2020 CanadianCIO Census
The CIO and the New Normal

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ABOUT OUTSYSTEMS

Thousands of customers worldwide trust OutSystems, the top low-code platform for rapid application development. Engineers with an obsessive attention to detail crafted every aspect of the OutSystems platform to help organizations build enterprise-grade apps and transform their business faster.

OutSystems is the only solution that combines the power of low-code development with advanced mobile capabilities, enabling visual development of entire application portfolios that easily integrate with existing systems.
FOREWORD

There has never been a more compelling moment for CIOs to compare notes than at this time of crisis.

CIOs in Canada are weathering the COVID-19 crisis remarkably well, and I congratulate each of you on your professionalism.

The seventh annual CanadianCIO Census is an opportunity to share insights on how CIOs coped with a worldwide pandemic as well as their priorities for the future. As in past years, we’ve also captured a snapshot of their day-to-day issues which continue to evolve.

The survey gives us insights and identifies trends that help IT leaders prepare for what comes next. There is no research like it in Canada.

I must make special mention of those without whose contributions this important publication simply would not have been possible.

For the insights we gain from our yearly CanadianCIO Census, we owe a debt of gratitude to Canada’s top enterprise leaders, who generously shared their concerns and priorities during this turbulent time.

I would also like to take the opportunity to thank OutSystems for their generosity and vision in having sponsored this critical research. We could not have done this without their support.

Jim Love
CIO, ITWC
EXECUTIVE SUMMARY

In 2020, it has not been business as usual for anyone. The COVID-19 crisis has tested CIOs like never before. Fortunately, they have so far proven themselves to be equal to the challenge.

When the lockdown occurred, CIOs in Canada came through with solid business continuity plans within days that allowed them to transition thousands of employees to work from home. It shone a spotlight on the enabling effects of information technology. As a result, CIOs have gained greater respect and an increased role in strategic decision-making.

Despite the economic uncertainty in the current marketplace, CIOs are optimistic about the future. They are pressing forward to transform their organizations at a pace they could not have previously imagined. These are among the key findings of the 2020 CanadianCIO Census:

- Digital transformation has accelerated because of the pandemic;
- A workplace transformation is also under way. Remote work is here to stay;
- Change management is no longer a barrier to transformation, but budgetary constraints may be;
- Security, the remote work environment, and customer experience are CIO priorities over the coming year;
- To achieve success, transformation must focus on customer needs.

ITWC held a series of virtual CIO roundtables this year to learn more about how they are navigating the crisis. We have shared their thoughts throughout this report to illustrate the survey findings.

No matter what lies ahead in the so-called “new normal,” for CIOs this is the era of resilience. That is the clear message in the newest edition of the CanadianCIO Census, the survey undertaken by ITWC’s digital media property CanadianCIO.
This year, CIOs are taking centre stage. While the CIO’s level of influence has been steadily increasing over the past few years, the COVID crisis has vaulted the CIO into a new strategic position.

“When we had to switch 1,000 employees to work-from-home within a week, all of a sudden IT became the centre of attention,” said an IT leader in Quebec’s insurance sector. In ITWC’s CIO sessions, organizations across the country reported they made this transition relatively smoothly thanks to the business continuity plans put in place by IT.

CIOs have gained greater respect because of their quick response to the crisis.
“I think that increased the profile of the role, and people started to say, ‘Yeah, we need these people,’” said one CIO. “For the first time ever, I received a thank-you note for making it possible to do what we do, for having this technology and it works,” said another. “That was nice to hear.”

### CIO INFLUENCE

**How will COVID-19 impact the CIO role?**

- **32%** No change
- **62%** Increased role in strategic business decisions
- **6%** Reduced role in strategic business decisions
“As technology becomes increasingly important, an organization’s success depends on whether the CIO can move from being a functional to a strategic business leader.”
—McKINSEY

A SEAT AT THE TABLE
All the survey respondents say they’re involved in executive decision-making meetings. The results show steady incremental growth for those who say they always participate in these meetings. This level of involvement is even higher for small companies (less than 50 employees) where CIOs play a central role.

The big news is that 62 per cent of CIOs say they anticipate an increased role in strategic business decisions because of their actions during the pandemic. Their seat at the centre of power is now reserved.

LEADERSHIP
Eighty-three per cent of CIOs report to the President or another C-level executive, up from 75 per cent last year.

The majority of IT leaders, at 60 per cent, say they provide the leadership on digital transformation for the organization. At the same time, there is a slight increase over previous years in those who say the business and other senior management are taking the lead (32 per cent). Similarly, 20 per cent say more than half of IT projects are controlled by the line of business — a small increase over last year.

This isn’t necessarily seen as a bad thing. “The joke we always make in IT is that when somebody says ‘the business wants this,’ we say ‘we are the business,’” said Purolator CIO Ricardo Costa at an ITWC DX CIO panel discussion. “That’s one of the things that’s helping us a lot to actually drive some of that transformation. It’s fully backed up by the CEO, and that position was because technology is part of our strategy today, so we are core to the strategy.”
THE OPTIMISTIC CIO

One of the most surprising results of the 2020 Census is that, despite the economic uncertainty caused by the pandemic, Canadian CIOs are optimistic about the future.

Sixty-one per cent are somewhat or very optimistic about how their organizations will fare over the next 12 months, 23 per cent are somewhat concerned, and only three per cent are very pessimistic. Smaller companies are slightly less hopeful, but still positive.

What makes them so sanguine?

Based on the survey results and our series of roundtables, it might be said that CIOs are having a moment. They're deservedly proud of their role in maintaining productivity during the crisis, and are getting the credit for doing so. They are wielding greater influence, and they are seeing their plans for digital transformation accelerate in ways they had once only imagined.

In short, CIOs are turning the crisis into an opportunity.

CIO MINDSET OVER THE NEXT 12 MONTHS

- 40% Somewhat optimistic
- 21% Very optimistic
- 23% Somewhat concerned
- 3% Very pessimistic
- 13% Just keeping my head above water
LEADERSHIP CHALLENGES

CIOs are also realistic about the challenges they face in getting the job done. This year’s survey results reveal that an old nemesis is fading while a new one is on the rise.

CULTURE

Company culture emerged as a major barrier in the last two years. Last year, almost half of CIOs said resistance to change was getting in the way of transformation initiatives.

The pandemic has changed that.

Now, only 36 per cent of CIOs see culture as a roadblock. “So much digital transformation gets held up in change management and resistance,” said an IT leader from a tech company. “Now there are less issues with change management.”

ITWC CIO Jim Love believes this shift signals the death of change management. “When you have to get something done, you can cut through a lot of cultural red tape,” he said.

This year’s survey also shows a small increase in those organizations that have fully implemented agile DevOps principles. The most progress has been made by larger companies where it has traditionally been more difficult to turn the ship.

BUDGETS AND INNOVATION

IT budgets have been steadily increasing over the past four years. But this year’s survey suggests warning signs are on the horizon. CIOs anticipate that budgets will shrink due to the economic fallout of the COVID crisis.

Thirty-eight per cent of CIOs now see budget as the biggest barrier to exercising their leadership, as compared to 32 per cent one year ago.
While 43 per cent still expect a budget increase this year, that’s a drop of 20 per cent since 2019. Twenty-seven per cent of CIOs think their budgets will fall. That’s up by 12 per cent over last year, and more than any time in the last four years. Not surprisingly, CIOs who say they’re optimistic about the future are less worried about a strain on their budgets.

**SPENDING TO RUN, GROW, TRANSFORM**
Despite potential budgetary constraints, CIOs are targeting more IT dollars to grow and transform the business.

IT leaders plan to spend 40 per cent of their 2020 budgets to grow (22 per cent) and transform (18 per cent) — the highest we have seen in a CanadianCIO Census. Sixty per cent of the budget will be spent on running the business or “keeping the lights on” — slightly less than in previous years.

Larger companies (over 10,000 employees) plan to invest a higher proportion of their budgets to transform their businesses. Smaller companies are keeping pace with the overall average on spending to transform the way they do business.

CIOs acknowledge that some projects are being cut due to a decline in revenue in 2020. At the same time, they see technology investment as way to overcome the economic challenges they face. “Efficiency will be king, and digital transformation can deliver,” said a CIO in the transportation sector.

“We are doing things you could never dream to do process-wise,” said a CIO from a public agency. “The process changed in a day.”
DAY-TO-DAY CONCERNS

What do CIOs worry about on a day-to-day basis?

Typically, security stands alone at the top of the list of what keeps CIOs awake at night. This year, 48 per cent of survey respondents ranked both security and uptime as their biggest concern. Thirty-nine per cent of them are troubled by the remote work environment.

The three issues clearly reflect the current environment. The immediate concern was to maintain connectivity for workers at home. However, the sudden increase in remote workers created new risks and led to a massive increase in phishing and file-based attacks. Now, the focus is on tools to improve productivity, and security in the remote work environment. Whether the issue is identified as uptime or remote work environment, security is always a source of concern.

Budgetary constraint has moved up from the seventh to the fourth most concerning day-to-day issue for CIOs. Business innovation remains solidly in the top five, as in past years. Interestingly, CIOs who have been in their jobs for less than one year ranked business innovation as their top area of concern.
THE NEW NORMAL — CHALLENGES AND PRIORITIES

CHALLENGES OVER THE NEXT 12 MONTHS
Like everyone, the impact of the COVID pandemic is foremost in the minds of CIOs as they consider what comes next. But their number-one concern arising from the crisis is not about technology - it’s about the well-being of employees.

“We were all prepared for the technology,” said one IT leader during the first ever virtual CanadianCIO roundtable. “But the human side is important.” “Our focus now is on making sure people are healthy and connected,” added a CIO from the construction industry. Another CIO suggested that the crisis highlights the need for a bigger partnership between IT and human resources to “take care of people.”

COVID CONCERNS OVER THE NEXT 12 MONTHS

<table>
<thead>
<tr>
<th>Priority</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee well-being</td>
<td>6.8</td>
</tr>
<tr>
<td>Increased cyber security threats</td>
<td>6.1</td>
</tr>
<tr>
<td>IT budget restrictions</td>
<td>6.0</td>
</tr>
<tr>
<td>Business survival</td>
<td>5.8</td>
</tr>
<tr>
<td>Need for culture change</td>
<td>5.7</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>5.6</td>
</tr>
</tbody>
</table>

RANKED ON A PRIORITY SCALE OF 1-10

As we have already seen, concerns about security and budget restrictions are a consistent theme in this year’s report. In a related question on the survey, 41 per cent of respondents said balancing security with accessibility is a challenge they will face over the next year. Similarly, 36 per cent said they’re worried about an increased strain on the budget, up from 22 per cent last year.
Finding ways to use data for competitive advantage was seen as a hurdle by 26 per cent of respondents, especially those in larger organizations. The number of people concerned about this “data challenge” has, however, declined by more than 20 per cent in the last two years, suggesting that some are making progress on the issue.

There is an even more fundamental question on the minds of some CIOs, and that is whether their businesses can survive this crisis at all.

**TOP PRIORITIES FOR THE NEXT 12 MONTHS**
If there was one common word on how to cope with the 2020 business climate, it would be “pivot.”

How will CIOs pivot to adjust to the new normal? Given their concern for employee well-being, IT leaders are very focused on the work environment. Eighty-five per cent say they will continue to improve remote work capabilities. Seventy-one per cent say they’re reorganizing the work site to ensure safety and distance measures are in place when employees return.

**HOW HAVE YOU BEEN ADJUSTING TO THE NEW NORMAL?**

<table>
<thead>
<tr>
<th>Action</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue to improve remote work capability</td>
<td>85%</td>
</tr>
<tr>
<td>Reorganize onsite workplace to ensure safety/distancing</td>
<td>71%</td>
</tr>
<tr>
<td>Re-prioritize projects</td>
<td>67%</td>
</tr>
<tr>
<td>Support new interactions and services for customers</td>
<td>51%</td>
</tr>
<tr>
<td>Revisit disaster plan</td>
<td>36%</td>
</tr>
<tr>
<td>Plans are on hold</td>
<td>28%</td>
</tr>
</tbody>
</table>
Given the record pace of change resulting from the crisis, 67 per cent of CIOs are reprioritizing their projects. As well, 51 per cent are looking for new ways to support customers at a distance.

Overall, the top five CIO priorities for the next 12 months align with the concerns they identified. With the exception of the new focus on remote work, the highest priorities haven’t changed much from last year. Security remains the number-one priority for 46 per cent of the respondents. Remote work ranked second at 42 per cent (which is also probably the reason for increased attention to VoIP this year). As in 2019, customer experience and disaster recovery rounded out the top five list of priorities along with data analytics and hybrid cloud as a service.
A STUNNING TRANSITION
Modernizing the workplace is an item that was on every CIO’s agenda. Little did they know of the leap forward they would take within a few months. The rapid and relatively smooth transition to a work-from-home model was astonishing. And most CIOs believe it is here to stay.

The survey shows that 25 per cent of employees were working from home before the pandemic. CIOs expect that 55 per cent of them will still be doing so one year from now.

Smaller companies with less than 50 employees think 80 per cent will continue to work remotely. Those with a high proportion of “office workers,” such as financial services, technology companies and professional services, anticipate over 70 per cent will still be working from home one year from now. Organizations in Ontario, New Brunswick and British Columbia all had slightly higher than the average prediction of the number of workers that will continue to be remote. By contrast, CIOs in Saskatchewan expect only 15 per cent of workers to stay home.

In ITWC’s CIO sessions, the majority agreed there is no more debate about working from home. “It’s opened our eyes that people can be just as productive, if not more so. We look at it differently now,” said an IT leader in the energy sector.

“I don’t think the genie goes back in the bottle,” said ITWC CIO Jim Love.
SUPPORTING REMOTE WORK
To support the remote work environment, 61 per cent of CIOs see the need to improve policies as a priority over the next 12 months.

Given the rush to enable work from home, it's not surprising that the policies to define expectations and responsibilities have to be brought up to speed. As well, CIOs say they're learning along the way. For example, although managers were anxious to see that employees were all right, they've realized that the use of cameras during meetings must be optional. “Not everyone wants to share their home,” said one CIO. “It can cause discomfort and invade people’s privacy.”

Fifty-three per cent of CIOs plan to focus on tightening security controls in the remote work environment. In particular, many are looking for new ways to train remote employees on how to protect against the increasing number of phishing attacks.

Filling the gaps in remote work technology and adopting new agile practices for remote work were also listed as priorities by just under half of respondents.

PRIORITIES FOR SUPPORTING REMOTE WORK OVER THE NEXT 12 MONTHS

- **61%**: Improve remote work policies
- **53%**: Introduce tighter security controls
- **48%**: Fill gaps in remote work technology
- **46%**: Adopt new practices for agile work
THE TOOLS TO ENABLE REMOTE WORK

When the lockdown began, CIOs moved forward quickly either with the tools they already had or those they could implement quickly. When asked about the most valuable tools to enable remote work, 92 per cent said it was a VPN or secure-browser-based access. Nonetheless, ITWC CIO Jim Love cautioned against heavy reliance on a VPN alone. “It’s a secure line to the office, but if you come from an insecure place, you’ve opened the door,” he said.

With phrases like “zoom fatigue” entering our common lexicon, it’s no surprise that CIOs are relying on video conferencing for teams to collaborate and to maintain a “sense of team.” Tools for document collaboration and team chats were also seen as useful.

Participants in our CIO discussions suggested that having the right tools in place for employees to be productive at home will become a selling feature for recruitment and employee retention. “This will be a way that companies differentiate themselves,” said one IT leader.

"We need to rethink things and give people a new class of tools."
— NIGEL THOMPSON, VP, PRODUCT MARKETING AT BLACKBERRY

KEY TOOLS TO ENABLE REMOTE WORK

- **92%**: VPN or secure browser-based access
- **75%**: Video conferencing/collaboration (e.g., Zoom, WebEx, Teams)
- **51%**: Document collaboration (e.g., OneDrive, Google Docs)
- **50%**: Team chat apps
TECHNIQUES TO MANAGE REMOTE TEAMS
Managers are finding creative ways to manage remote teams and to maintain morale. Not surprisingly, video conferencing plays a central role, with 83 per cent of respondents saying they use it to hold regular team meetings. Another 30 per cent hold daily standup meetings via video conferencing for a “check-in” at the beginning or end of the day. Some CIOs reported they set up virtual get-togethers that are not meant to discuss work issues but rather to maintain a human connection.

As previously mentioned, CIOs are also reviewing their work-from-home policies and applying agile techniques to the work-from-home environment, including weekly reporting. Tools for process and time management have not been widely adopted.

WHAT TECHNIQUES DO YOU USE OR PLAN TO USE TO MANAGE REMOTE TEAMS?

- **83%** Hold regular team video meetings
- **52%** Refine and communicate work-from-home policies
- **43%** Require weekly reporting on progress/outcomes
- **40%** Apply agile techniques to define clear, measurable outcomes
- **30%** Adopt process management tools to assign and track projects
- **30%** Hold daily standup meetings
- **20%** Adopt time management tools to track time spent on projects
TALENT

Although the working environment has swiftly transformed, CIOs anticipate a setback in their ability to hire new talent. The majority, at 68 per cent, say they’ll be in a hiring freeze or keeping headcount stable over the next 12 months. Larger companies were more likely to say their staff levels will remain stable.

The slowdown in hiring comes after several years during which around 40 per cent planned to increase IT headcounts. This year, only 17 per cent plan to do so. The number of CIOs who plan to downsize has increased to 12 per cent, from four per cent last year. Given the current level of economic uncertainty, however, the fact that most CIOs expect to keep headcounts stable reflects the heavy reliance on IT to help organizations recover from the pandemic.

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keeping IT headcount stable</td>
<td>37%</td>
<td>44%</td>
<td>38%</td>
<td>32%</td>
</tr>
<tr>
<td>In a hiring freeze (can only replace critical staff)</td>
<td>31%</td>
<td>12%</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td>Hiring/increasing IT headcount</td>
<td>17%</td>
<td>37%</td>
<td>43%</td>
<td>43%</td>
</tr>
<tr>
<td>Decreasing IT headcount/downsizing</td>
<td>12%</td>
<td>4%</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>Not sure</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>0%</td>
</tr>
</tbody>
</table>

JOBS IN DEMAND

Not surprisingly, the number of organizations hiring for any given position is lower across the board this year. For those that are hiring, almost the same skills remain in demand as over the past two years. They are big data/analytic specialists, enterprise application developers, and web designers. It’s notable that Systems Analyst is the one category where demand did not change since last year.

The positions likely to be downsized this year are general IT and IT project management — both expected to drop by 10 per cent. Help desk positions were also expected to drop, however, just as many CIOs said they were hiring help desk staff. This may represent a transition in the type of skills needed.
“CIOs need to be talent scouts. CIOs who want to reinvent tech’s role need tech stars.”
—MCKINSEY

SKILLS SHORTAGE
Finding skilled resources remains a challenge for those CIOs that are hiring. Like last year, CIOs ranked skills in artificial intelligence (AI), IoT, data analytics, and mobile development in the top five most difficult skills to hire this year. For the first time, security expertise was seen as the second most difficult skill to find, while cloud skills slipped off the top five list.
Despite the ongoing effects of a worldwide pandemic, CIOs still say digital transformation will have the most significant impact on their businesses over the next five years. Customer experience was seen as having the second biggest impact, followed by the COVID-19 crisis.

Last year, 18 per cent of those surveyed saw cloud as a service as being the most impactful technology. This year, only five per cent feel this way. This suggests CIOs believe that cloud is having its biggest impact now rather than in the future. Larger companies see customer experience as having the most impact over the next five years, while smaller companies place their bets on AI.

The COVID-19 crisis has had a dramatic impact on the pace of digital transformation in Canada. Seventy-eight per cent of IT leaders say their transformation plans, or certain aspects of them, have accelerated because of the pandemic. Larger organizations were most likely to say their plans had accelerated.

### HOW HAS COVID IMPACTED YOUR DX PLANS?

- **50%** Accelerated some aspects of plan while placing others on hold
- **28%** Accelerated the plan
- **5%** The plan is on hold
- **7%** Revisiting the plan
- **4%** A setback for overall transformation plans
- **5%** It didn’t change anything
CIOs acknowledged that projected budgetary constraints called for a tactical approach, speeding up those projects most needed to cope with the crisis, while placing others on hold. Innovations, such as those to enable remote work, moved forward at “record pace,” and are expected to be part of the new normal. Leading-edge technologies like robotic process automation have also been given a boost because, as one CIO put it, “robots don’t have to be in quarantine.”

“We’ve learned to be innovative through crisis,” said a CIO in the IT sector. “We were on the verge of rapid digitization before. Now, things we see in sci-fi movies will become reality sooner.”

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<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to respond to customer expectations</td>
<td>43%</td>
<td>59%</td>
<td>64%</td>
<td>66%</td>
</tr>
<tr>
<td>Requirements to continually lower operating costs</td>
<td>40%</td>
<td>45%</td>
<td>35%</td>
<td>38%</td>
</tr>
<tr>
<td>To demonstrate to our customers, employees and others our innovative capabilities</td>
<td>37%</td>
<td>38%</td>
<td>43%</td>
<td>44%</td>
</tr>
<tr>
<td>Adjust to new business models due to COVID-19 crisis</td>
<td>37%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Create a competitive lead, to disrupt the industry</td>
<td>35%</td>
<td>27%</td>
<td>23%</td>
<td>29%</td>
</tr>
<tr>
<td>Competitive pressures from others in our industry</td>
<td>27%</td>
<td>31%</td>
<td>36%</td>
<td>23%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>8%</td>
<td>6%</td>
<td>4%</td>
</tr>
</tbody>
</table>

**WHY DX?**

The main reason organizations are pressing forward with digital transformation is to respond to customer expectations. Today’s customers don’t tolerate anything less than flawless service.
Organizations, especially larger companies, are also expecting that DX will lower costs. They’re seeking to increase innovation and, especially this year, improve productivity in the new business models required in the current environment. More CIOs than ever before (35 per cent) are also relying on DX to gain a competitive edge by being market disruptors.

**DX RISK FACTORS**
Despite the incredible acceleration of digital transformation in 2020, there are still risk factors that could limit progress.

Budgetary constraints are now seen as the primary risk factor by 57 per cent of IT leaders — up from 29 per cent last year. As in 2019, organizational resistance to change and legacy systems are still considered impediments to DX. It may be that some progress is being made on overcoming the legacy system barriers given that 10 per cent fewer respondents over last year said this is still a problem.

The skills shortage is seen as a much lower risk, dropping from 51 to 28 per cent on the list. However, this may reflect the fact that CIOs have lower capacity to hire this year.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
</tr>
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<tbody>
<tr>
<td>Budget constraints</td>
<td>57%</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Organizational resistance to change</td>
<td>48%</td>
<td>50%</td>
<td>44%</td>
</tr>
<tr>
<td>Challenges of modernizing or integrating legacy systems</td>
<td>41%</td>
<td>51%</td>
<td>47%</td>
</tr>
<tr>
<td>Speed of change of technology</td>
<td>28%</td>
<td>25%</td>
<td>31%</td>
</tr>
<tr>
<td>Lack of skills</td>
<td>28%</td>
<td>51%</td>
<td>38%</td>
</tr>
<tr>
<td>Lack of a digital architecture or infrastructure</td>
<td>25%</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>Challenges of integrating technology</td>
<td>23%</td>
<td>29%</td>
<td>32%</td>
</tr>
<tr>
<td>Changing priorities due to COVID-19 crisis</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Lack of management commitment</td>
<td>18%</td>
<td>26%</td>
<td>31%</td>
</tr>
<tr>
<td>Customer reluctance to use digital technology</td>
<td>7%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>4%</td>
<td>6%</td>
</tr>
</tbody>
</table>
**BENEFITS REALIZED ON DX INVESTMENTS**

CIOs face constant pressure to demonstrate a return on investment in digital transformation technology. The ability to show realized benefits can determine whether projects proceed, especially when budgets are tight.

This year, investments in collaboration tools met or exceeded the expectations of 90 per cent of CIOs — up from 62 per cent last year. Clearly, these technologies paid dividends in the transition to remote work. Survey respondents were also more satisfied with their investments in security, cloud, enterprise, and enterprise mobility.

The biggest disappointments were outsourcing and big data analytics, with 22 per cent of respondents in each case saying these investments fell below expectations. At the same time, a higher number found these technologies met their expectations.

Although larger companies are happy with their return on AI investments, many are still on the fence with regard to AI. The same can be said for IoT. As well, the numbers indicate little interest in Blockchain technology.

<table>
<thead>
<tr>
<th></th>
<th>🌟</th>
<th>🙅</th>
<th>Not investing in this</th>
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</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>90%</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>Security</td>
<td>77%</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td>Cloud (Public, Private, Hybrid) as-a-service</td>
<td>67%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Enterprise</td>
<td>65%</td>
<td>6%</td>
<td>19%</td>
</tr>
<tr>
<td>Enterprise Mobility</td>
<td>61%</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Social</td>
<td>47%</td>
<td>15%</td>
<td>25%</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>43%</td>
<td>22%</td>
<td>30%</td>
</tr>
<tr>
<td>Big Data/Analytics</td>
<td>35%</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>Internet of Things (IoT)</td>
<td>20%</td>
<td>9%</td>
<td>46%</td>
</tr>
<tr>
<td>Artificial Intelligence (AI)</td>
<td>15%</td>
<td>12%</td>
<td>48%</td>
</tr>
<tr>
<td>Blockchain</td>
<td>2%</td>
<td>6%</td>
<td>78%</td>
</tr>
</tbody>
</table>
Cloud is a cornerstone of most transformation strategies and, as has been proven this year, is also useful as part of a business continuity plan. “The more services you have in the cloud, the easier it is for people to work from home,” said a CIO from central Canada.

According to IDC research conducted in 2020, nearly 63 per cent of organizations in Canada are planning to implement a hybrid cloud environment over the next 12 to 24 months.

Census survey respondents say they plan to leverage cloud for 32 per cent of their architecture and applications over the next 12 to 24 months — up just one per cent from last year. While on-premises architecture is projected to drop from 43 to 37 per cent, it’s not disappearing as many had predicted. “Organizations continue to keep workloads on-premises because of concerns about latency or security and compliance. In some cases, their applications are just not ready to be moved,” said one cloud expert. Cloud providers are starting to integrate this reality into the services they offer.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>On-premises</td>
<td>37%</td>
<td>43%</td>
<td>38%</td>
<td>40%</td>
<td>41%</td>
</tr>
<tr>
<td>Traditional/dedicated hosting</td>
<td>9%</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Managed services</td>
<td>13%</td>
<td>9%</td>
<td>12%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Colocation</td>
<td>9%</td>
<td>10%</td>
<td>12%</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>Cloud</td>
<td>32%</td>
<td>31%</td>
<td>30%</td>
<td>30%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Fewer respondents than last year believe that cloud outsourcing reduces costs. Rather, the biggest advantage is that it saves time. Others noted that it provides increased data availability, as well as better security, efficiency and time to market.
<table>
<thead>
<tr>
<th>Benefit</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced time spent on infrastructure maintenance</td>
<td>74%</td>
<td>80%</td>
</tr>
<tr>
<td>Increased data access and availability</td>
<td>48%</td>
<td>41%</td>
</tr>
<tr>
<td>Better efficiency</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>Better security</td>
<td>41%</td>
<td>34%</td>
</tr>
<tr>
<td>Reduced costs</td>
<td>36%</td>
<td>39%</td>
</tr>
<tr>
<td>Ability to focus on core business areas</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>Process standardization across IT</td>
<td>33%</td>
<td>34%</td>
</tr>
<tr>
<td>Improved time to market/competitiveness</td>
<td>30%</td>
<td>24%</td>
</tr>
<tr>
<td>Improved customer experience/satisfaction</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Improved employee productivity</td>
<td>29%</td>
<td>33%</td>
</tr>
<tr>
<td>Access to specialized skills</td>
<td>20%</td>
<td>12%</td>
</tr>
<tr>
<td>Creation of new business/revenue opportunities</td>
<td>9%</td>
<td>18%</td>
</tr>
<tr>
<td>None</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Not applicable - no outsourcing engagements</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Improving customer experience has been identified as a key driver of digital transformation. It is getting even greater attention because of the pandemic.

“We have to reevaluate the way customers interact,” said one company VP. “Customer experience in the new normal is very important.” This view applies equally to the public and private sectors. “We’re taking advantage of that big culture shift to reimagine services to customers,” said a CIO for a public agency.

How are CIOs reimagining the customer experience for the new normal?

Almost 60 per cent said they’re looking for ways to improve existing applications for online and mobile use. Financial services ranked this as an even higher priority.

Others want to develop new customer-friendly applications, make more use of analytics, or develop new services to sell online. Smaller companies were focused on improving their call centre capabilities. No matter how they do it, all organizations must come up with new virtual ways to do business.
The 2020 CanadianCIO survey provides a unique snapshot on the views of the country’s IT leaders at a time of unprecedented change. This year’s survey posed 43 questions, including ten questions on the impact of the COVID-19 crisis. ITWC distributed the survey from May 22 to June 26, 2020, and received 165 responses.

The respondents are the technology leaders in their organizations, including many CIOs and C-suite executives, along with IT directors and managers. Over 98 per cent of them are directly involved in technology-related decisions.

Fifty-five per cent of the participants have been in their roles for more than five years, although there are emerging signs this year of a changing of the guard with an increase in the younger cohort.

The respondents work in organizations of all types and sizes. The majority, at 62 per cent, were from organizations with fewer than 1,000 employees. There was representation from every size category all the way up to organizations with more than 5,000 employees, which comprised 16 per cent of the total. The participants came from all sectors, including non-profit, education, government, health care, financial services, manufacturing, transportation, retail, and professional services. Overall, their combined input is a true representation of the Canadian landscape.
If 2020 teaches us one thing, it is that no one can predict the future.

Planning is necessary, but the ability to pivot is even more important.

The lesson from this year’s survey is about resilience. Due to good planning, Canadian CIOs were prepared to pivot.

How are they preparing for an uncertain future?

CIOs are building greater resilience by focusing on the known challenges. Their priorities for the next 12 months are to strengthen defences against rising security threats, improve productivity in the remote work environment, and to drive transformation to better serve their customers.

Despite the likelihood of budgetary constraints, CIOs remain optimistic and determined to capitalize on the momentum and influence they have gained.

They intend to be ready for what the future may bring.