Deloitte.

Cresting the cloud horizon
From adoption to business value

Contents

Executive summary

As Canadian organizations look to the next horizon of growth and value generation, moving to the cloud is becoming less about the technology and more about enabling business value.

In 2023, we surveyed more than 200 Canadian public and private sector cloud decision-makers and interviewed more than 20 technology leaders, including the Canadian leaders of the three largest public cloud providers: Amazon Web Services, Google Cloud, and Microsoft Azure. What we found was a discernible shift in priorities from enabling underlying infrastructure to delivering value at the heart of the business.

We also found that cloud adoption continues to accelerate in Canada. Organizational capabilities are maturing, the toolkit is expanding, and exciting new use cases for industry-specific capabilities powered by industry clouds and Generative AI (GenAI) are emerging.

Key findings

83%
believe that their capabilties are ahead of their peers

Canadian cloud leaders are confident in their progress

The majority of organizations have moved **at least 40%** of their technology workloads to the cloud, with nearly three-quarters of respondents characterizing their progress as past the foundational stage. This progress has translated into higher confidence, with **83%** of those that placed themselves in the "acceleration" or "optimization" phase of their cloud journey believing that their capabilities are ahead of their peers—a marked increase from our 2022 survey.

86%
expect investment in cloud solutions to increase

Despite some economic uncertainty, cloud investment continues to grow

For the majority of Canadian organizations (**77%**), economic conditions impact their cloud adoption plans to a considerable extent, with economic uncertainty, increases in the cost of goods and services, and labour shortages indicated as the top three economic factors. Despite this, expectations for cloud investment remain robust. The overall compound annual growth rate (CAGR) for cloud spend is projected at **11.4%** over the next five years, outpacing other categories of IT spend, with **86%** of organizations expecting investment in cloud solutions to increase over the same period.[1]

81%
characterize their feelings toward GenAI as optimistic, energized, hopeful, or curious

Cloud aspirations are growing as business expectations evolve

Canadian cloud leaders are no longer considering the cloud strictly as an option for cost reduction, instead understanding the investment potential and innovative opportunity it presents for their business. The majority view their cloud service providers (CSPs) as strategic partners in business transformation, and more than half see them as a gateway to accessing emerging technologies. Coupled with positive sentiment scores toward GenAI—with **81%** of respondents characterizing their feelings as optimistic, energized, hopeful, or curious—cloud services are increasingly being viewed as a necessary investment and a vital enabler of innovation, growth, and agility.

91%
identify industry clouds as an enabler for transformation and automation

Adoption of industry cloud solutions is accelerating

The use of industry clouds—composable building blocks that include cloud-based services, applications, and other tools to accelerate the development of industry-specific digital solutions—is on the rise across all industries. A recent survey by International Data Corporation (IDC) highlighted a dramatic increase in adoption last year, with organizations that were currently using or planning to use industry cloud solutions increasing from **44%** in 2022 to **77%** in 2023.[2] Our Canadian survey reinforces this, with **91%** of cloud leaders identifying industry clouds as an enabler for the transformation and automation of industry-specific business processes.

A call to action

We believe that delivering on an organization's expanded vision and aspirations for the cloud calls for technology leaders to act on three fronts:

### Align business and technology on investment priorities and planning

Business leaders have become more prominent in the procurement of cloud services. Whether experimenting with AI or leveraging the building blocks of industry cloud solutions, business and technology decisions have become more closely entwined. The role of technology teams is to help the business identify the right tools for the job. It's now more critical than ever that business and technology roadmaps align on parallel tracks to evolve the organization's cloud footprint and support the development of new capabilities over time.

Ensure capabilities are ready to rise to the moment

As more cloud investments move toward business-driven use cases, it's imperative to have the right foundations and capabilities to deliver on the organization's goals. Growing demand from the business to enable new use cases, particularly around GenAI, is putting pressure on technology teams to ensure their existing cloud architecture and capabilities are up to the task. The difference between organizations that are ready for the moment and those with foundational gaps is rapidly becoming evident in terms of their capacity for innovation and time to market.

Quantify the true value of the cloud

Leaders will need to articulate the long-term value of cloud investments and how they help deliver on the ambitions of the business. Cloud spend should be viewed as less of an operational expense and more of a business investment. Setting a clear strategy on how and why cloud adoption enables business needs to be met is key if technology is going to get the support and investments it requires to deliver on the aspirations of the business. Similarly, leaders will need to rethink how they measure success, with less focus on how many systems are on the cloud and more on building modern engineering capabilities to innovate and accelerate time to market.
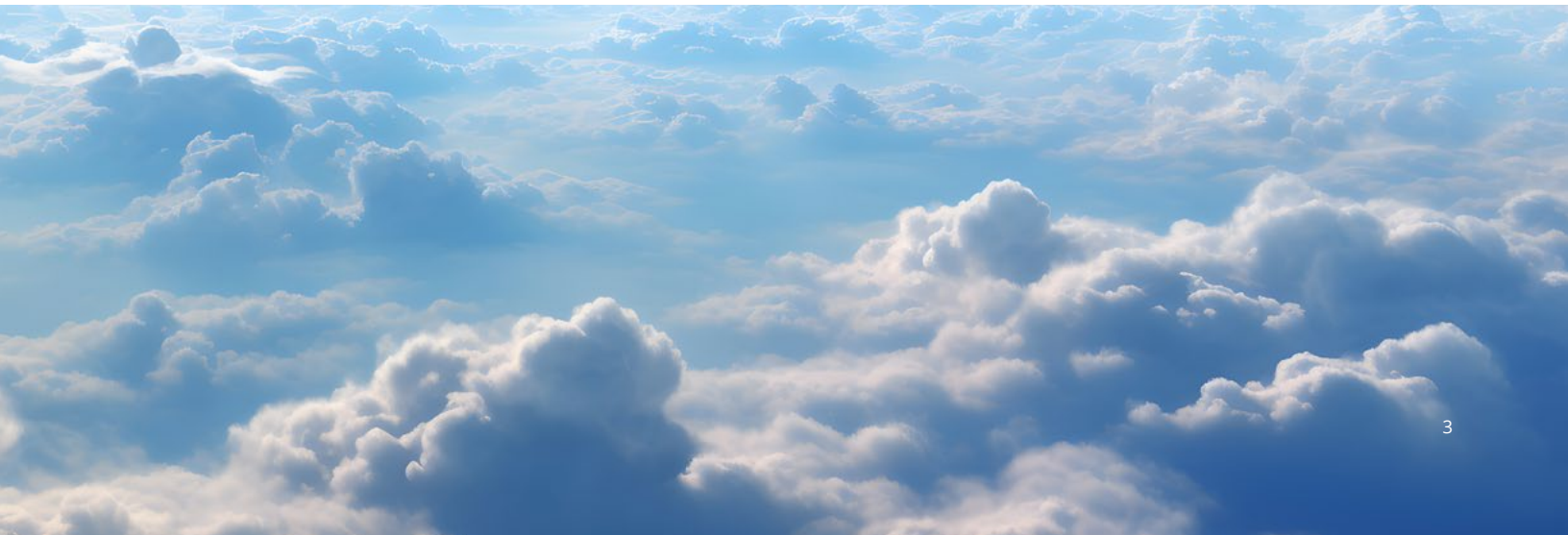
Detailed survey findings

Canada adopts cloud

The shift to the cloud is progressing rapidly across Canadian public and private organizations. Our data shows how their cloud maturity and adoption rates have increased over the past two years.
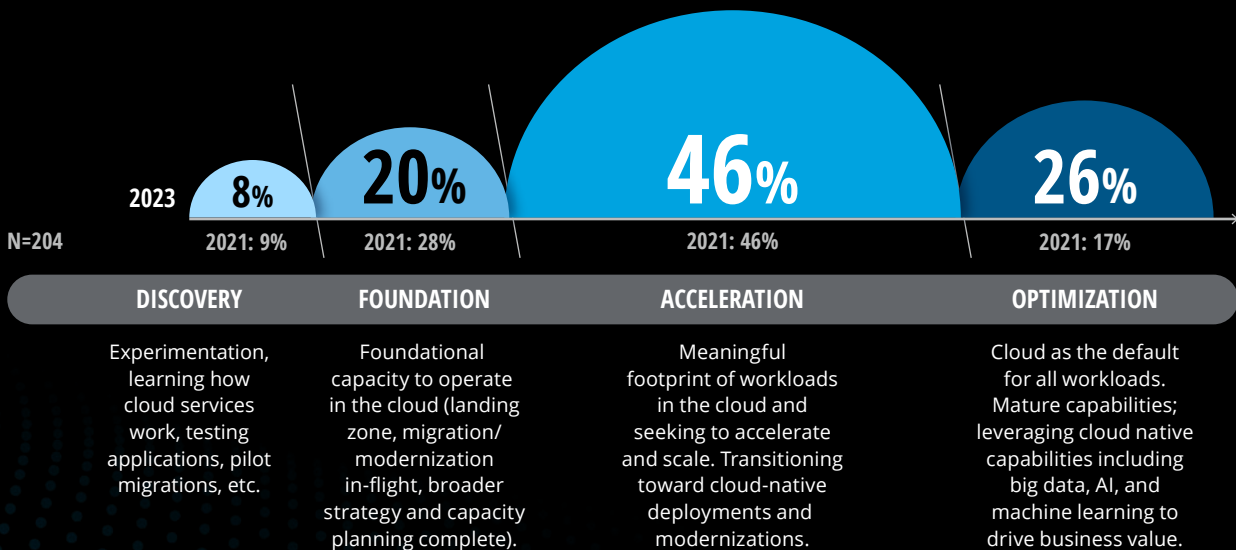
Many of our respondents (**58%**) have already moved **at least 40%** of their current workloads to the cloud and more than one in five have moved **more than 60%**.

What percentage of your organization/agency's workloads/applications are in the cloud?

Percentage of organizations

11%	**31**%	**37**%	**18**%	**3**%
0%	20%	40%	60%	80%	100%

N=204

Percentage of current workload in the cloud

Where would you place your organization/agency on the cloud journey at this time?

2023

N=204

8%	20%	46%	26%
2021: 9%	2021: 28%	2021: 46%	2021: 17%

| DISCOVERY	FOUNDATION	ACCELERATION	OPTIMIZATION
Experimentation, learning how cloud services work, testing applications, pilot migrations, etc.	Foundational capacity to operate in the cloud (landing zone, migration/ modernization in-flight, broader strategy and capacity planning complete).	Meaningful footprint of workloads in the cloud and seeking to accelerate and scale. Transitioning toward cloud-native deployments and modernizations.	Cloud as the default for all workloads. Mature capabilities; leveraging cloud native capabilities including big data, AI, and machine learning to drive business value.

Moreover, **72%** of organizations are now in the acceleration or optimization phase of the cloud journey (compared to **63%** two years ago), and the vast majority of respondents from these organizations (**83%**) believe they are outpacing their peers in terms of maturity.

Our research shows that mid-sized organizations are accelerating at a greater pace than large ones (**54%** versus **33%**). Organizations that were early adopters (using the cloud for more than seven years) are more likely to be in the acceleration or optimization phase. Yet, as they started moving many of their workloads to the cloud, a greater need emerged for business justifications and use cases in order to proceed.

> **"As a telematics company, we moved quickly to adopt cloud. For us, the really important part has been our ability to combine cloud with a very advanced suite of analytics tools to provide our clients with new services and insights. Cloud on its own isn't enough. It's how you enable the business and customers to use it that matters,"** says Mike Branch, vice president of Data & Analytics at Geotab.

What percentage of your total workloads currently on cloud platforms fall into the following categories?
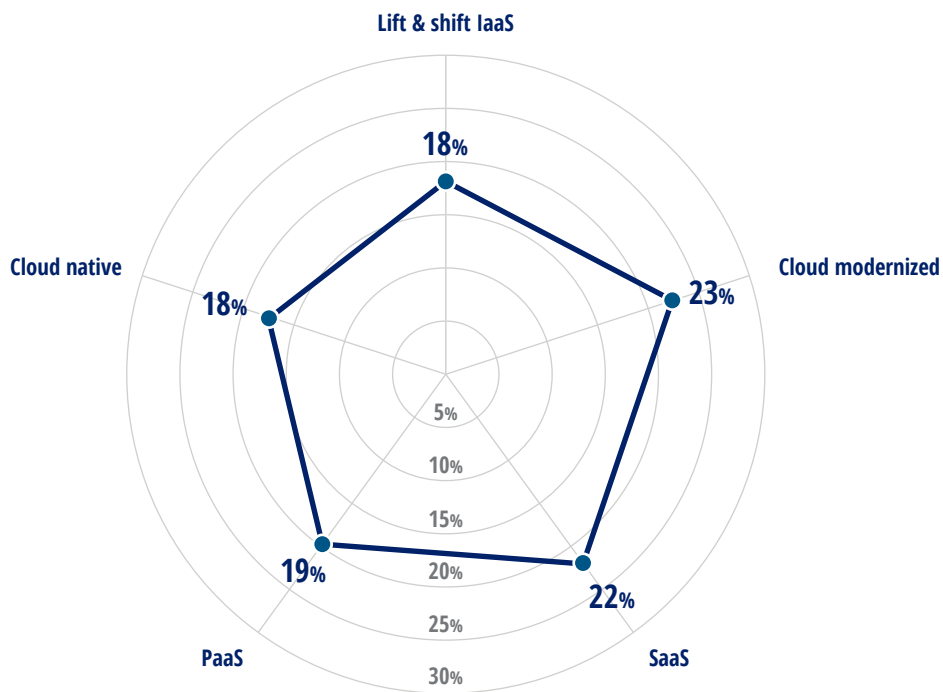
Cloud adoption trends aren't uniform across industries. We found **nearly 80%** of financial services (FS) respondents had shifted at **least 40%** of their workloads to the cloud, compared to just a third of government and public services (GPS) organizations. Many FS organizations have gone beyond lift and shift infrastructure as a service (IaaS) and software as a service (SaaS) solutions to enable more complex use cases and deeper modernization of their core platforms.
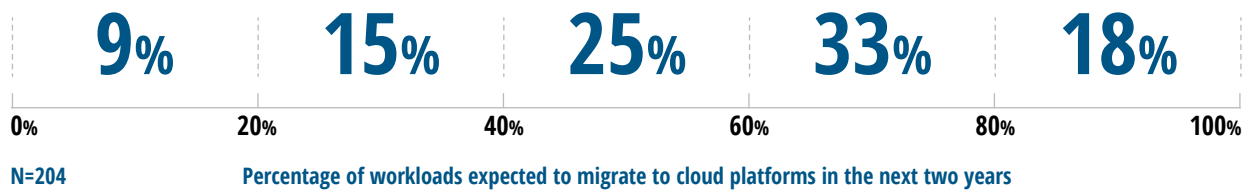
> **"We started on the infrastructure side with a hardened set of services. Then we started layering on the cloud-native applications for specific business needs, like client onboarding,"** explains Mario Hrapko, senior vice president of Architecture, Data & Analytics at CIBC.

Looking ahead

Recent adoption trends seem set to continue as Canadian cloud decision-makers project more of their workloads will be on the cloud in the coming years. More than half of the total respondents (**51%**) will have **60%** of their organization's workloads there within the next two years. FS organizations seem the most ambitious—**72%** indicate they'll do so in one to two years. Six out of 10 technology, media, and telecommunications (TMT) companies will do the same.

Percentage of organizations

9%	**15%**	**25%**	**33%**	**18%**
0%	20%	40%	60%	80%	100%

N=204   **Percentage of workloads expected to migrate to cloud platforms in the next two years**

> **"When we started in January 2020, we had about 5% of our workloads on the cloud, and it was all platform as a service (PaaS) and data lakes. Now we have nearly 75% of our compute workloads there; we've added around 20% per year,"** notes a Canadian cloud leader.

With utilization expectations rising, the majority of respondents (**86%**) expect their investment in the cloud to increase over the next two years. More than a quarter (**26%**) suggest it will increase by **20%** or more.

Do you expect your investment in cloud solutions to change in the next one to two years?

1%	13%	60%	26%

- ● Decrease somewhat (decrease by 6%—19%)
- ● Stay mostly the same (-5%—+5%)
- ● Increase somewhat (increase by 6%—19%)
- ● Increase significantly (20% or more)

"**The shift to cloud has a huge impact on the business. It requires a different thought process than we had in the past. And we really need to enable that change on the business side as well,**" says Raj Thuppal, former assistant deputy minister and chief information officer at the Department of National Defence.

86%

feel that innovative and emerging technologies are driving cloud adoption to a large extent

Emerging technology accelerates adoption

Emerging technology offers attractive tools to drive business growth. Respondents see cloud cyber and AI-based technologies as the most favourable catalysts for innovation within their organizations, highlighting the potential for realizable benefits such as driving retail sales, improving customer service, and providing greater access to services.

"**Our organization is more interested in business outcomes than technology outcomes. It's not about implementing this technology or that one. It's about focusing on the business outcomes and letting that guide the technology decisions,**" notes one Canadian cloud leader.

In particular, Canadian cloud leaders are facing significant pressure from the business to enable GenAI capabilities within their organization. And they recognize the enormous potential, with **81%** saying they are optimistic about the future of GenAI and large language models (LLMs).

Respondents note the potential for GenAI to accelerate process optimization and data modelling, citing the opportunities to use it to power chatbots, marketing campaigns, and other customer-facing domains. They also see value in using it to enhance operational and risk processes, such as fraud detection and cybersecurity.

Leaders expect emerging technology and the pursuit of innovation to drive business growth and cloud adoption.

"You literally cannot do AI without cloud because of the compute power and capacity it requires—even just to do some fine-tuning of large language models. Increasingly, the business is recognizing that AI, data, and cloud go hand in hand," notes Lawrence Wan, chief architect and innovation officer at BMO Financial Group.

How are Canadian technology leaders enabling GenAI?

We asked our interviewees how GenAI is influencing their cloud strategy and pace of adoption. Here's some of what we heard.

"Cloud may not be a board-level topic, but cyber and GenAI certainly are. And both are cloud dependent. So now you are seeing boards start to pressure their CEOs on these important topics and that is forcing CIOs and CTOs to really think carefully about how they can accelerate their cloud adoption."
—*Sam Sebastian, Vice President and Canada Country Manager, Google Cloud*

"I could see us having our own internal GenAI models that are specific to us. But we're really being thoughtful and mindful on how to do that. Right now, we're looking at doing a proof of concept with an AI vendor who specializes in gaming AI personalization."
—*Mark Goldberg, Chief Information Officer and Vice President, Business Technology, British Columbia Lottery Corporation*

"Generative AI is almost like a revolution, and we still probably don't know the extent to which it is transforming business processes and models. We're getting in front of it to understand what the implications might be and ensure we are well positioned to leverage what this emerging technology has to offer."
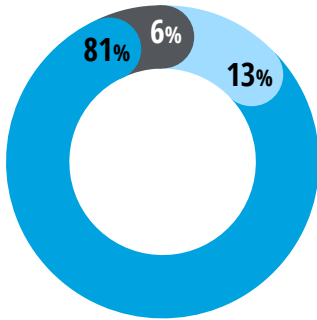—*Dinesh Mohan, Director General, Enterprise Cloud Services , Employment and Social Development Canada (ESDC)*

"In the right circumstances, I've seen great uses of Generative AI that have saved senior commanders and officials a lot of time. But I can conceive of other areas where, unless it's appropriately governed, it could be misused."
—*Ross Ermel, Assistant Deputy Minister, Digital Transformation, Department of National Defence*

"As soon as GenAI hit, our executives were interested in seeing how it could help the business. Thankfully, we had already created a sound cloud landing zone, we had operations teams who knew how to operate in the cloud, and we had good visibility into costs. Within two weeks, we had a few prototypes out. And we've spent the past six months iterating on that to see where the true value is for the organization."
—*A Canadian cloud leader*

"We recently launched Geotab Ace—a trusted copilot that integrates a large language model (LLM) with the context of a fleet's data. Our customers can now use open-ended questions to query their own data leveraging Geotab's data models. And we've spent years on data governance, privacy, security, and underlying AI models, which has made it faster for us to bring this capability to our customers."
—*Mike Branch, Vice President, Data & Analytics, Geotab*

"There were lots of expectations about it delivering efficiencies but also transforming our business and how we interact with the client."
—*Mario Hrapko, Senior Vice President, Architecture, Data & Analytics, CIBC*

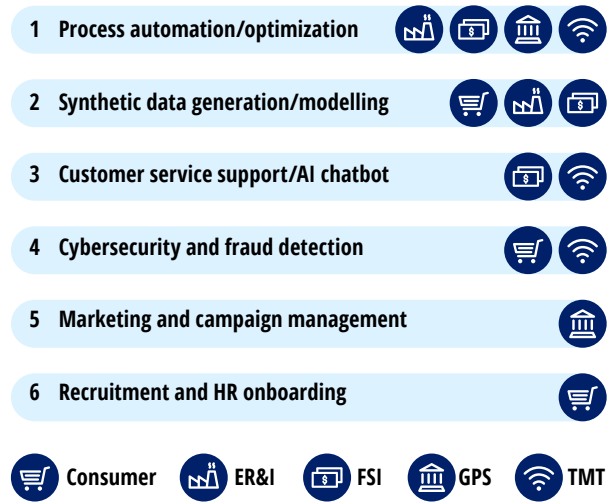## Describe your sentiment toward the future of GenAI and LLMs

- 81% — ● Concerned/Very concerned
- 13%
- 6%

● Concerned/Very concerned
● Optimistic/Energized/Curious
● Cautious

What GenAI use cases would create the most value for you?

1 **Process automation/optimization**   ER&I FSI GPS TMT
2 **Synthetic data generation/modelling**   Consumer ER&I FSI
3 **Customer service support/AI chatbot**   FSI TMT
4 **Cybersecurity and fraud detection**   Consumer TMT
5 **Marketing and campaign management**   GPS
6 **Recruitment and HR onboarding**   Consumer

🛒 Consumer   ER&I   FSI   🏛 GPS   📶 TMT

AI isn't the only thing capturing leaders' attention. Most Canadian organizations expect to adopt a wide range of new technologies and approaches in the coming years.

Industry clouds, for example, can help accelerate the adoption and optimization of cloud solutions. Composed of building blocks of cloud services, applications, and other tools built for strategic use cases in specific industries, they allow an organization to rapidly and confidently embed their capabilities as modular components into its existing value chains.

They also offer a highly effective way of accelerating cloud adoption while still enabling the business to differentiate itself and tailor capabilities to the organization's unique needs.

In your organization/agency, where do you see the biggest need for industry cloud solutions?

- **39%** Client domains
- **43%** Supply chains
- **51%** Core operations

10
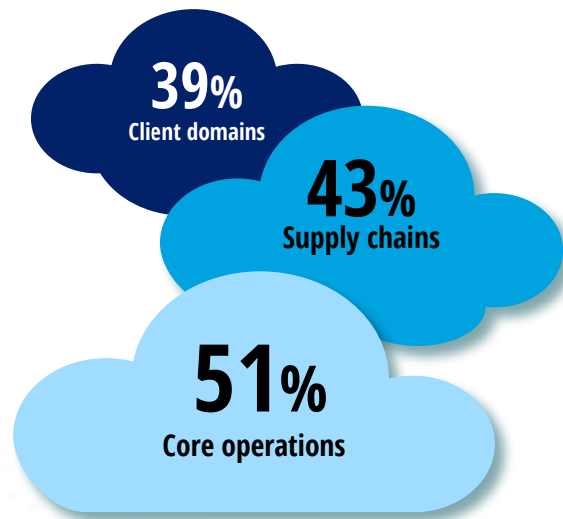
91%

agree that industry cloud solutions are a catalyst for transformation and automation of industry-specific business processes

Not surprisingly, nine in 10 respondents see industry clouds as an enabler of transformation and automation—those from TMT and energy, resources, and industrials (ER&I) were unanimous in their agreement. Canadian leaders believe that industry clouds will help their organizations get innovations to market faster, accelerate the capacity for change, and ensure they remain at the leading edge of digital business processes.

"The industry cloud models and industry solutions that we create are proving to be key in helping organizations really focus on the next horizon for their businesses. And we're only seeing that accelerate," says Doug Smith, general manager of Solutions at Microsoft Canada.

While the draw of emerging tech can be alluring, cloud adoption should never be driven by a desire to chase trends. Organizations that are the most successful with adopting the cloud do so when driven by business needs and desired outcomes rather than mandates. When properly aligned to those needs and objectives, emerging technologies can serve as potent accelerators to cloud adoption and value. Cloud decision-makers should therefore be looking at how they can optimize and grow their cloud capabilities in ways that will enable the business to seize new opportunities as the market evolves.

"We're not moving things to cloud for the sake of moving things to cloud. We're being selective about what problem we're trying to solve and what's the best way to solve it. And that's what's pivoting our decisions and driving our adoption," notes Charles Mongeon, senior vice president of Technology Operations and Cybersecurity at Empire Company Limited.

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Navigating a challenging road

While expectations for adoption are high, cloud leaders did note that recent economic uncertainty has created some headwinds for Canadian cloud implementations. More than three-quarters feel their cloud adoption plans had been impacted to a large or very large extent by economic uncertainty over the past 18 months.

Few think these economic pressures will subside any time soon. Looking out two years, our respondents have a range of concerns. More than half are worried about the potential for continued uncertainty, with slow economic growth and a potential recession still top of mind. An equal number have concerns about ongoing inflationary pressure and its impact on the cost of goods and services.

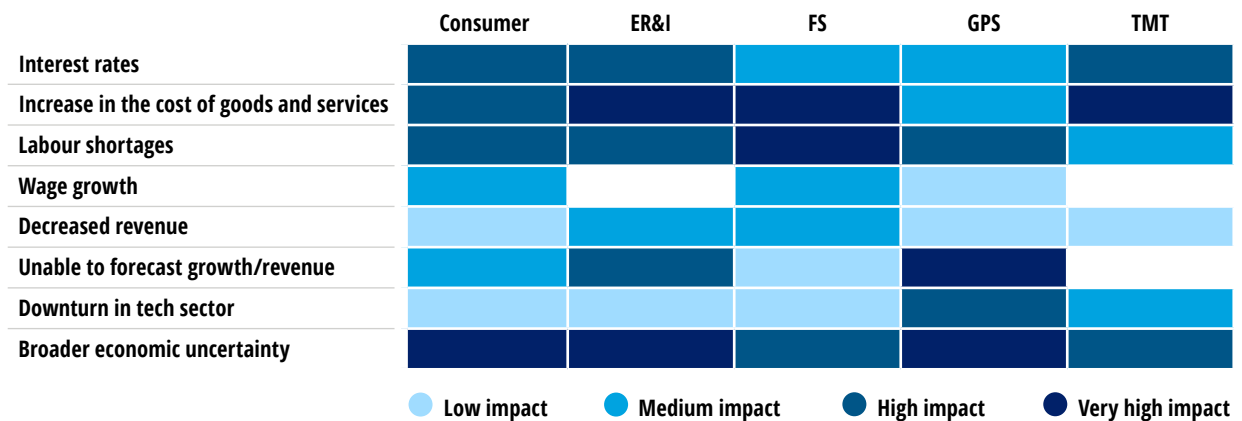**What are the top three economic factors that you feel may impact your momentum to the cloud in the next two years?**

Broader economic uncertainty (recession, slow economic growth, bank insolvency, etc.)

51%

Increase in the cost of goods and services (inflationary pressure)

51%

Labour shortages/inability to hire/retain workforce

50%

	Consumer	ER&I	FS	GPS	TMT
Interest rates	High impact	High impact	Medium impact	Medium impact	High impact
Increase in the cost of goods and services	High impact	Very high impact	Very high impact	Medium impact	Very high impact
Labour shortages	High impact	High impact	Very high impact	High impact	Medium impact
Wage growth	Medium impact		Medium impact	Low impact	
Decreased revenue	Low impact	Medium impact	Medium impact	Low impact	Low impact
Unable to forecast growth/revenue	Medium impact	High impact	Low impact	Very high impact	
Downturn in tech sector	Low impact	Low impact	Low impact	High impact	Medium impact
Broader economic uncertainty	Very high impact	High impact	Medium impact	High impact	High impact

● Low impact ● Medium impact ● High impact ● Very high impact

> **"It's not just about optimizing costs with cloud. It's also about optimizing the workloads and making sure our business model is such that costs and revenues are aligned. Ultimately, it's about transforming the model rather than just lifting and shifting it into the cloud,"** notes Mario Hrapko, senior vice president of Architecture, Data & Analytics at CIBC.

Labour shortages are still a top concern for most Canadian organizations, as they were two years ago. Nearly a third of all respondents who indicated as much expect to struggle to find new cloud talent, and more than a quarter are facing challenges in expanding their cloud workforce capacity.

"We put a big emphasis on the labour component of our cloud strategy. Our focus is on developing our own pool of capabilities by, for example, hiring graduates right out of university and training them in operations and enabling them to really help accelerate our journey to cloud," explains one Canadian cloud leader.

In what areas have labour shortages and trends impacted your organization in the last two years?

N=102

32%	26%	24%	23%	20%
Hiring new cloud talent	Expanding necessary cloud workforce capacity	Retaining existing cloud talent	Training existing cloud talent	Wage competitiveness

At the same time, our respondents also believe there are multiple levers they could pull to accelerate their organization's cloud adoption. Notably, cybersecurity was cited as the top accelerator in three of the five industries of our respondents. They also recognized aligning their cloud adoption plans to the wider business strategy and technology automation as two of the greatest catalysts.

Considering your cloud progress to date, which of the following factors do you feel are most critical to accelerating cloud adoption at your organization/agency?

Service and technology automation	Cybersecurity	Alignment to business strategy
③	①	②
37%	43%	37%

The right support

Cloud adoption doesn't happen in a vacuum. It requires the participation of cloud service providers and often other ecosystem partners, technology vendors, system integrators, and solution providers.

98%

say their CSPs have invested in their organization's cloud migrations/operations in return for a fixed commitment

In our survey, virtually all respondents report that CSPs have invested in their organization's cloud migrations or operations in return for committed cloud consumption over a multi-year agreement. Many of them have received support from multiple CSPs.

CSPs play different roles for different clients—but there appears to be a shift toward closer, more strategic relationships. **Nearly 60%** of our respondents think of their primary CSP as a strategic partner to transform their business, and **55%** see them as a service provider to access next generation technology. This is in addition to their more traditional role as infrastructure service providers: **56%**.

How do you perceive your relationship with your primary CSP?

Strategic partner to transform our business

59%

Technology vendor to provide infrastructure services

56%

Service provider to access next generation technology, like AI and machine learning (ML)

55%

Technology vendor to host our SaaS solutions (no direct relationship)

47%

> **"For the most mature organizations, our relationship has gone beyond the horizon one issues of security, optimization, and cost. Our partnerships are increasingly about horizon two and horizon three enablement—bringing them the ideas, innovations, and technologies that can help them unlock massive opportunities for their business,"** notes Doug Smith, general manager of Solutions at Microsoft Canada.

Canadian cloud leaders also want to enter into multi-year transformation deals with ecosystem partners and vendors, with **78%** having interest in striking such deals. However, our data also indicates there is more work to be done, with **only 16%** of organizations currently having multi-year deals.

We asked our respondents where they expect to gain the greatest value from their ecosystem partners and technology vendors; the results suggest that organizations see a wide range of ways their partners and vendors could support their cloud transformation objectives. Cloud strategy support, cloud design, and cloud managed services are their top three choices, with many also suggesting great value in accessing innovative technologies.

> **"We are working closely with customers to help them understand and imagine the broad range of use cases that they could prioritize. At the same time, we are also seeing a markable increase in investment in things like data governance, data structure, and data security—all the things that are really important to enabling those use cases,"** explains Dan Stark, director of Enterprise Canada at Amazon Web Services.

How would you rate your current level of willingness to do multi-year transformation deals for your organization?

- 1% Not at all
- 1% Somewhat
- 3% Interested
- 25% Very interested
- 53% Currently doing
- 16% Don't know
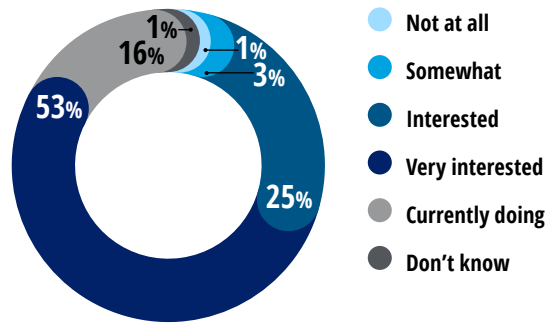
Which capabilities from ecosystem and technology vendors would provide the most value to your organization/agency?

Cloud strategy and planning
38%

Cloud design
35%

Cloud managed services
34%

Access to innovative technologies
30%

Operations support
28%
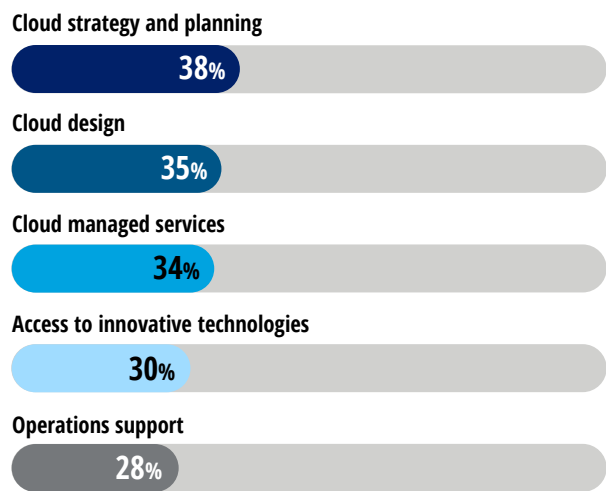
A call to action

Three tips for driving value from the cloud

At Deloitte, our cloud teams work with Canada's top technology leaders to help drive value from their cloud investments. Based on our experience, our interviews, and our survey data, we believe that delivering on an organization's expanded vision and aspirations for the cloud calls for leaders to act on three fronts:

Align business and technology on investment priorities and planning

The need to align business and technology leaders on investment priorities is not new—but it has become more important than ever.

> **"We're more engaged from a line of business perspective than we have ever been. But it's not an either/or proposition. It's more of an 'and' approach—with the business and IT together,"** notes Dan Stark, director of Enterprise Canada at Amazon Web Services

Business leaders have become more prominent in the procurement of cloud services. Whether experimenting with AI or leveraging the building blocks of industry cloud solutions across the operational value chain, business and technology decisions have become more closely entwined.

However, without careful consideration, cloud adoption can lead to downstream operational complexity and unnecessary increases in costs. Enthusiasm for GenAI is high, yet when applied too broadly to projects where the business case doesn't rationalize the added expense of the compute horsepower required, it fails to add meaningful value.

The role of technology teams is to help the business identify the right tools for the job. They help with navigating portfolio-level decisions and identifying trade-offs between investment in new features and functionality versus addressing more systemic concerns. They also set standards and guardrails based on architectural patterns that balance the needs of the business with operational and financial concerns of running technology for the organization.

Business and technology roadmaps therefore need to align on parallel tracks, evolving the organization's cloud footprint and supporting the development of new capabilities over time.

Ensure capabilities are ready to rise to the moment

As cloud investments move toward business-driven use cases, it's imperative to create the right foundations and capabilities to deliver on those aspirations.

> **"I tell the business that it's like building a house. It's hard to rip out foundational things later and upgrade them. It's way easier to rip out the countertop and put in a new one than it is to change the cinder blocks in the foundation when the house is built,"** says Charles Mongeon, senior vice president of Technology Operations and Cybersecurity at Empire Company Limited.

Growing demand from the business to enable new use cases, particularly around GenAI, is putting pressure on technology teams to ensure their existing cloud architecture and capabilities are up to the task. Organizations frequently require new ways of working, with strong discipline around DevOps, automation, and observability.

In addition to considerable computing power, GenAI and LLMs will require organizations to invest in a strong cloud data foundation and develop additional governance, usage guardrails, data management strategies, and security protocols. As organizations mature their readiness in these areas, they'll also reap greater rewards—moving away from low-stakes experimentation with public data into bigger opportunities when LLMs are turned inward, targeting the organization's proprietary customer and operational data for more compelling use cases that can be integrated seamlessly into everyday business processes.

Many Canadian cloud leaders are already getting their foundations in place. They're rethinking their platform architecture, infrastructure, and tools and evolving their approach to business partnering, data engineering, MLOps, DevOps, and DevSecOps. Organizations are also creating more robust controls around IP, governance, data management, and security and improving their infrastructure management, operations management, and platform operations.

> **"When we were less mature, we measured our success based on percentages of workloads in cloud. Now we're looking at more sophisticated metrics that move us toward creating a more modern engineering capacity—things like the delivery time to market and adoption of automation. It's not about pushing things into cloud but rather what you are doing with cloud that matters,"** explains one interviewee.

Quantify the true value of the cloud

Early cloud business cases often centred on a reduction in the total cost of ownership (TCO) over time. Cloud computing was initially seen as a way to move away from expensive data centres and reduce infrastructure costs. Yet, in many cases, as organizations shift more of their workloads to the cloud, and consume more value-added services, costs do not fall as expected.

> **"Between multi-cloud usage driving up costs and complexity, and challenges shutting down our on-premises infrastructure, we're seeing cloud costs spiral. Our CFO is starting to feel like our cloud spend is out of control,"** notes one respondent confidentially.

Despite these challenges, cloud adoption continues to increase in Canada, driven by the recognition of the value it can provide. The recent emergence of technologies like industry clouds and GenAI—and the opportunity to enable the development of new services, quickly address technical debt, and get closer to consumers globally—has created a strong business case for continued adoption.

Going forward, leaders can articulate the long-term value of cloud investments and how they can help deliver on the ambitions of the business. TCO calculations should become broader to include long-term value creation and business enablement benefits. Cloud spend will need to be viewed less as an operational expense and more as a business investment. In parallel, cloud leaders can work with finance to put the right discipline and controls in place to ensure visibility and governance over spend.

This calls for technology teams to work in partnership with the business to rationalize and optimize existing cloud spend to better align with business needs. Setting a clear strategy on how and why cloud adoption enables business needs to be met will be key for technology leaders to get the support and investment they require to deliver the benefits of the cloud.

Detailed survey findings by industry

Consumer

Cloud adoption progress

Leaders in Canada's consumer industry have seen their organization's overall cloud maturity increase over the past two years. However, they are around **7% less likely** than the Canadian cross-industry average to rank their organization as being in the acceleration or optimization phase of the cloud journey.

**Where would you place your organization/agency on the cloud journey at this time?**

CONSUMER
N=49

DISCOVERY	FOUNDATION	ACCELERATION	OPTIMIZATION
14%	21%	47%	18%
2021: 16%	2021: 31%	2021: 32%	2021: 22%
2021: 9%	2021: 28%	2021: 46%	2021: 17%
8%	20%	46%	26%

ALL INDUSTRIES
N=204
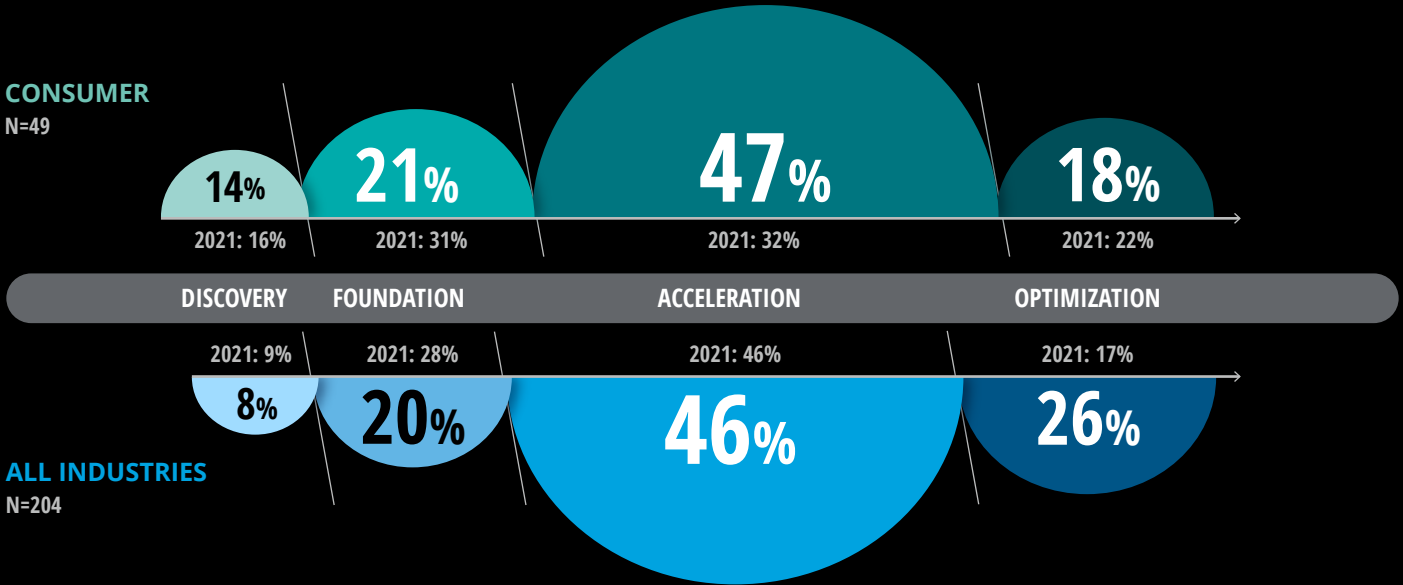
57% of consumer industry organizations have migrated **more than 40%** of their workloads to the cloud, putting them on par with the adoption rate across industries in Canada.

What percentage of your organization/agency's workloads/applications are in the cloud?

CONSUMER
Percentage of organizations

14%	29%	39%	18%	0%

ALL INDUSTRIES
Percentage of organizations

11%	31%	37%	18%	3%

0%　20%　40%　60%　80%　100%

Percentage of current workload in the cloud

What percentage of your total workloads currently in the cloud fall into the following categories?

Lift & shift IaaS 18%
Cloud modernized 24%
SaaS 22%
PaaS 18%
Cloud native 17%
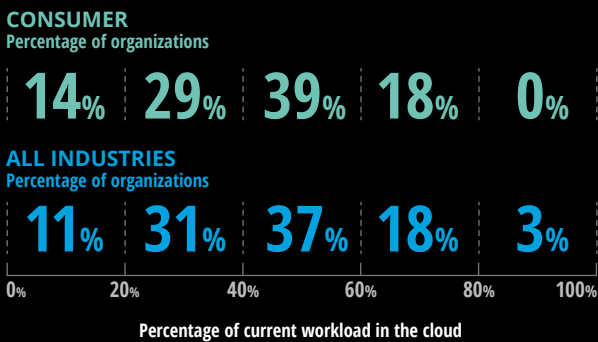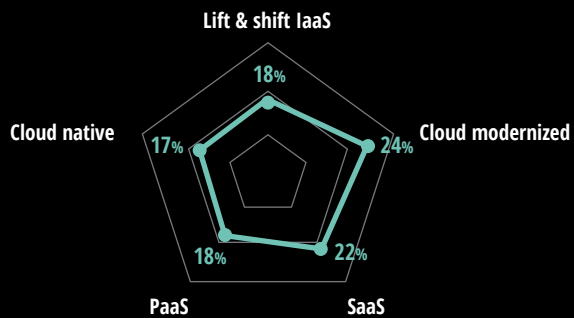
Cloud value, vision, and investment outlook

Consumer industry respondents are highly focused on using the cloud to help their businesses increase their product offerings and expand into new markets. They also see the cloud as helping to enable the ESG objectives of the business.

How important will cloud technology be in enabling these business objectives for your organization/agency?

Expanding existing product/service revenue	16%	45%	39%
Providing better sustainability in support of environmental issues	2% 18%	29%	51%
Expanding into new markets	2% 18%	31%	49%

● Not at all important   ● Somewhat important   ● Important   ● Very important
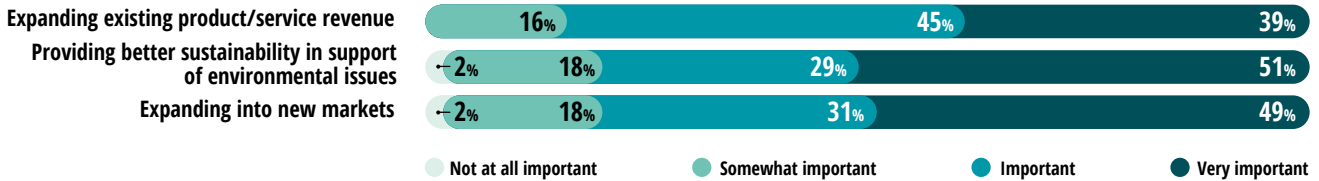
Consumer organizations are more likely than the cross-industry average to see significant increases in investment in the cloud over the next two years. However, **76%** have seen their cloud plans impacted by economic uncertainty over the past 18 months. The economic factors leaders expect to have continued impact include labour shortages, cost increases, and slow economic growth.

Do you expect your investment in cloud solutions to change in the next one to two years?

CONSUMER

● Decrease somewhat (6%–19% decrease)
● Stay mostly the same (-5%–+5%)
● Increase somewhat (6%–19% increase)
● Increase significantly (20% or more)

29%   4%   14%   53%

ALL INDUSTRIES

● Decrease somewhat (6%–19% decrease)
● Stay mostly the same (-5%–+5%)
● Increase somewhat (6%–19% increase)
● Increase significantly (20% or more)

26%   1%   13%   60%
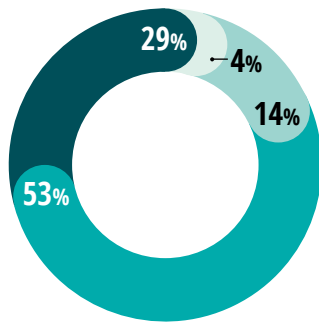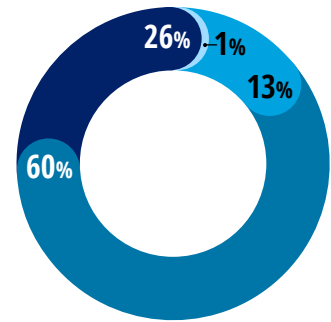
Sentiment around emerging technology

Leaders of consumer organizations expect industry clouds to be an enabler of transformation, helping them gain agility, meet new regulatory demands, and bring innovations to market faster.

Describe your sentiment toward the future of GenAI and LLMs

● Cautious
● Concerned
● Very concerned

● Optimistic
● Energized
● Hopeful
● Curious

Positive sentiments/outlook

16%   14%   2%   8%   22%   19%   19%
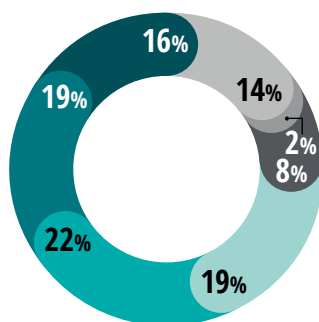
86%

of all consumer industry respondents feel to a **large or very large extent** that innovative and emerging technologies are driving cloud adoption in their organization

Energy, resources, and industrials

Cloud adoption progress

Canadian ER&I organizations have seen their overall cloud maturity increase over the past two years, with leaders ranking them ahead of the Canadian cross-industry average by **8%**.

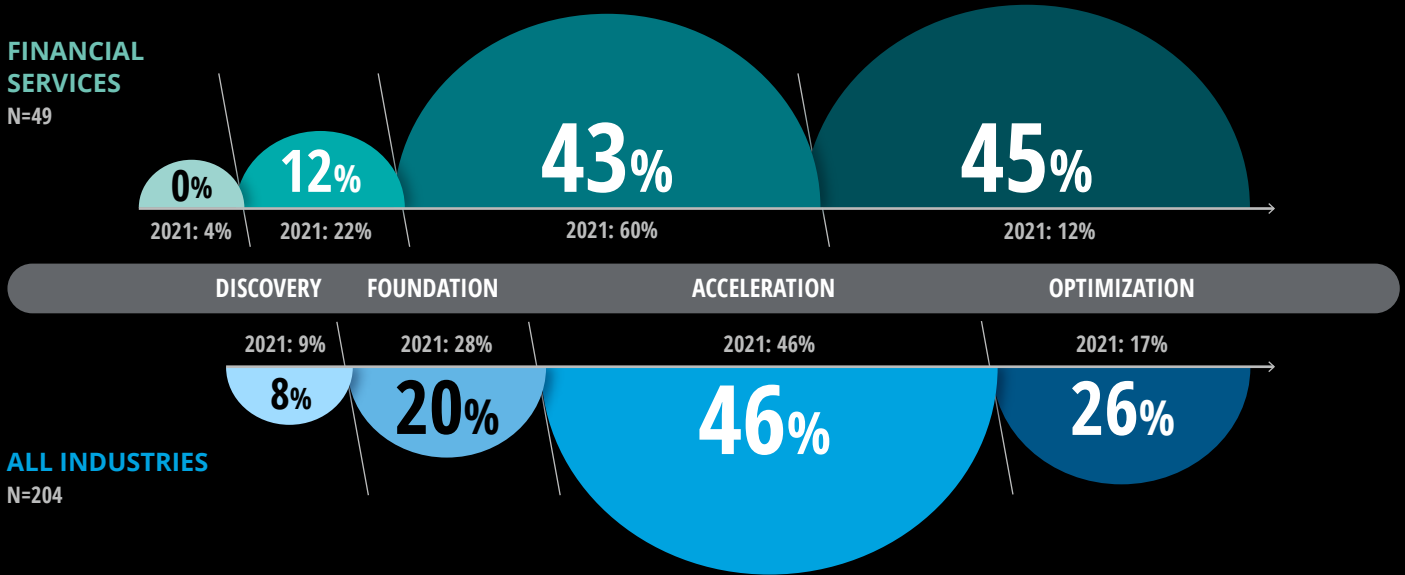**Where would you place your organization/agency on the cloud journey at this time?**

ENERGY, RESOURCES, AND INDUSTRIALS
N=49

10%	10%	55%	25%
2021: 4%	2021: 33%	2021: 43%	2021: 20%

DISCOVERY	FOUNDATION	ACCELERATION	OPTIMIZATION
2021: 9%	2021: 28%	2021: 46%	2021: 17%
8%	20%	46%	26%

ALL INDUSTRIES
N=204
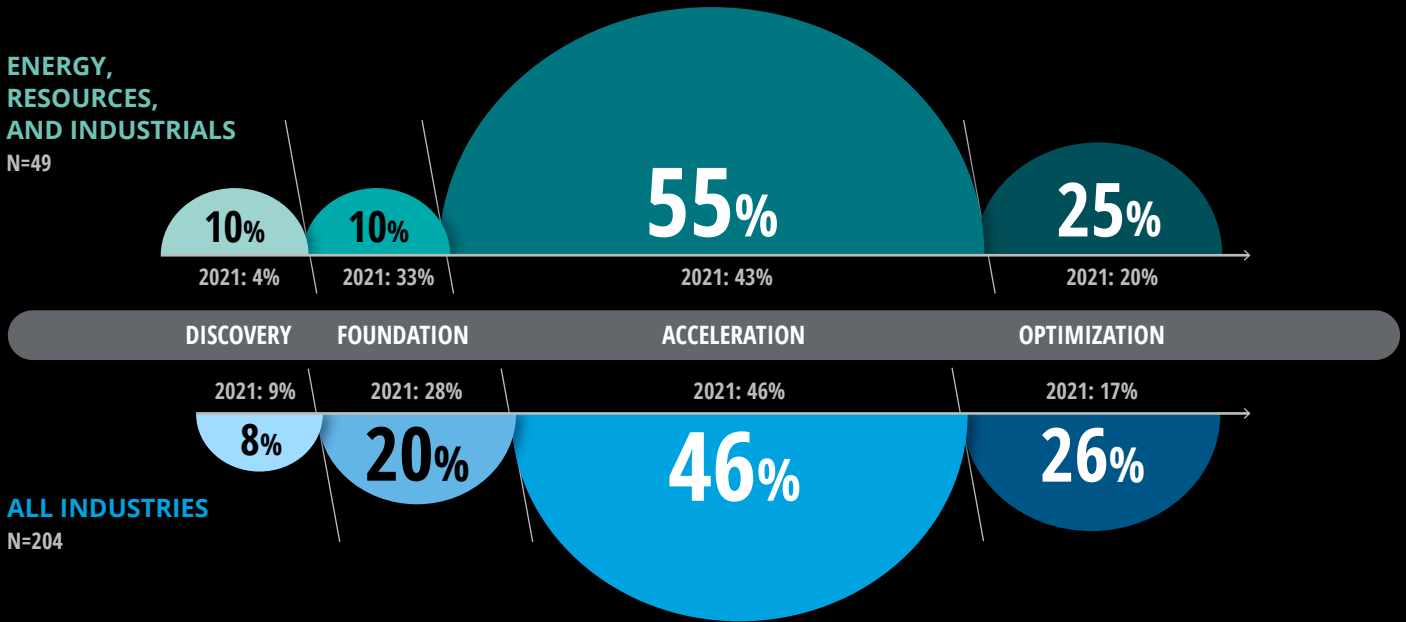
68% of respondents in the ER&I industry have migrated **more than 40%** of their workloads to the cloud, surpassing the average adoption rate across industries in Canada.

What percentage of your organization/agency's workloads/applications are in the cloud?

ENERGY, RESOURCES, AND INDUSTRIALS
Percentage of organizations

3% 29% 42% 23% 3%

ALL INDUSTRIES
Percentage of organizations

11% 31% 37% 18% 3%

0%   20%   40%   60%   80%   100%

Percentage of current workload in the cloud

What percentage of your total workloads currently in the cloud fall into the following categories?

Lift & shift IaaS 21%
Cloud modernized 23%
SaaS 21%
PaaS 18%
Cloud native 17%

22
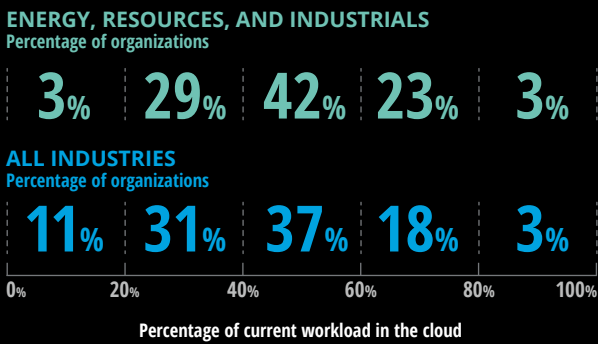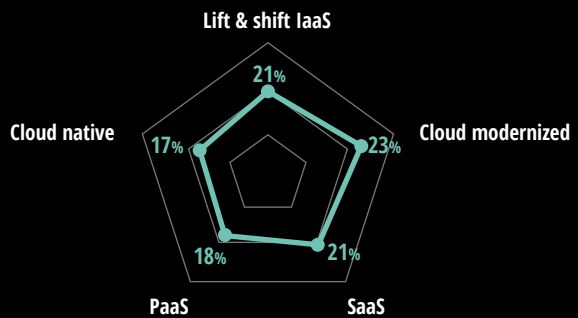
Cloud value, vision, and investment outlook

How important will cloud technology be in enabling these business objectives for your organization/agency?

	Not at all important	Somewhat important	Important	Very important
Developing new ideas, approaches, or methodologies			52%	48%
Creating new operational processes or workflows		10%	39%	51%
Expanding existing product/service revenue	3%	6%	36%	55%

Overall, **87%** of respondents from the ER&I industry expect their organization's investments in cloud solutions to increase in the next one to two years, about on par with the cross-industry average, driven primarily by using the cloud to help the business develop new ideas, create new operational processes, and expand existing revenue streams.

At the same time, **77%** of ER&I respondents feel that the economic uncertainty of the last 18 months has impacted their cloud adoption plans to a large extent; moreover, over half are worried about how the continuing uncertainty and its impact on the cost of goods and services might affect their cloud momentum over the next two years.

Do you expect your investment in cloud solutions to change in the next one to two years?

ERI

- Decrease somewhat (6%–19% decrease)
- Stay mostly the same (-5%–+5%)
- Increase somewhat (6%–19% increase)
- Increase significantly (20% or more)

19% 13% 68%

ALL INDUSTRIES

- Decrease somewhat (6%–19% decrease)
- Stay mostly the same (-5%–+5%)
- Increase somewhat (6%–19% increase)
- Increase significantly (20% or more)

26% 1% 13% 60%
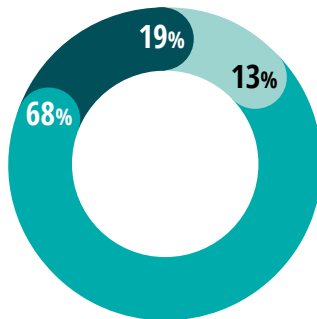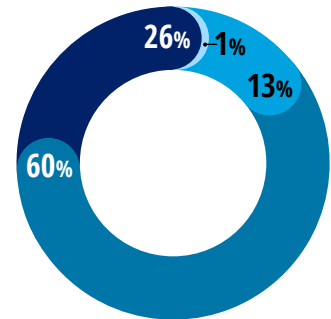
Sentiment around emerging technology

Respondents from ER&I organizations are unanimous in their expectation that industry clouds will be an enabler of transformation, helping them bring innovations to market faster, meet regulatory demands, and ensure they continue to benefit from the most current digital business process blueprints.

They also see the Internet of Things (IoT) as the greatest catalyst for innovation. Simultaneously, ER&I leaders have overwhelmingly positive sentiments (94%) toward GenAI and LLMs, the highest of all the industries surveyed, and growing expectations that GenAI will help deliver process automation, data generation, and data modelling.

Describe your sentiment toward the future of GenAI and LLMs

- Cautious
- Concerned
- Very concerned

- Optimistic
- Energized
- Hopeful
- Curious

Positive sentiments/outlook

29% 6% 6% 29% 29% 29%
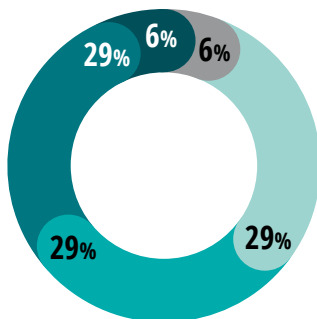
94%

of all ER&I industry respondents feel to a **large or very large extent** that innovative and emerging technologies are driving cloud adoption in their organization

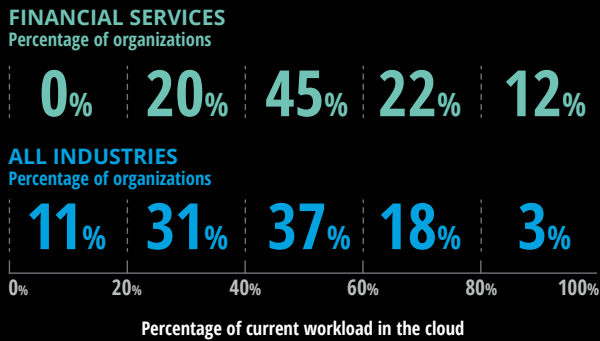# Financial services

Cloud adoption progress

Canadian financial services companies have seen their overall cloud maturity significantly increase over the past two years. Financial services respondents were **16%** more likely than the Canadian cross-industry average to rank themselves as being in the acceleration or optimization phase of the cloud journey.

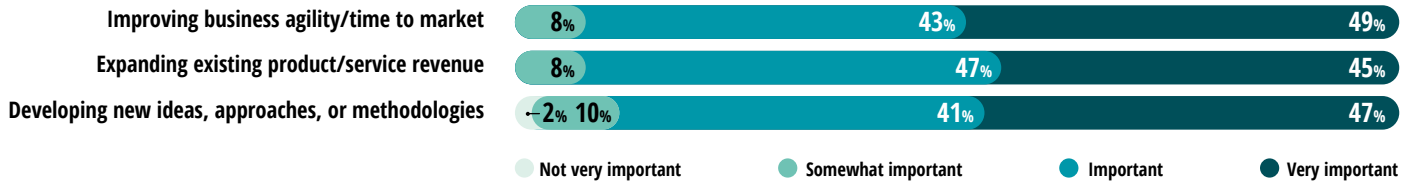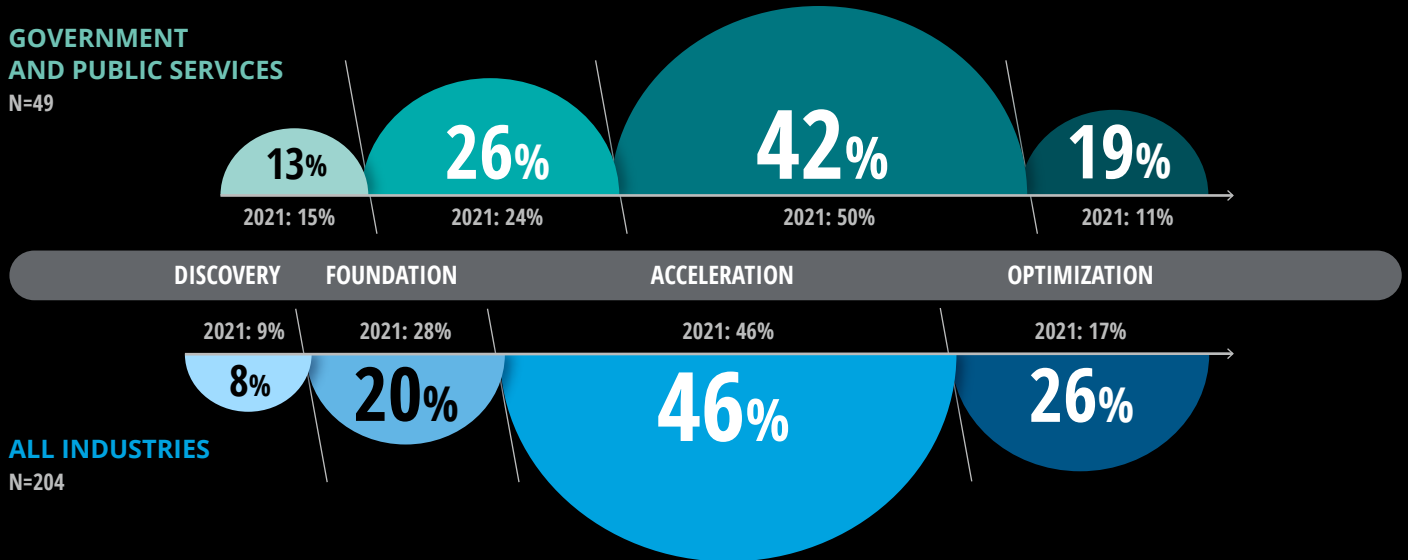### Where would you place your organization/agency on the cloud journey at this time?

FINANCIAL SERVICES
N=49

0%	12%	43%	45%
2021: 4%	2021: 22%	2021: 60%	2021: 12%

DISCOVERY	FOUNDATION	ACCELERATION	OPTIMIZATION
2021: 9%	2021: 28%	2021: 46%	2021: 17%
8%	20%	46%	26%

ALL INDUSTRIES
N=204

79% of financial services respondents have migrated **more than 40%** of their workloads to the cloud, greatly surpassing the average adoption rate across industries in Canada.

What percentage of your organization/agency's workloads/applications are in the cloud?

FINANCIAL SERVICES
Percentage of organizations

0%	20%	45%	22%	12%

ALL INDUSTRIES
Percentage of organizations

11%	31%	37%	18%	3%

0%   20%   40%   60%   80%   100%

Percentage of current workload in the cloud

What percentage of your total workloads currently in the cloud fall into the following categories?

Lift & shift IaaS 18%
Cloud native 17%
Cloud modernized 22%
PaaS 19%
SaaS 24%
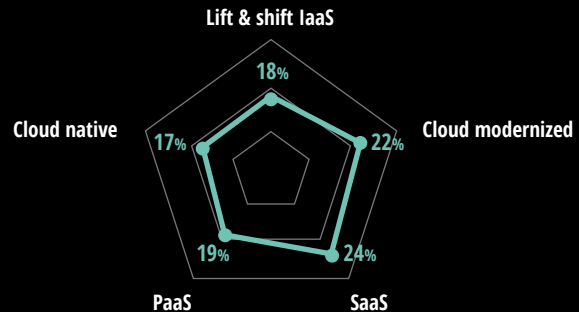
Financial services organizations see setting foundations early on as the greatest catalyst to accelerating cloud adoption, notably differing from other industries that see cybersecurity as the greatest accelerator.

Cloud value, vision, and investment outlook

Financial services respondents are highly focused on delivering business positive outcomes through the cloud, including increased agility, new revenue opportunities, and new approaches and methodologies.

How important will cloud technology be in enabling these business objectives for your organization/agency?

	Not very important	Somewhat important	Important	Very important
Improving business agility/time to market		8%	43%	49%
Expanding existing product/service revenue		8%	47%	45%
Developing new ideas, approaches, or methodologies	2%	10%	41%	47%

Financial services organizations are also more likely to suggest they will see signficant increases in investment into the cloud over the next two years. However, **over 50%** of financial services respondents cited concerns that momentum may be slowed by labour shortages, inflationary pressures, and economic uncertainty, higher than any other industry.

Do you expect your investment in cloud solutions to change in the next one to two years?

FINANCIAL SERVICES

- Decrease somewhat (6%–19% decrease)
- Stay mostly the same (-5%–+5%)
- Increase somewhat (6%–19% increase)
- Increase significantly (20% or more)

31% · 10% · 59%

ALL INDUSTRIES

- Decrease somewhat (6%–19% decrease)
- Stay mostly the same (-5%–+5%)
- Increase somewhat (6%–19% increase)
- Increase significantly (20% or more)

26% · 1% · 13% · 60%
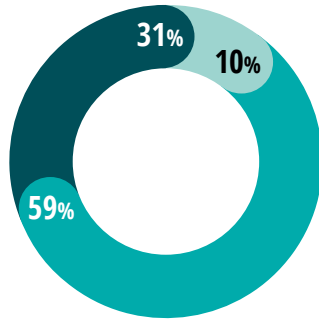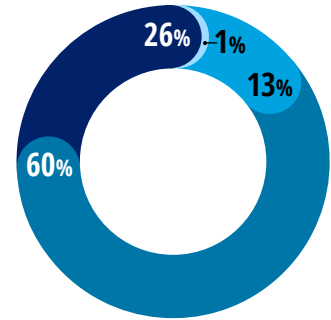
Sentiment around emerging technology

Financial services organizations overwhelmingly agree that industry clouds will be an enabler of transformation, helping them accelerate their capacity to change, achieve faster time to market, and enable more modular solution designs.

Financial services leaders see AI/ML as the greatest catalyst for innovation and have a positive sentiment toward GenAI and LLMs. They expect GenAI to help deliver process automation, data generation and modelling, and customer service support.

Describe your sentiment toward the future of GenAI and LLMs

- Cautious
- Concerned
- Very concerned

- Optimistic
- Energized
- Hopeful
- Curious

Positive sentiments/outlook

18% · 4% · 8% · 6% · 22% · 41%
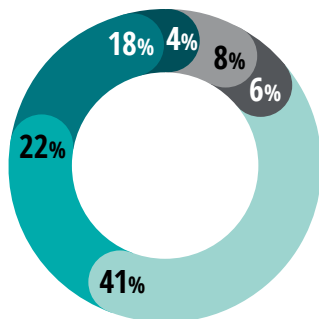
92%

of the respondents in financial services feel to a **large or very large extent** that innovative and emerging technologies are driving cloud adoption in their organization

25

Cloud adoption progress

Canadian GPS organizations have seen their overall cloud maturity increase since 2021. However, GPS leaders are **around 11% less** likely than the average private sector company to rank their organization as being in the acceleration or optimization phase of the cloud journey.

Where would you place your organization/agency on the cloud journey at this time?
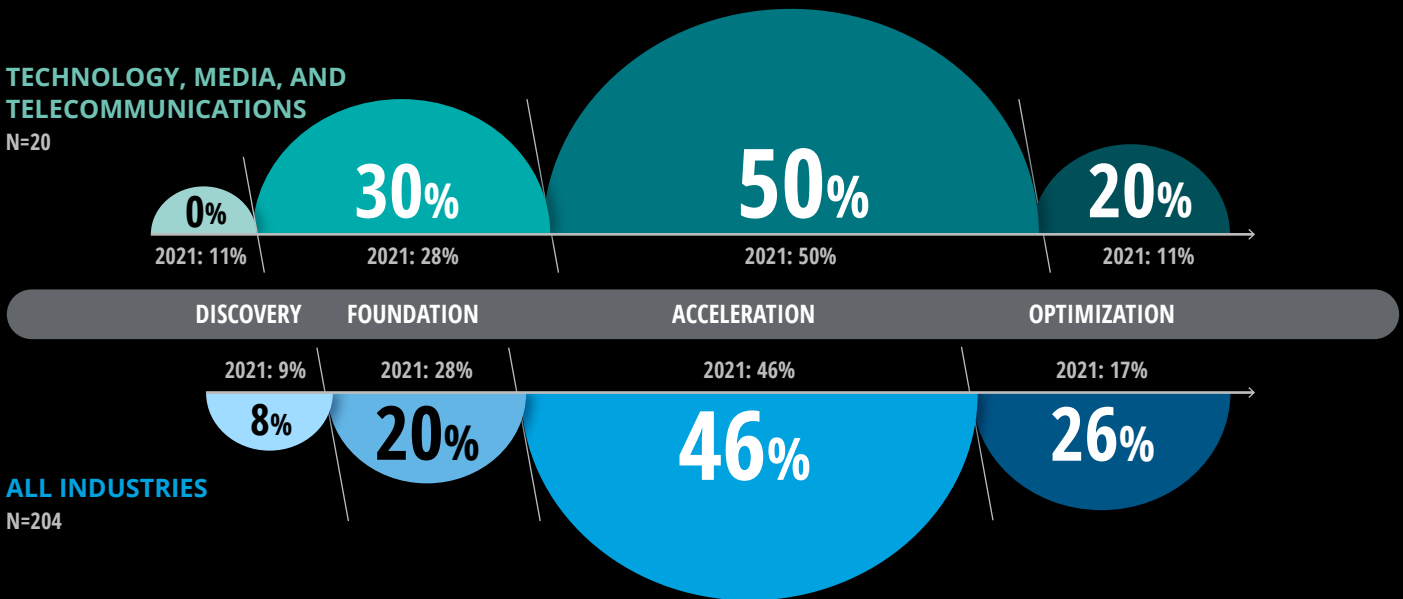
**GOVERNMENT
AND PUBLIC SERVICES**
N=49

DISCOVERY	FOUNDATION	ACCELERATION	OPTIMIZATION
13%	**26%**	**42%**	**19%**
2021: 15%	2021: 24%	2021: 50%	2021: 11%
2021: 9%	2021: 28%	2021: 46%	2021: 17%
8%	**20%**	**46%**	**26%**

**ALL INDUSTRIES
N=204**

30% of GPS respondents have migrated **more than 40%** of their workloads to the cloud, putting them behind the average adoption rate across industries in Canada.

What percentage of your organization/agency's workloads/applications are in the cloud?

GOVERNMENT AND PUBLIC SERVICES
Percentage of organizations

26% **43%** **21%** **9%** **0%**

ALL INDUSTRIES
Percentage of organizations

11% **31%** **37%** **18%** **3%**

0%   20%   40%   60%   80%   100%

Percentage of current workload in the cloud

What percentage of your total workloads currently in the cloud fall into the following categories?

Lift & shift IaaS
18%

Cloud native
19%

Cloud modernized
21%

PaaS
22%

SaaS
20%
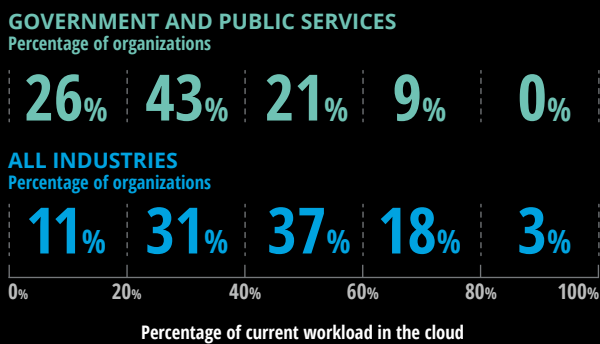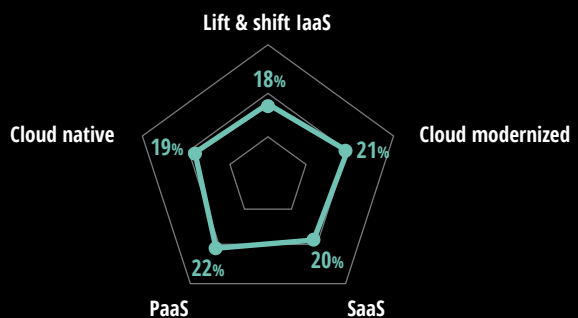
Cloud value, vision, and investment outlook

GPS respondents are highly focused on delivering value to Canadians by using the cloud to help them create new service offerings, expand into new markets, and increase their service offerings.

How important will cloud technology be in enabling these business objectives for your organization/agency?

Building net new product/service revenue	13%	55%	32%
Expanding into new markets	2% 15%	36%	47%
Expanding existing product/service revenue	17%	51%	32%

● Not at all important ● Somewhat important ● Important ● Very important
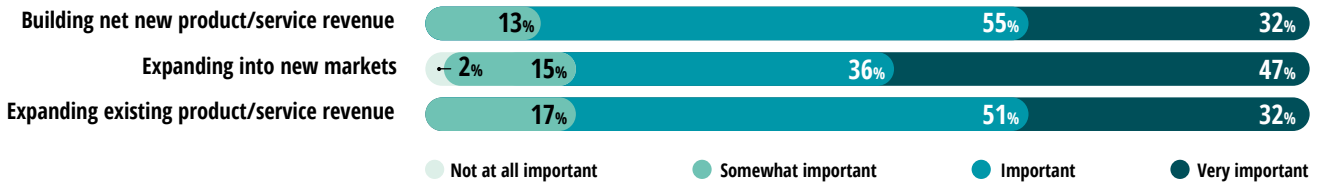
GPS organizations are on par with the Canadian private sector for increasing investment in the cloud over the next two years. However, there are concerns that economic uncertainty and an inability to forecast budgets may impact momentum on cloud enablement, with **72%** of GPS industry respondents indicating that economic uncertainty has impacted their cloud adoption plans to a large extent, with more than half expecting these challenges to continue in the near term.

Do you expect your investment in cloud solutions to change in the next one to two years?

GPS

● Decrease somewhat (6%–19% decrease)
● Stay mostly the same (-5%–+5%)
● Increase somewhat (6%–19% increase)
● Increase significantly (20% or more)

26% · 13% · 61%

ALL INDUSTRIES

● Decrease somewhat (6%–19% decrease)
● Stay mostly the same (-5%–+5%)
● Increase somewhat (6%–19% increase)
● Increase significantly (20% or more)

26% · 1% · 13% · 60%
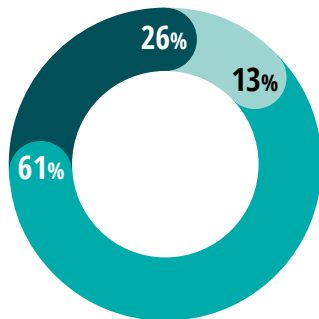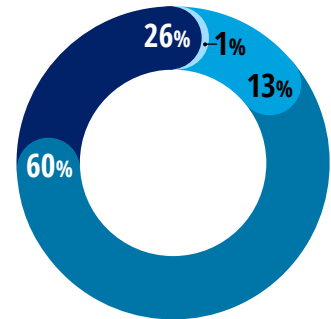
Sentiment around emerging technology

The majority of GPS respondents expect industry clouds will be an enabler of transformation, helping them take advantage of the most current digital business process blueprints, speed up time to market, and accelerate their capacity for change.

Leaders in GPS organizations see cloud cyber as the greatest catalyst for innovation. At the same time, they're more cautious in their sentiments toward GenAI and LLM; only **70%** of them had positive outlooks—the lowest of any industry surveyed. There are still growing expectations that GenAI will help deliver more process automation and better marketing and campaign management.

Describe your sentiment toward the future of GenAI and LLMs

● Cautious
● Concerned
● Very concerned

● Optimistic
● Energized
● Hopeful
● Curious

Positive sentiments/outlook

21% · 10% · 21% · 9% · 13% · 26%

77%
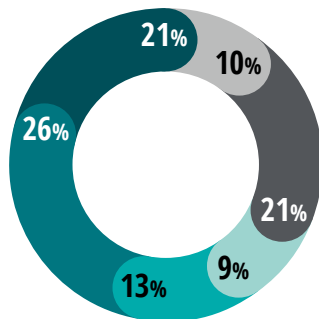
of all GPS industry respondents feel to a **large or very large extent** that innovative and emerging technologies are driving cloud adoption in their organization

Technology, media, and telecommunications
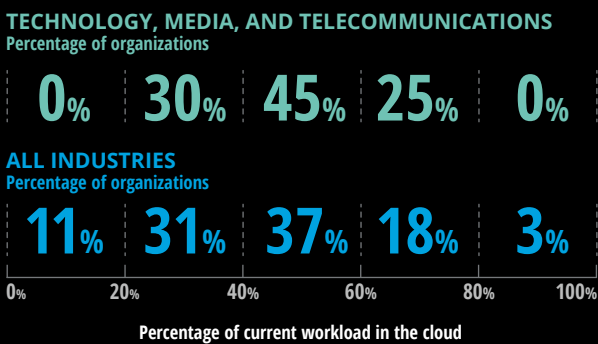
Cloud adoption progress

TMT companies in Canada have seen their overall cloud maturity increase over the past two years, and TMT leaders are on par with the Canadian cross-industry average in ranking their organization as being in the acceleration or optimization phase of the cloud journey.

Where would you place your organization/agency on the cloud journey at this time?

TECHNOLOGY, MEDIA, AND TELECOMMUNICATIONS
N=20

0%	**30%**	**50%**	**20%**
2021: 11%	2021: 28%	2021: 50%	2021: 11%
DISCOVERY	**FOUNDATION**	**ACCELERATION**	**OPTIMIZATION**
2021: 9%	2021: 28%	2021: 46%	2021: 17%
8%	**20%**	**46%**	**26%**

ALL INDUSTRIES
N=204

70% of TMT respondents have migrated **more than 40%** of their workloads to the cloud, surpassing the average adoption rate across industries in Canada.

What percentage of your organization/agency's workloads/applications are in the cloud?

TECHNOLOGY, MEDIA, AND TELECOMMUNICATIONS
Percentage of organizations

0% **30%** **45%** **25%** **0%**

ALL INDUSTRIES
Percentage of organizations

11% **31%** **37%** **18%** **3%**

0%   20%   40%   60%   80%   100%

Percentage of current workload in the cloud

What percentage of your total workloads currently in the cloud fall into the following categories?

Lift & shift IaaS — 17%
Cloud modernized — 25%
SaaS — 22%
PaaS — 20%
Cloud native — 16%
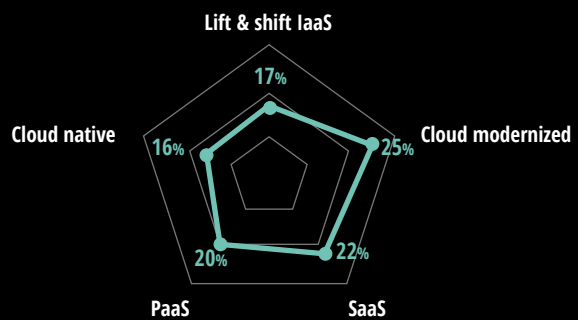
Cloud value, vision, and investment outlook

TMT leaders are also highly focused on delivering business outcomes by using the cloud to help them expand revenue opportunities, mitigate risk, and develop innovative ideas and approaches for the organization.

How important will cloud technology be in enabling these business objectives for your organization/agency?

	Not very important	Somewhat important	Important	Very important
Expanding existing product/service revenue		10%	35%	55%
Mitigating business and regulatory risk	5%	5%	55%	35%
Developing new ideas, approaches, or methodologies		15%	35%	50%

● Not very important   ● Somewhat important   ● Important   ● Very important
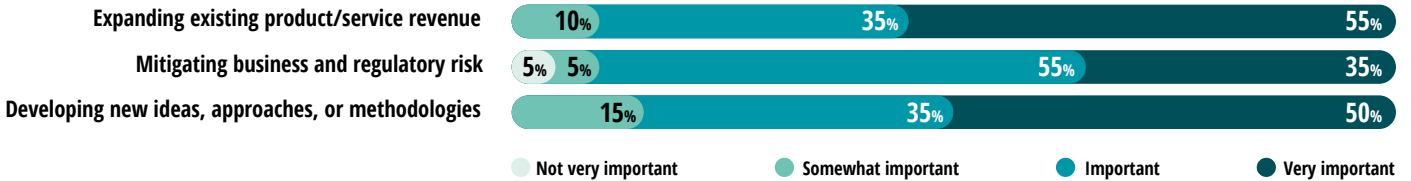
Despite this, TMT respondents are less likely than the Canadian average to suggest they will see significant increases in investment in the cloud at their organization over the next two years, with **75%** citing concerns that progress could be slowed primarily by inflationary pressures, followed by higher interest rates and broader economic uncertainty.

Do you expect your investment in cloud solutions to change in the next one to two years?

TMT

- ● Decrease somewhat (6%–19% decrease)
- ● Stay mostly the same (-5%–+5%)
- ● Increase somewhat (6%–19% increase)
- ● Increase significantly (20% or more)

15% 5% 65% 15%

ALL INDUSTRIES

- ● Decrease somewhat (6%–19% decrease)
- ● Stay mostly the same (-5%–+5%)
- ● Increase somewhat (6%–19% increase)
- ● Increase significantly (20% or more)

26% 1% 13% 60%
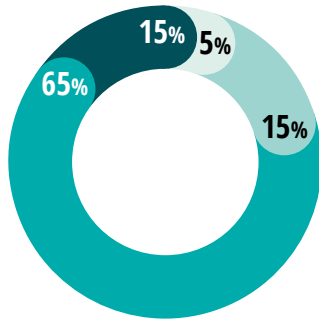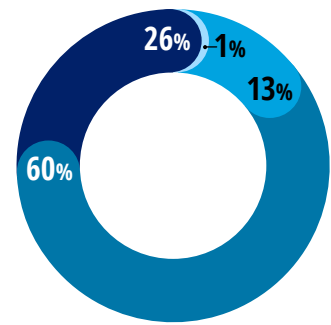
Sentiment around emerging technology

TMT leaders are unanimous in viewing industry clouds as an enabler of transformation, helping to accelerate the capacity to change, migrating industry-specific processes to the cloud, and enabling better connections with suppliers and customers.

Describe your sentiment toward the future of GenAI and LLMs

- ● Cautious
- ● Concerned
- ● Very concerned

- ● Optimistic
- ● Energized
- ● Hopeful
- ● Curious

Positive sentiments/outlook

25% 10% 10% 35% 20%
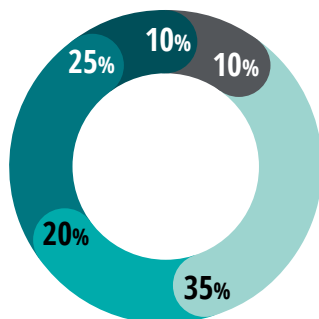
85%

of all TMT industry respondents feel to a **large or very large extent** that innovative and emerging technologies are driving cloud adoption in their organization

Methodology

This report is based on a survey of 204 Canadian executives and public services leaders, including CEOs and presidents, deputy ministers, CIOs, CDOs, and CTOs. The survey was conducted between June 21 and July 17, 2023. Respondents represented mid- and large-sized organizations, with **36%** reporting 10,000 or more employees and **40%** reporting 5,000 to 10,000 employees.

Additionally, Deloitte conducted select one-on-one interviews with more than 20 private sector and public services leaders to explore their responses in more depth.

All private sector respondents came from organizations with annual revenues of $250 million or more, with **42%** earning $1 billion or less and **29%** earning $5 billion or more annually. Among the public services leaders surveyed, **47%** represented organizations and agencies with annual budgets of $100 million or more. Across industries, **26%** of respondents were from the government and public services, 25% were from the consumer business industry, **24%** from financial services, **15%** from energy, resources, and industrials, and 10% from technology, media, and telecommunications.

In terms of their roles in advancing their organization's cloud transformation, **50%** of respondents said they determine cloud technology spending and/or approve cloud investment, **24%** develop cloud technology strategies, **17%** manage or oversee cloud technology investments, and **8%** manage or oversee cloud technology implementations.

Endnotes

1   Gartner, "Offering Managers Must Adapt to the Nexus of Digital Business and Cloud Services," Gartner Research, September 13, 2023.

2   Nadia Ballard, *Industry Cloud: State of the Union—2023 Industry Cloud Council Survey Results*, International Data Corporation (IDC), online presentation, January 2023.

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Deloitte.