By knowledge

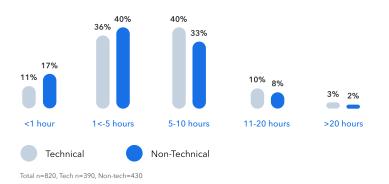
Respondents with higher levels of genAl knowledge are more likely to save a greater amount of time per week using these tools, with 21% of the most knowledgeable saving more than 10 hours per week. By contrast, those who have the least knowledge save the least time. Number of hours saved by using genAl



High Al Knowledge n=148, 4 n=332, 3 n=244, Little Al Knowledge n=96

By role

Levels of genAl knowledge were more significant in determining who saves more time using genAl than technical vs. non-technical job roles, though there are some differences there as well. Notably, respondents in technical roles are more likely to save between five and 10 hours per week and those in non-technical roles less than an hour. Number of hours saved by using genAl

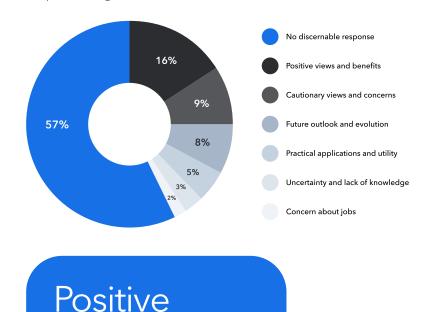


Positive views outnumber cautious, mixed, or negative views

When given the opportunity to share their perspectives on genAl or Al more broadly, most of our respondents demurred, but the overall sentiment ranged from cautious optimism to strong enthusiasm. Fiftyseven percent provided no response, said no comment, told us they didn't know, or provided an incoherent answer.

Of the 43%, or 356, who did comment, the majority (61%) were positive about genAl. Twenty-eight percent expressed concerns or had mixed views, with an overall sense that genAl is happening and is going to make a significant impact regardless of potential drawbacks. Another 8% expressed neutral views. Only 3% were explicitly negative in their views, ranging from it not being necessary in their organizations to genAl being dangerous or outright bad.

We classified the responses into positive views and benefits (16%), cautionary views and concerns (10%), future outlook and evolution (8%), practical applications and utility (5%), uncertainty and lack of knowledge (3%), and concern about jobs (2%). We also received two responses that had clearly been produced by ChatGPT. It's tough to say what's more interesting: the fact that two respondents took this approach, or the fact that we could so easily recognize that's what they did.



Neutral

Negative 3%

Mixed 12%

Perspectives on genAl

61%

Concerned 16%

Access and appeal

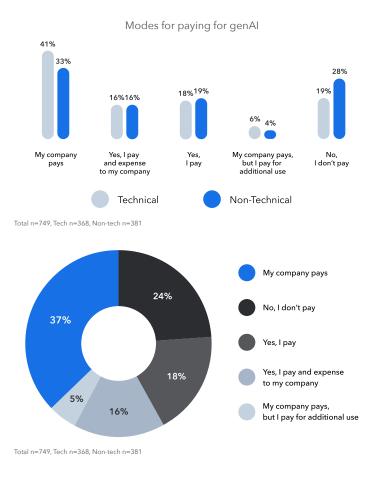
When it comes to using genAl professionally, the vast majority of our respondents willingly pay to play (sometimes out of their own pockets)

Only 24% of respondents don't pay to use genAl tools at work. For the largest portion of our respondents, 37%, their companies pay for their professional use. Another 16% pay for it themselves and expense it. But the most interesting group is the 18% of respondents who pay out of their own pockets – without expensing it – to use genAl tools for work. Add the other 5% who pay out of pocket for additional professional use beyond what is company-funded and nearly a quarter of all respondents find these tools so valuable in a work context that they seem happy to put in their own money to access them.

We struggle to identify a comparable technology development that individuals have been so eager to access that they've been willing to fund professional usage themselves. Mobile phones might come close but most of us with firsthand experience carried a work phone and a personal phone until employers started rolling out bring-your-own-device policies. Cloud computing may have had some parallels in the early days, but most of that use was billed on credit cards and expensed back to employers.

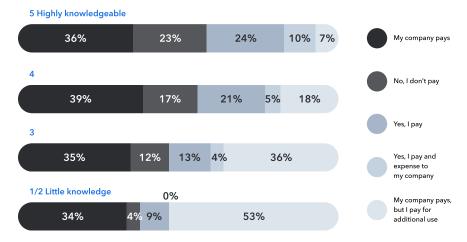
Access and appeal

As in other parts of our survey, patterns vary depending on respondent segments. Respondents in technical roles are more likely to say their companies pay for their genAl usage; nontechnical respondents are more likely to say they don't pay for usage. But there's no significant difference between the groups when it comes to paying and expensing their use, paying themselves, or paying for additional usage.



The more meaningful distinctions here seem to be determined by the level of genAl expertise. The people who rated their knowledge a 4 or 5 are the most likely to pay their own money to use these tools at work, whether or not they expense it, with the "5s" more likely to fund over and above employer-paid access. Given that these are the same groups that are most likely to be saving the greatest amount of time per week, it stands to reason that they would also be more willing to pay their own money for access to genAl tools.

The proportion of respondents who fund their own access to genAl tools for work purposes raises several questions: Do employers know that employees are using these tools? Is this use sanctioned? Does it follow established corporate guidelines or policies? These answers are beyond the scope of our survey – but something businesses should seek out for themselves.



High Al Knowledge n=147, 4 n=326, 3 n=229, Little Al Knowledge n=47

Perspective from the Prof: Sam Maglio's take



Sam Maglio Professor of Marketing and Psychology, University of Toronto Scarborough

Give me some of that - whatever it is

How much are people buying the hype around generative AI? Enough to put their money where their mouth is, that's for sure. Close to one in five pay out of their own pocket for access to these tools. The opportunity to use these tools at work makes an employer more enticing to over 60% of workers. If companies don't already have their own LLM, odds are they're working on one.

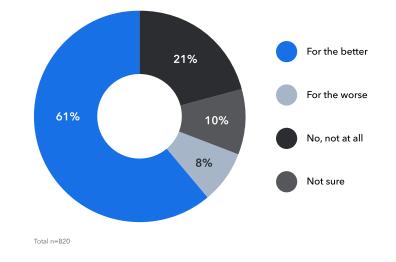
Nothing riles people up quite like potential, even if that potential might take a while to be realized. Between now and then, we see people behaving like they always do when faced with a hazy opportunity. They're terrified by FOMO. They want to make sure they get in on the ground floor. And this frenzied rush guides their investment strategy. The overwhelming share of usage for ChatGPT makes it look like an index fund, seen as a catch-all that can benefit even novices. But people are also diversifying their assets. The average person uses approximately three, but people overall sample from a dozen or more different options.

This behavior – dipping a toe into multiple genAl pools – reveals that people want to explore, to learn, to keep their finger on the pulse of this new technology, or at least to hedge their bets. There's still plenty left to sort out among these providers. In the meantime, people navigate this uncertainty by doing what they've always done: keeping their options open.

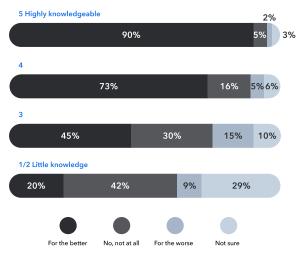
Access to genAl tools at work is a net positive

Overall, most respondents view a potential employer's decision to provide access to genAl tools favorably in choosing whether or not to take a job, with far more ambivalence than any negative impact.

This is even more strongly the case among those who consider themselves genAl experts. Those who rated their knowledge of genAl higher (a 4 or 5) were more likely to say it would positively influence their likelihood of taking a job (73% and 89%, respectively). By contrast, access to genAl tools doesn't seem to make much of a difference at all to respondents who don't consider themselves to be among the genAl cognoscenti. Influence of access to genAl tools on choice to work for an employeer



Impact on the likelihood to choose to work for an employeer that uses genAl tools



High Al knowledge n=148, 4 n=332, 3 n=244, Little Al Knowledge n=96

Most anticipate that genAl will require them to develop new skills

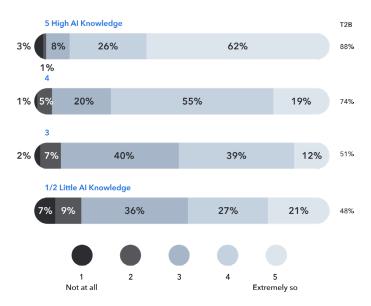
Over two-thirds of all respondents, 67%, rated the degree to which they'll have to develop new skills as a 4 or 5. A scant 2% said not at all. Technical respondents are more firmly convinced than non-technical respondents that they will need to learn new skills as a result of genAl.

Degree to which genAI requires developing new skills

Technical T2B 2% 20% 43% 30% 5% 73% Non-Technical 2% 5% 31% 42% 20% 62% Total 2% 5% 26% 42% 25% 67% 2 З Not at all Extremely so

Total n=820, Tech n=390, Non-tech n=430

Here too, the level of genAl knowledge determines the degree to which respondents anticipate the need to develop new skills. Those who consider themselves the most knowledgeable are overwhelmingly likely to think that genAl will require learning a significant amount of new skills. Even respondents who didn't claim to know much about genAl seem to have a good inkling that they'll need to learn new skills, but they perhaps don't yet know to what extent.



Degree to which genAI requires developing new skills

Tools, use, and guidance

On average, those using genAl tools, whether professionally or personally, are using more than one – regardless of role type or level of genAl knowledge

Overall, respondents who use genAl tools professionally use slightly more tools than those who use them personally. As with other areas of our analysis, the average number of tools increases with levels of genAl knowledge.

This "more than one tool" statistic – and among all but the least knowledgeable, more than two – supports the idea that people across all manner of job roles are experimenting and trying out various options to find what genAl capabilities work best for them. Which genAl tools are you using?

	5 High Al knowledge	4	3	1/2 Low Al knowledge	Total
Professionally	3.73	2.93	2.52	1.56	2.91
Personally	3.28	2.80	2.48	1.59	2.74
Total	3.51	2.86	2.50	1.58	2.82

Total n=1409, High AI Knowledge n=291, 4 n=629, 3 n=413, Little AI Knowledge n=76

By far, the most commonly used genAl tool is ChatGPT, for both professional and personal use

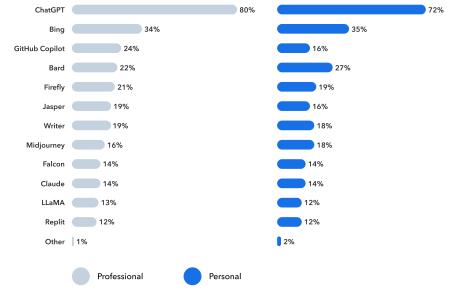
No surprise here – ChatGPT is the most well known and the free version is readily accessible to all. Bing makes a respectable showing as the second most frequently used tool, with over a third of respondents indicating professional or personal use.

More interesting is how many of the other paid, often more specialist, genAl tools have a significant percentage of users, notably GitHub Copilot, Adobe Firefly, Jasper, and Writer. There's a significant subsegment of users for whom these tools are becoming mainstream.

The fact that close to a seventh of respondents indicate using Falcon and Meta's LLaMA, in one capacity or another, hints at the experimentation being done in building custom genAl tools.

Among the fairly small set of "other" tools mentioned, we see on one side genAl capabilities that are integrated into other commonly used tools like Canva and Wix and on the other highly technical investments like proprietary genAl tools. This suggests that we're moving quickly toward a "something for everyone" approach, spanning experts and novices across a range of functional uses.





Professionally n=699, Personally n=710

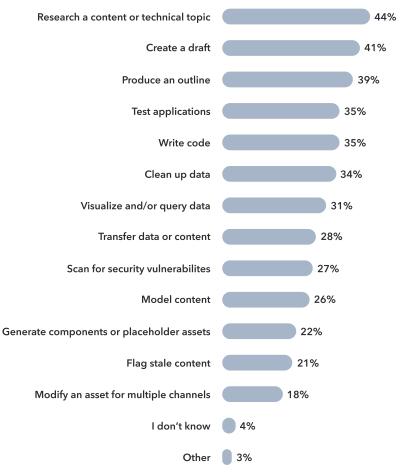
GenAl isn't just for writing blog posts (but yes, that too)

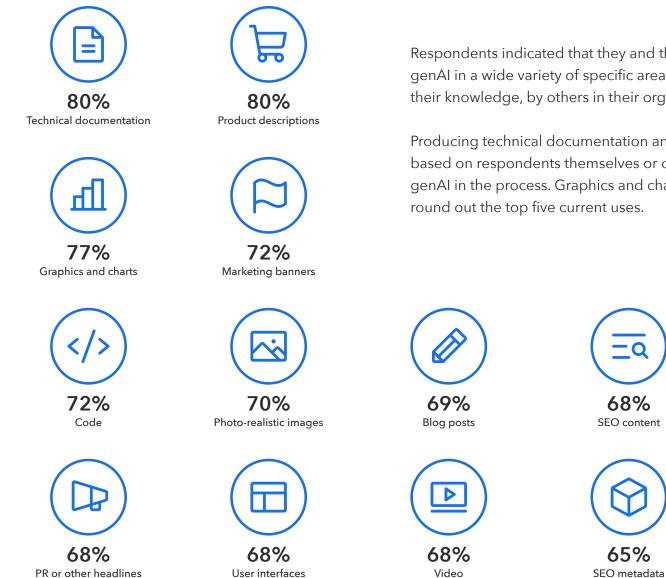
People anticipate using genAl for a wide range of use cases, not just creating content. And their organizations already are. Does that mean that the "tsunami of crap" that many expect genAl to produce might not be so overwhelming after all? Time will tell, but these results give hope that useful output will result regardless.

We asked survey respondents two questions to understand more about what challenges they anticipated genAl would solve for them and where in a professional capacity these tools are currently being used. First, we asked what types of challenges and needs they anticipated generative or other forms of Al to solve for them. Second, we followed up by asking respondents to tell us where they or, to the best of their knowledge, others in their organization were already using genAl.

Among the top challenges or use cases respondents see genAl solving are indeed some that are content-related: researching a content or technical topic, creating a draft, or creating an outline. But there are several important areas not directly related to content, per se, like testing applications, writing code, or cleaning up data. This validated a hunch we had: for all the focus in the media and elsewhere on genAl "producing content," it's actually being used in many different ways, often as part of a broader process, and not necessarily to produce "final product" content.

Use cases for genAl





Respondents indicated that they and their colleagues are already using genAl in a wide variety of specific areas, either directly by respondents or, to their knowledge, by others in their organizations.

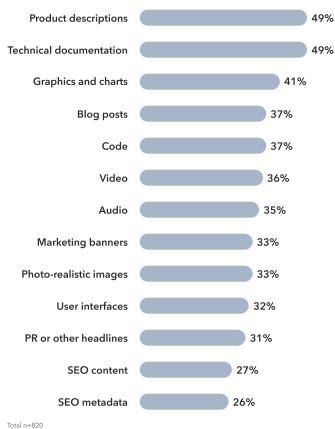
Producing technical documentation and product descriptions rank highest based on respondents themselves or others in their organizations using genAl in the process. Graphics and charts, marketing banners, and code



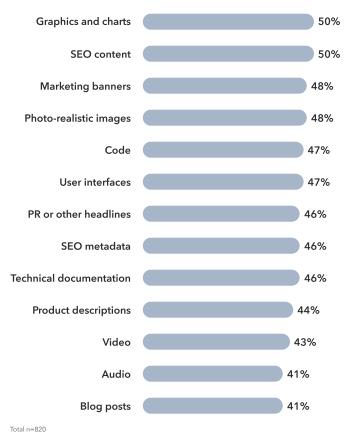
Current usage areas for genAl Total n=820

In comparing where respondents say they're using genAl tools and where others in their organization are, we see clear indications that most people think that others are using these tools more widely than they are. Whether hype or that universally felt fear-of-missing-out, most people seem to think their own usage is behind the curve.

Current Al usage areas (Me)

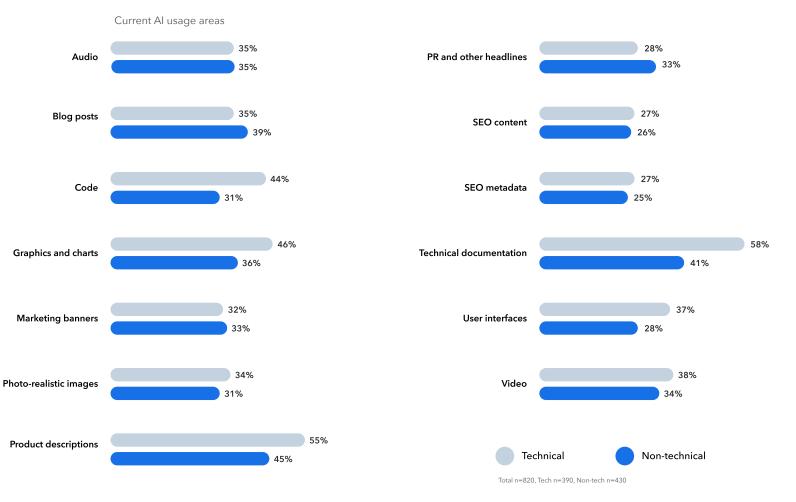


Current AI usage areas (Others in my organization)



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While there's a fair amount of overlap, the areas in which technical and non-technical users indicate that they themselves are using genAl reflect different priorities and objectives, but still have significant overlaps across both more technical tasks (i.e., coding) and less technical tasks (i.e., blog posts).



Perspective from the Prof: Sam Maglio's take



Sam Maglio Professor of Marketing and Psychology, University of Toronto Scarborough

Wait, wait ... do tell me

Uncertainty. Let's take a minute to talk about how much people hate it. Consider a lottery that costs \$1 to play. There's a 60% chance that it pays \$2, leaving a 40% chance of winning nothing. That's a pretty good bet! With a 60% chance of \$2, you can expect to walk away with \$1.20 for every \$1 you play. But lots of people don't think like that. There's still a chance of losing the dollar, so they refuse to play.

Throughout the results we're seeing, respondents are telling us how much uncertainty they feel about genAl. Based on how far things have come in the short year since the release of ChatGPT, using these tools seems, similar to the gamble above, like a good bet. But it's also a risky one. That explains why people are dipping their toes in the genAl water and not doing a sprinting cannonball.

Ask people what they think of genAI and it's mostly positive, plus a hefty dose of "I don't know," "I'm not sure," and "no comment."

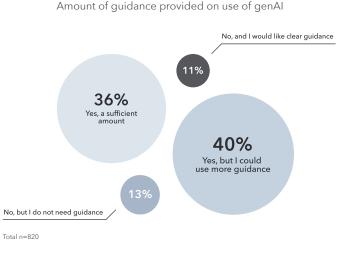
Those unknowns take some of the shine off the otherwise glistening, positive promise of genAl. Appreciating the benefits it might bring, our respondents want to know how to dial down the uncertainty.

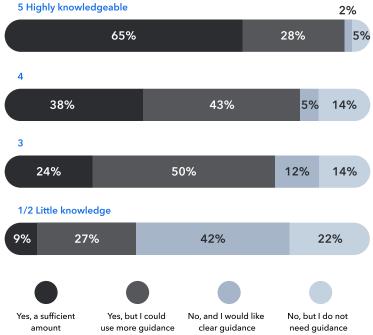
Nowhere is this on clearer display than when you ask people about how they use generative AI and compare it to how they think others use the same tools. For nearly every type of task, and for the technical and the non-technical alike, professionals think that they're using generative AI some but that others are using it more. What are those other people doing? Yes, they're presumed to be using it more to make marketing banners and improve SEO. But what they're really doing, according to our respondents, is "other." That is, people are thinking that there's this awesome tool in genAI and that everyone else is finding ways to use it that they themselves can't fully appreciate.

Despite their enthusiasm, people overwhelmingly want more guidance

Although 36% say they have been given a sufficient amount of guidance from their organization on how to use genAl responsibly, more than half of respondents, 51%, would like more. Forty percent say they already have some guidance but want more and an additional 11% have none but would like some.

Only those who rated their knowledge a 5 are likely to say they have a sufficient amount of guidance. The self-professed experts out there may feel like they know what they're doing with genAl, but just about everyone else would like more reassurance. Importantly, the people who consider themselves the least knowledgeable are most likely, on one hand, to say that they don't have but would like clear guidance and, on the other, to say they don't need it – presumably because they aren't using genAl anyway.





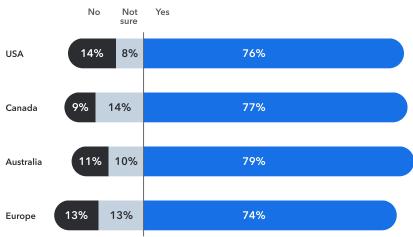
High Al Knowledge n=148, 4 n=332, 3 n=244, Little Al Knowledge n=96

The vast majority support requirements to disclose the use of genAl

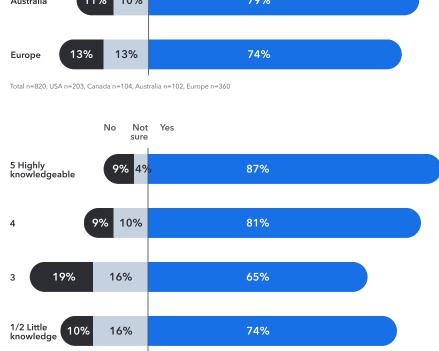
The overwhelming majority of those in our survey, 76%, believe that the use of genAl should be disclosed, whether internally or to customers. Only 12% say that it should not. This is one area in which we expected to find some noteworthy geographic differences. To our surprise, these views are highly consistent across regions, with no significant differences.

Once again, the most meaningful contrasts emerged among levels of knowledge. If anything, those who are more knowledgeable about genAl are more likely to be in favor of disclosure.

We asked respondents to explain in an open-ended response why they felt the way they did about disclosure requirements. Reasonings varied and were often insightful. Consistent themes include, most commonly, the need for transparency and honesty (23% of respondents). The second most common response (11%) expressed uncertainty – people weren't sure or couldn't explain why they felt the way they did. (Six percent of respondents provided no answer or an incoherent one, but we'll chalk that up to survey fatigue.)



Need for genAI disclosure



High Al Knowledge n=148, 4 n=332, 3 n=244, Little Al Knowledge n=96

Although 5% of respondents pointed in some way to fear of what genAl might do, most responses articulated a more nuanced view. They touched on themes around the potential of genAl to improve work or operations (10%), the need to improve awareness or understanding (8%), the evolving capabilities of genAl (6%), the ethical obligations or requirements of disclosure (6%), and the need for regulation or policy guidelines (6%).

The majority of respondents who believed use of genAl should be disclosed clearly indicated that, for one reason or another, it's better to make known where these tools are used. Of those who don't believe there should be disclosure requirements, many indicated a concern that use of genAl may provide some material advantage that businesses shouldn't have to make public. Others felt that since there's already some level of human quality control or involvement, disclosure isn't necessary. A small but distinct group doesn't think disclosure is necessary because they don't think genAl will amount to much or make a meaningful impact.

And then there are responses like this, encapsulating a techelitist view that, though far from predominant among our survey population, certainly exists: "I feel like it isn't a hard concept to grasp, if you need to be explained and/or taught about everything regarding AI, you shouldn't be using it." (Considering this view came from a male in the 18-24 age group, we may well classify this as the ignorance – and certainty – of youth!) Most intriguing to us, respondents who had differing views on the need to disclose use of genAl often had very similar reasonings. For example, the idea that "it depends" came from respondents who variously said they thought use of genAl should be disclosed, shouldn't be disclosed, or weren't sure.

One respondent who felt the use of genAl should be disclosed said: "For our industry, I do not think disclosure of using Al is necessary but in other industries, senior leaders need to be transparent with customers if they use Al in their systems, e.g., health sector." One who did not believe there should be requirements to disclose the use of genAl had a similar view: "If it's just a part of the process and it's not fully controlled by the Al, I don't think it's necessary." Most of the "it depends" camp weren't sure about the need for disclosure, with rationales like this: "It depends on the type of content and how it is used. For example, code generated by Al would not need to be disclosed, but images or other art that is published might."

Across the range of comments, there is a palpable sense of cautious optimism. Most of our survey respondents see the potential and possibilities of genAl and want to encourage positive development while avoiding potential harm or misuse.

Perspective from the Prof: Sam Maglio's take



Sam Maglio Professor of Marketing and Psychology, University of Toronto Scarborough

And action!

No wonder everyone wants more transparency and disclosures around usage. On some level, they're worried that genAI, if not regulated properly, will put others at an advantage over them. As a result, people strive to stay current (paying for genAI out of pocket, playing with more than just ChatGPT, prioritizing employers who use these tools). If there's an advantage to be had, they call dibs.

On the risky chance that others (say, someone competing for the same promotion) might get an unfair leg up, they want guardrails to level the playing field. People may well have an existential fear that, in 20 years, genAl will take their job or wipe out humanity. In the shorter term, we're seeing another kind of Al-nxiety: concerns that genAl will help others get ahead of them.

At the institutional level, this means that businesses need clear internal policies around how genAl can – and cannot – be used in the workplace. You could imagine a near future where companies not only have HR professionals (to govern matters among employees) but also AI professionals (to govern matters between employees and the technology they use). Even with an internal issue like this settled, businesses also need to consider outward-facing matters where their Al usage meets their customers.

We see from our respondents what people have been saying for a long time: The more we trust genAl, the more we'll embrace it. They've also, for almost as long a time, been telling scientists like me how to make Al more trustworthy: by making it less uncertain. People fear the unknown, but a little bit of help goes a long way to demystify Al. They might see genAl as a black box – but, if you let users put their own tweak on the algorithm, they trust it more. The same thing happens, according to my research, when people watch an algorithm make a mistake and then learn from it. People might not totally get how genAl works, but people do get people. An easy route to making algorithms less uncertain and scary is to make them more human-like.

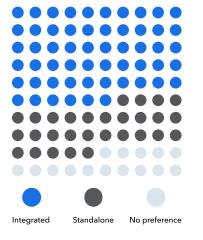
People are begging for ways to make the future of generative AI more predictable, regulated, and equitable. As in so many other areas of life, it's best to give them what they want.

Looking forward

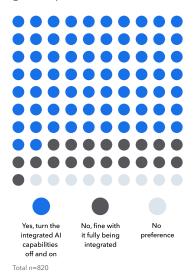
Most people prefer genAl capabilities to be integrated into other tools they (already) use, but want the ability to turn it off

More than half, 56%, want genAl to be integrated. A sizable minority, 29%, prefer them to be standalone. Most people, 72%, want the ability to turn integrated genAl capabilities off and on.

Though the majority of respondents (56%) favor integrating Al capabilities into existing tools, those with greater genAl knowledge are more likely to prefer these capabilities be integrated (70% of 5s and 62% of 4s). Those with the least knowledge are fairly evenly split between integrated, standalone, and no preference (see data on following page). Preference for integrated vs. standalone AI tools



Ability to control use of genAl capabilities

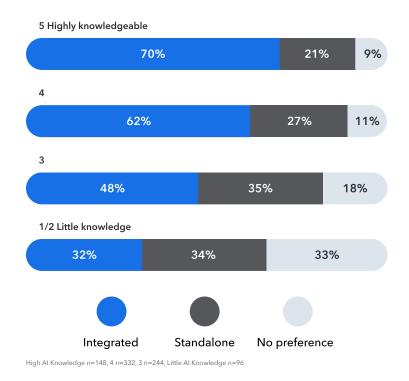


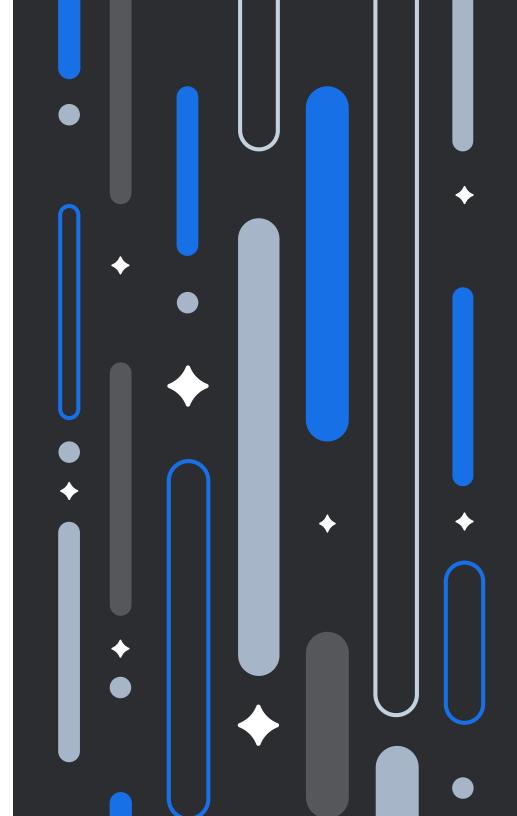
Total n=820

Looking forward

The majority of all respondents (72%), regardless of knowledge level, favor the ability to turn genAl capabilities off and on if they're integrated. The least knowledgeable are more likely to have no preference.

Preference for integrated vs. standalone AI tools





Perspective from the Prof: Sam Maglio's take



Sam Maglio Professor of Marketing and Psychology, University of Toronto Scarborough

Where experts and non-experts agree

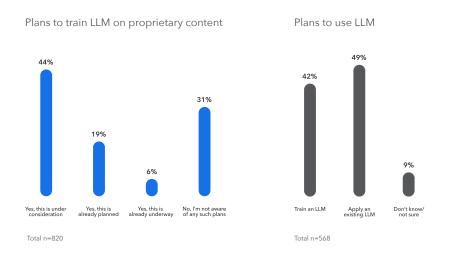
It makes sense that experts and non-experts would diverge in their thinking about generative AI. Similarities in how they think – the psychology behind their judgments about generative AI – lead to differences in what they think. So it really jumps out at you when these two groups agree. We found this in two important areas.

First, both self-described experts and non-experts want the ability to flip off the genAl switch. This makes it sound like algorithm aversion is alive and well. People can be hesitant when it comes to taking advice from an algorithm, especially in certain domains. They'll let an algorithm tell them which tax prep software to buy but not what kind of clothes to buy with their refund. They'll trust an algorithm on how best to drive to a movie theater but not what to see once they get there. Of course, despite all the enthusiasm for this new technology, users still have reasonable reservations about it. The fact that everyone still wants the option to pump the brakes on genAl tells me that people will always want a blend of human and machine. Second, experts and non-experts want to make sure everyone knows who's doing the work. Three-fourths of both groups insist that users of genAl disclose that they've used it. Some respondents answered the survey from the perspective of being a diligent employee, like the person who said, "Employers should know who is doing the work – employees or Al." But these respondents also make decisions as consumers, like the person who said, "Consumers need to know if recommended action is from a human."

This sense of wearing both hats was put well by the respondent who said, "One should work transparently both within the company and with customers." Disclosure around generative AI is the new frontier in business ethics and corporate social responsibility. Consumers have always prioritized and will always prioritize these values. Companies that meet the moment with openness stand to benefit the most.

More than two-thirds of organizations are considering plans either to apply an existing LLM to their own content or to train a proprietary LLM

Just 31% of our survey respondents said they were unaware of any such plans in their organizations, 18% already have plans and a small, but forward-thinking 6% have projects underway. Of those organizations with projects or plans, 49% are applying an existing LLM and 42% are training their own. We seem to be on the cusp of a major wave of tailored genAl use.



These results validate our view that, for all the philosophical or academic discussions of "artificial general intelligence" emerging at some point in the future, the significant near-term value of genAl for most organizations is in a tailored approach. GenAl tools that reference vetted, validated, and approved inputs are more likely to produce useful outputs, whatever the objective or context.

One of the most pointed questions these data raise is which approach to building a tailored LLM will be the fastest and most effective. Training a proprietary LLM using, say, open-source tools can deliver substantial value, but is not for the faint of heart. This approach requires clearly understood use cases, specialist engineering capabilities, and significant resources. The ability to fine-tune or apply retrieval-augmented generation (RAG) to existing LLMs may present faster and less expensive (or less demanding) alternatives. In all of these cases, the volumes of proprietary content businesses already have become valuable assets. We look forward to examining this topic more thoroughly in future research.

Recommendations

The knowledge gap in genAl has major implications for businesses and individuals alike. Those most knowledgeable about genAl are far more enthusiastic about this new technology than others. They are more efficient because they save more time using it and they anticipate a much larger need to learn new skills.

Exposure and access do not necessarily mean unfettered use. There are many well-founded reasons to be selective about how and where genAl tools are used. However, finding opportunities to use and experiment with them, for all employees regardless of job role, is the most likely avenue to identifying useful applications as well as potentially problematic or harmful outcomes. In this case, knowledge really is power. Given the rapid rise of genAl and the demonstrable enthusiasm among those who are most knowledgeable about it, businesses have much to gain by making sure all of their employees have access to these tools and the guidance they need to work with them appropriately. People who don't have the opportunity to work with genAl on the job may seek out other opportunities to do so, either outside work or in other roles elsewhere.

Business leaders must take action

Encourage everyone throughout the organization to experiment with genAl – and give them access to tools

Even in businesses that anticipate little benefit from genAl, ignorance could prove exceedingly risky. Knowledge should not be compartmentalized within only a few teams. The potential impact is far-reaching and firsthand experience should be as well. As Prof. Maglio points out, current research suggests that nontechnical users may be the most likely to gain from its use. Even negligible benefits may yield valuable lessons (see our comments on survey methodology).

Provide a clear set of guidelines and encourage experimentation

Our survey results clearly indicate that employees across a range of roles are eager to see what genAl can do for them, but they're concerned about doing something harmful or unethical. Business leaders must provide the guardrails that allow employees to experiment without fear of inadvertent missteps. The narrow or broad guidelines should be determined by the type of business and even the work of particular teams.

Build a plan for custom genAl tools

Tailored LLMs, whether trained from scratch or leveraging existing models, are poised to be the next step-change in genAl. The ability to leverage existing, proprietary content to drive reliable, relevant outputs has broad potential benefits. So does the use of a range of additional, specialized tools that employ genAl. We expect businesses to see the biggest benefits from these investments. Above all, recognize that genAl tools, for all their potential, are a means to an end.

Individual professionals also have agency

Seek out opportunities to learn, whether at work or elsewhere

A growing number of businesses are actively encouraging and facilitating experimentation with genAl tools among their employees, but this isn't universally the case. For many reasons (well justified or not), some businesses may restrict or prohibit use of genAl tools. Gaining experience with and building understanding of genAl capabilities can come from any sphere, including personal use and outside courses.

Be prepared for change

GenAl has been widely available for just over a year. We are only at the start of using it and understanding what it can do. At the same time, capabilities are evolving even more rapidly than expertise. We can only anticipate how and where it will provide the biggest benefits and make the most impact. Those most knowledgeable about genAl are also the most likely to say there is a lot to learn. Growth mindsets and lifelong learners rejoice.

Appendix: Methodology and demographics

A few words about our survey sample

Any survey will have some bias in its responses, whether because of the subjects it covers, the respondents sought, who responds, or the way questions are posed. Ours is no exception. With a subject like genAl in particular, it's fair to say that people who feel they know more are more likely to respond. That's certainly reflected in our survey population.

It also means that although we met our survey objectives for the number of responses in 10 countries and four regions, an approximate balance between technical and non-technical roles, a reasonable mix of industry representation and company size, and a mix of age ranges, the gender balance among our respondents skewed somewhat more male than female. The full demographics of the survey are available in the demographics section.

Overall, we feel confident that our survey population presents a good approximation of the diversity among our customer base, though knowledge of or experience with a content management system (CMS) was in no way a qualification to participate in this survey.

Methodology

The survey for this research was developed by Contentful, then validated and fielded by PureSpectrum on behalf of Contentful during December 2023. Respondents were part of voluntary research panels and contacted via email to complete an online survey. We set response quotas by country and had soft targets for a roughly even number of technical and non-technical respondents in each, job levels that covered mid-level responsibilities and seniority, a reasonable distribution across industry sectors, and a range of company sizes.

PureSpectrum and Contentful jointly analyzed the data using Decipher. Additional translation and classification of open-ended responses was conducted by Contentful using ChatGPT 3.5 (also known as the free version).

We found ChatGPT's translations to be consistently high quality, something we validated by requesting a one-for-one output of the original response and the translation. We did a significant amount of spot-checking among these translations and were satisfied with the results.

We also asked ChatGPT, based on the original questions posed, to identify important themes and then categorize the responses within those themes, counting how many fell into each category. Here is where ChatGPT 3.5 produced some less impressive results. The tool was fairly good at identifying themes among the open-ended responses. It was far less good at consistently categorizing individual responses accurately. In some cases, ChatGPT only provided counts of the responses within each category, without identifying which theme it had classified individual responses within.

When asked to provide each response and the category within which it fell in a table, ChatGPT 3.5 had difficulty with long lists of responses. Any more than about 100 responses at a time caused the system to break down and either stop providing responses or provide nonsense responses. Even with providing 100 responses at a time, the tool couldn't get through the entire list of responses for some questions. (Perhaps we should have paid for access to GPT 4!)

The other major difficulty the tool had was accurately classifying responses, especially when nuance or informal language was involved. Considering how challenging this can be even for experienced humans, we weren't particularly surprised. As a result, we took significant time to manually review or add classifications to all responses, and in some cases, to the list of themes we used to classify them. Despite this considerable manual effort, we estimate that ChatGPT 3.5 saved at least five hours of work over several partial days of effort (perhaps 12 hours of manual work). We probably learned at least as much as ChatGPT did in the process.

Prof. Sam Maglio at the University of Toronto's Rotman School of Business joined the Contentful team in the substantive analysis of the survey data. His unique perspectives as a psychologist examining perceptions and attitudes toward machine learning and artificial intelligence have provided invaluable contributions to the findings we share in this report.

Regional breakdown

Country breakdown

Country	Percentage
USA	25%
UK	12%
Canada	13%
Australia	12%
Germany	13%
France	7%
Denmark & Norway	6%
Netherlands	6%
Mexico	6%
Total n=820	

Respondent job level and role

What best describes the level of your position at your organization?

Position	Percent	age
Entry-level	0%	
Mid-level	4%	
Managerial level	59%	
Director level	21%	
Head of Department	16%	
Vice-President level	0%	
Executive level (C-level)	0%	
Total n=820		
Position		Percentage
Technical		48%
Non-technical		52%

What best describes the job function that you work in?

Technical position	Percentage	Non-technical position	Percentage
Web developer	1%	Content creator	5%
Front end designer/developer	1%	Content designer	3%
Back end designer/developer	1%	Content editor	2%
Full stack developer	1%	Content strategist	2%
Software developer	4%	Communications	10%
Data analyst	8%	Digital marketing manager	5%
Cloud architect	1%	Information architect	3%
DevOps manager	4%	Marketing leader	6%
Technical account manager	7%	Public relations	6%
Mobile app developer	1%	Social media marketing	3%
П	18%	UX designer	1%
		UI designer	1%
		Other	6%

Total n=820

Industry

Which of the following best reflects the industry you work in?

Industry	Percentage
Financial services and Banking	9%
Public sector	10%
Healthcare	8%
Retail	11%
Manufacturing	9%
Technology	21%
Media and Communications	5%
Professional services	6%
Real estate	2%
Construction, Engineering and Architecture	4%
Transportation and Warehousing	5%
Entertainment	3%
Energy, Mining, Oil and gas	2%
Other	4%
Total n=820	

Company size

How big is your company?

Employees	Percentage
I'm self employed	0%
Under 50	7%
50-499	37%
500-999	19%
1,000-1,249	9%
1,250-4,999	12%
5,000-9,999	6%
10,000+	10%
Total n=820	

Gender		Age	
Gender	Percentage	Age	Percentage
Female	44%	18-24 years	10%
Male	55%	25-34 years	31%
Other	1%	35-44 years	26%
		45-54 years	19%
		55-64 years	10%
		65+ years	4%