

THE WORKPLACE EVOLUTION.

How IoT is Maximizing Operational Efficiency in Canada.

Executive Summary

As technologies continue to expand and evolve in both quantity and complexity, many organizations are understanding the increasing importance of transforming their digital operations. However, organizations continue to face significant operational and financial barriers when it comes to adopting and investing in Internet of Things (IoT) and emerging technologies.

96%

Nearly all (96 percent) Canadian organizations value IoT and emerging technologies, but more than one third (37 percent) are not adopting these technologies.

57%

Key barriers to adoption include not being a company priority (57 percent), lack of budget (34 percent) and lack of employee expertise/talent (30 percent).

76%

Most respondents believe that adopting IoT and emerging technologies can help improve operational efficiency (76 percent), increase data and information availability (70 percent) and improve the customer experience (68 percent).

64%

Organizations face challenges when it comes to adoption. The top three risks and challenges experienced include increased security threats, such as cyberattacks and ransomware (64 percent), technology failure (61 percent) and maintenance requirements (54 percent).

As organizations continue to implement these new technologies, it is important to frame digital transformation in terms of making incremental changes to achieve business goals. By doing this, organizations can grow their business and garner large and scalable returns on these technology investments.

Introduction

CDW commissioned a survey with Angus Reid to examine the state of IoT and emerging and transformative technologies in the workplace. The survey looked at how Canadian IT professionals across various sectors are witnessing the digital transformation evolution in the workplace, and the various ways they are implementing IoT and emerging and transformative technologies within their organization.

IoT, or the Internet of Things, refers to everyday devices capable of sending and receiving information through a connection to the internet. Some of the most common and well-understood examples of IoT are personal, daily-use devices, such as wearable fitness trackers, televisions, smart watches and even cars. Due to the breadth of this category, the constantly evolving nature of IoT and its applications in business are extensive, including creating new opportunities to collect data, implementing efficiencies and increasing data accessibility. These benefits are perceived by both internal IT staff and customers alike, as they have a positive influence on day-to-day experience, support business growth and enhance an organization's bottom line.





While IoT as a technology has been around for several decades, IoT is considered an emerging technology, as its development and applications are still largely unrealized. Emerging and transformative technology is defined as a variety of technologies such as artificial intelligence, high performance computing, augmented/virtual reality, business process transformation tools, containers and low code applications. For the purposes of this report, "IoT" and "emerging and transformative technologies" will be referred to as "emerging technologies." Early adopters of IoT include the retail, manufacturing and energy industries, and many IoT devices have materialized from their investments, such as inventory trackers, remote monitoring devices and climate control. However, the possibilities of IoT for even more meaningful and impactful applications are still being explored, including autonomous vehicles and urban planning. Other sectors, such as healthcare and government, are also beginning to tap into IoT's potential.

Due to the prevalence of IoT in our everyday environment, it is important that ongoing digital transformations are optimized and streamlined with security at the forefront. With each new IoT device added to a network, the number of data exchanges multiplies along with the potential to be interrupted and targeted by bad actors. It is important for the expanding attack surface to be regularly screened for vulnerabilities and that security measures are continuously updated to control access to data and prevent breaches. While IoT's extensive connectivity creates greater exposure to threats, it also allows for both on and off-premises cybersecurity tools, including enhancing endpoint solutions and multifactor authentication. Given the broad security challenges of IoT, many organizations are engaging a trusted third-party partner to help manage resources, expand IT environments and ensure successful digital transformations.



KEY FINDINGS:

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Key Findings:



Nearly all (96 percent) of Canadian organizations value IoT and emerging technologies, but over one third (37 percent) are not adopting these technologies.

Key barriers to adoption include not being a company priority (57 percent), lack of budget (34 percent) and lack of employee expertise/talent (30 percent).



Most respondents believe that adopting IoT and emerging and transformative technologies can help improve operational efficiency (76 percent), increase data and information availability (70 percent) and improve the customer experience (68 percent).

However, organizations face challenges when it comes to adoption. The top three risks and challenges organizations have experienced include increased security threats, such as cyberattacks and ransomware (64 percent), technology failure (61 percent) and maintenance requirements (54 percent).



Key Findings:



Over three-quarters (82 percent) of respondents said their organization engages with third-party IT partners.

However, nearly one-third of respondents (30 percent) said their third-party IT partner(s) does not support their organization in the adoption of IoT and emerging and transformative technologies.



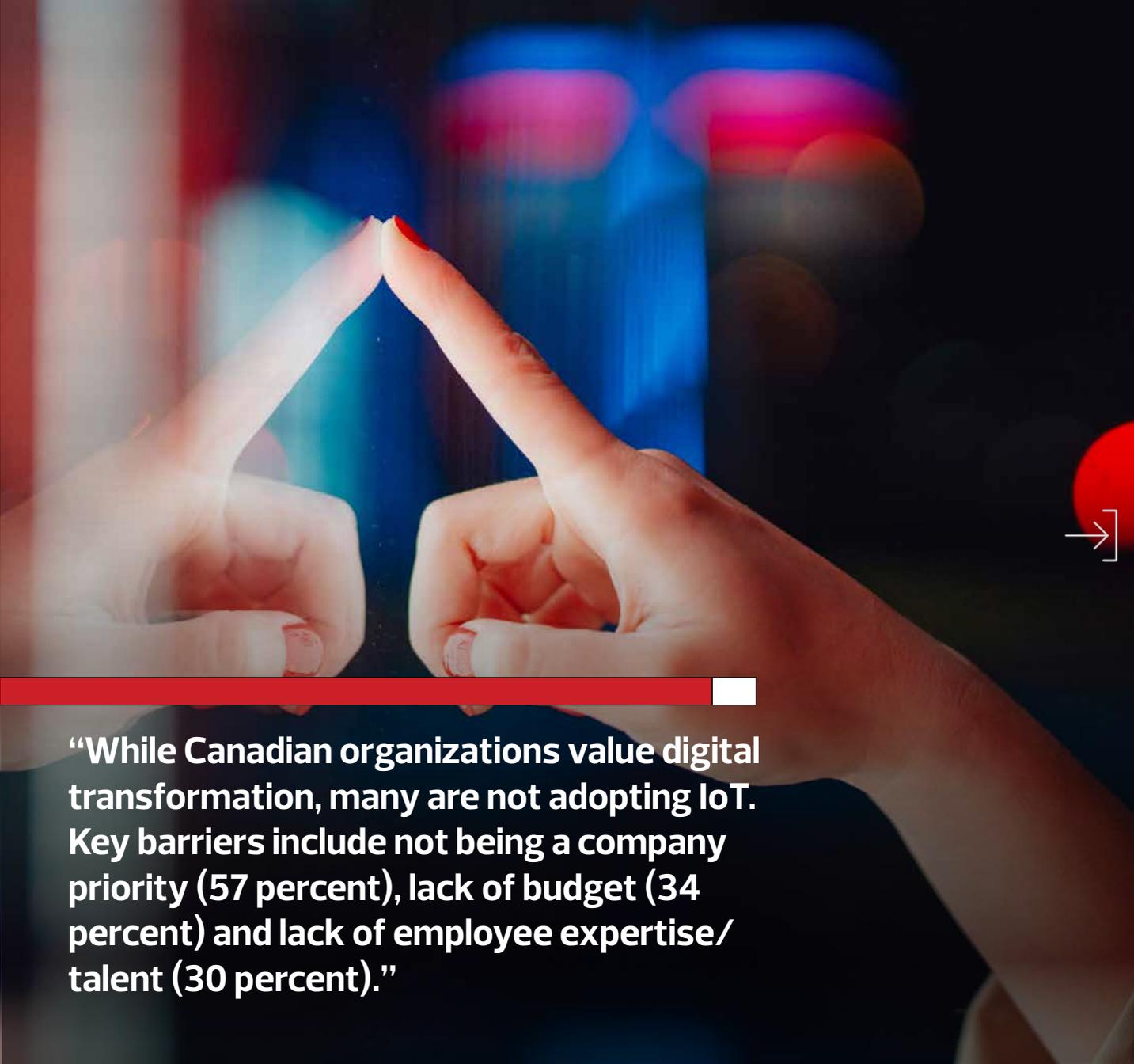
When asked why their third-party IT partner(s) does not support their organization in the adoption of IoT and emerging and transformative technologies, over half of respondents (54 percent) said it is not in their IT partner's scope.

Other challenges include lack of expertise (16 percent) and lack of budget (14 percent.)

Digital Transformation Adoption in Canada

As technology continues to evolve at the speed of light, Canadian organizations are looking to expand their operations and digital solutions in modern, dynamic and customized ways. In fact, nearly all (96 percent) Canadian organizations surveyed reported valuing IoT and emerging technologies. However, while there is vast interest in IoT, many organizations have been slow to adopt them. Just over half (53 percent) of Canadian organizations adopt IoT and emerging technologies, and nearly half (46 percent) reported that their organizations invest over \$100,000 annually in emerging technologies.

The study found that more than one-third (37 percent) of Canadian organizations do not invest in IoT, and nearly two-fifths (39 percent) said their organization does not plan to use IoT and emerging technologies in the future. Some of the top barriers for not investing in IoT included not being a company priority (57 percent), lack of budget (34 percent) and lack of employee expertise/talent (30 percent). This indicates that while organizations understand the importance of leveraging emerging technology and are curious to explore its applications within their organization, adoption may be hindered by a lack of investment and buy-in from senior leadership.

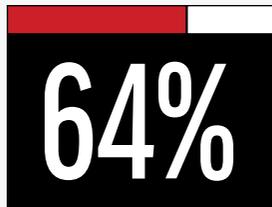


“While Canadian organizations value digital transformation, many are not adopting IoT. Key barriers include not being a company priority (57 percent), lack of budget (34 percent) and lack of employee expertise/talent (30 percent).”

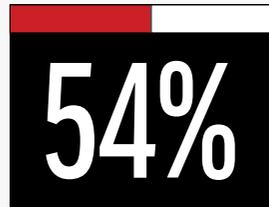
Digital Transformation is Key to Creating Efficiencies, Driving Growth and Enhancing an Organization's Bottom Line

The benefits of IoT adoption are widespread and well understood by Canadian organizations. Most respondents believe that adopting IoT can help improve operational efficiency (76 percent), increase data and information availability (70 percent) and improve the customer experience (68 percent).

However, gaining access to these benefits is not always a seamless process, as these technologies can lead to increased security threats and operational challenges. The top risks and challenges organizations have experienced related to IoT include:



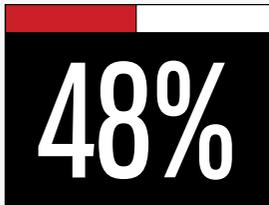
Increased security threats, such as cyberattacks and ransomware



Maintenance requirements



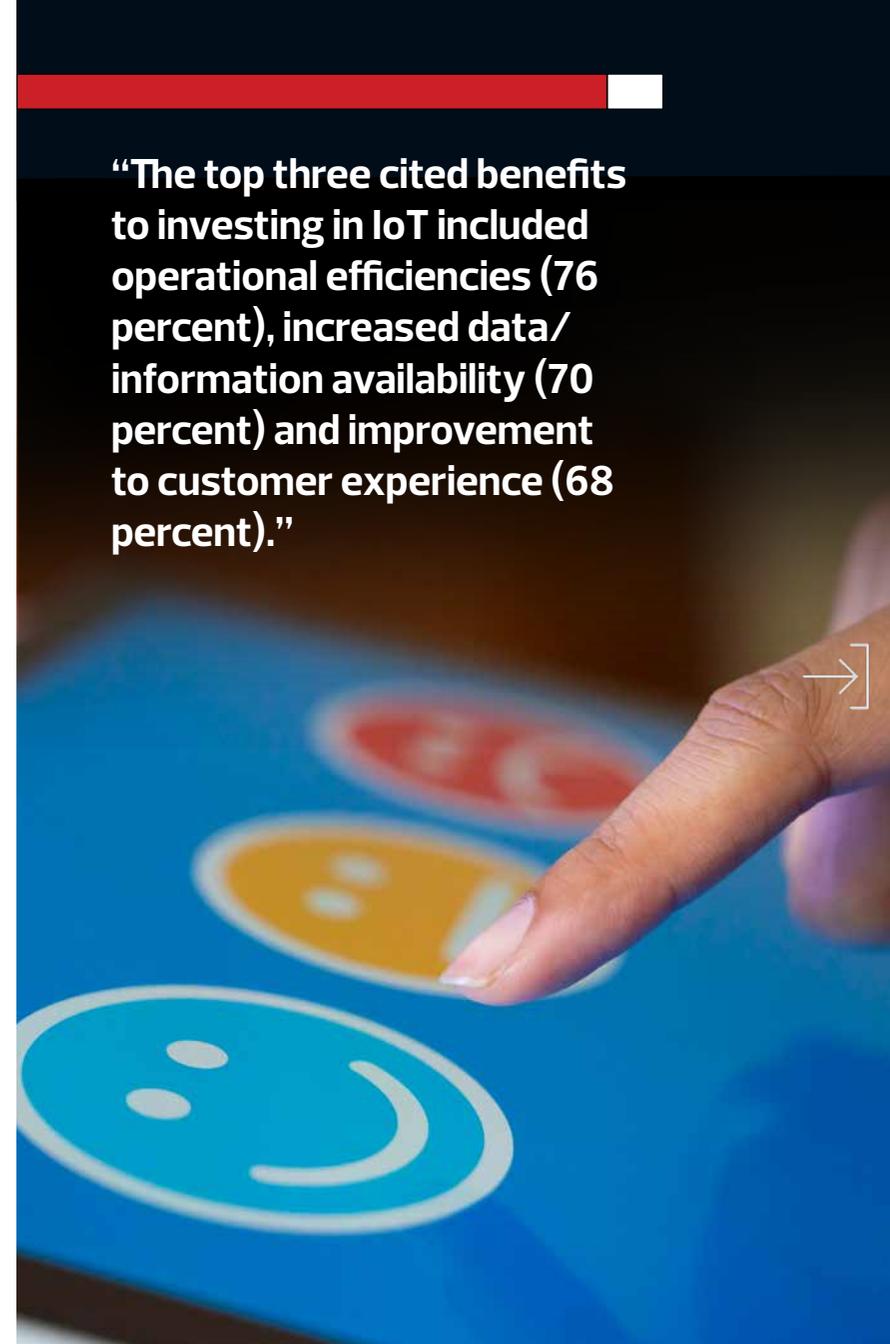
Technology failures



Increased dependency on technology

When implementing IoT and emerging technologies, organizations should consider evaluating their security posture and ensuring their IT team has the tools and knowledge needed to troubleshoot technology challenges. Alternatively, if an organization is not equipped to evaluate and troubleshoot their security posture, leveraging an external third-party partner to manage it is an effective way to ensure secure computing practices are always prioritized.

“The top three cited benefits to investing in IoT included operational efficiencies (76 percent), increased data/information availability (70 percent) and improvement to customer experience (68 percent).”

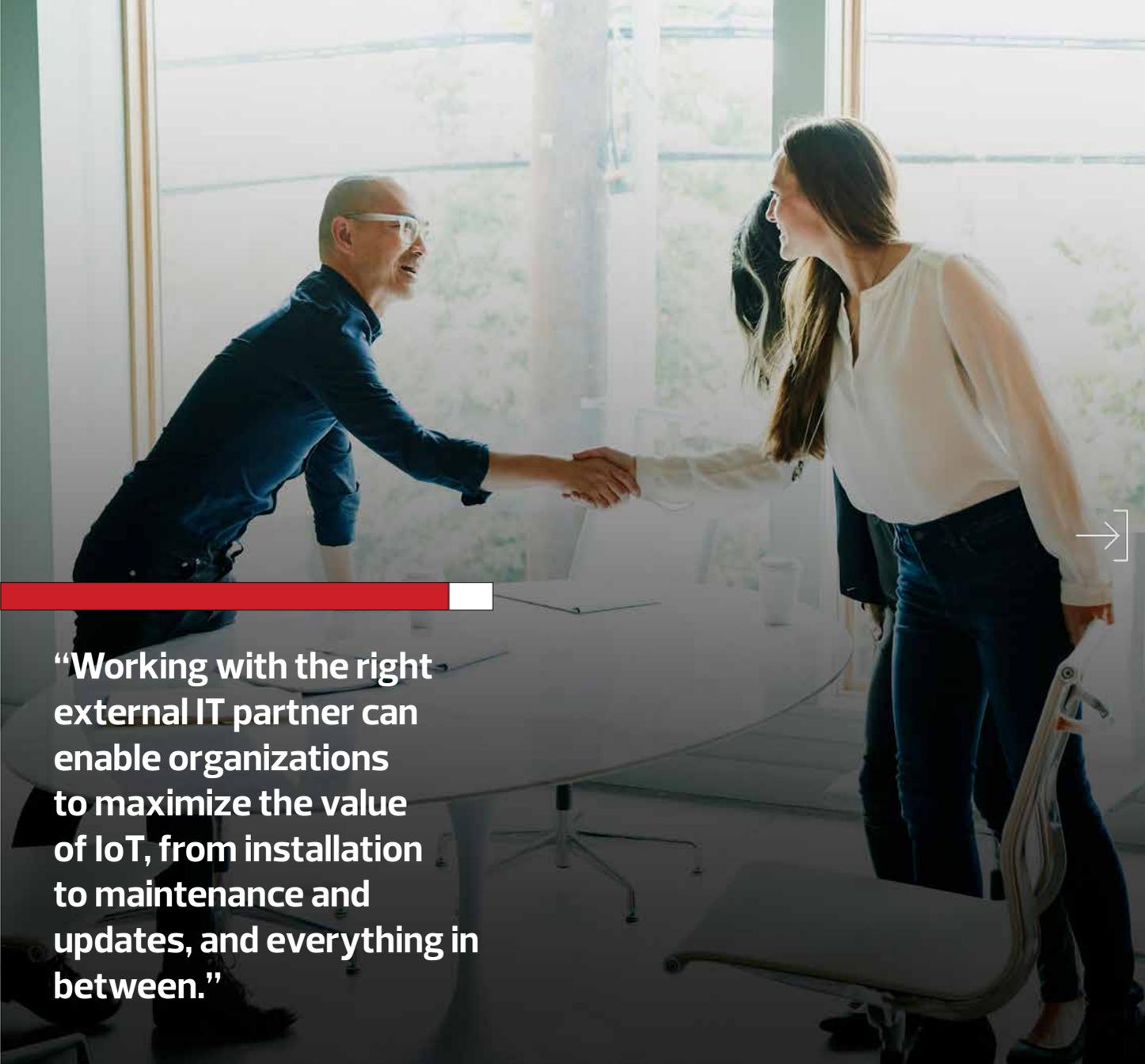


External IT Security Services Partners Can Help Ensure Digital Transformation Success

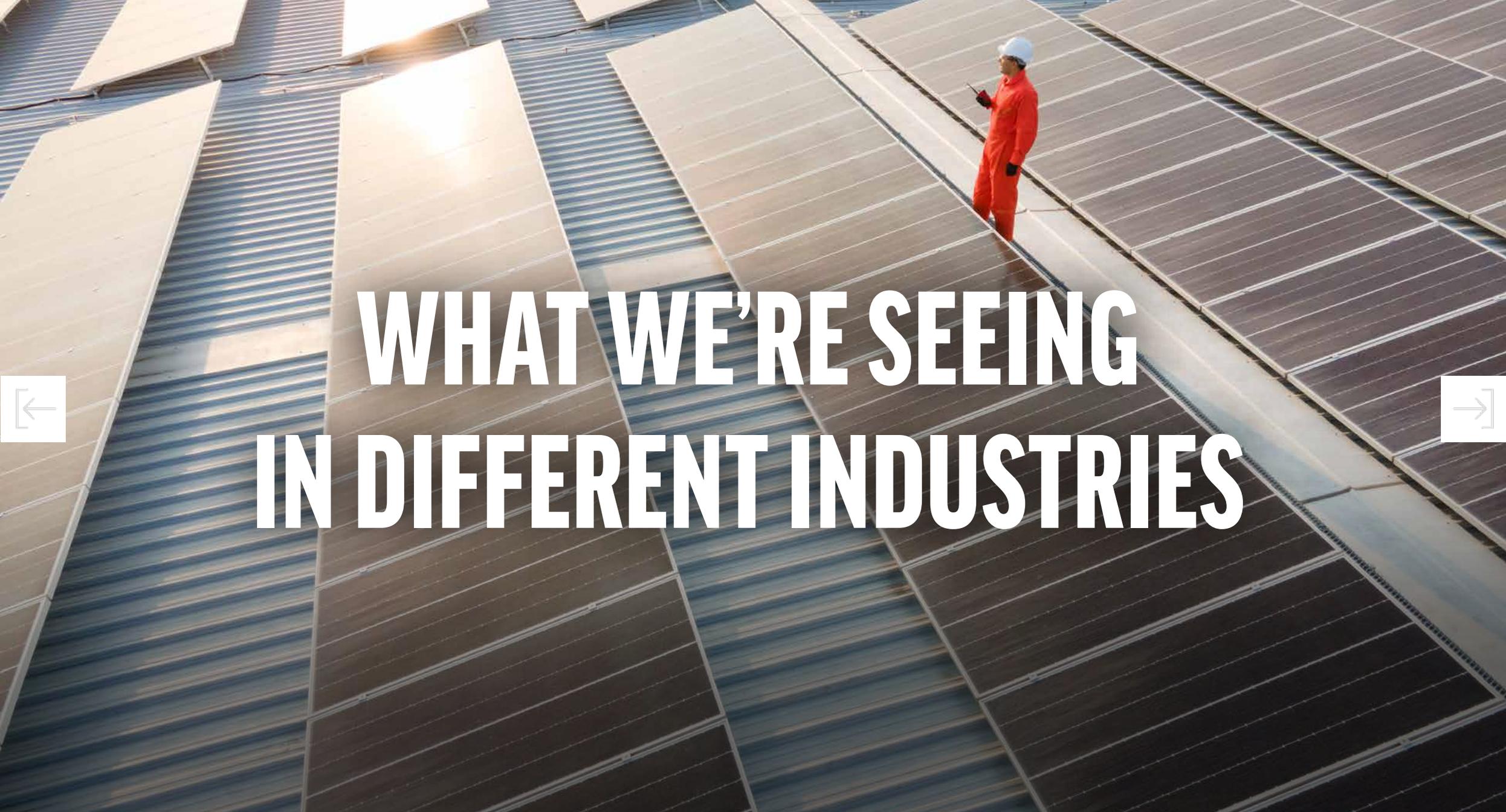
Working with external IT partners has become increasingly valuable to help organizations navigate their IT needs, particularly as technologies continue to expand and evolve in both quantity and complexity. While many organizations (82 percent) reported engaging with a third-party IT partner, one-third (30 percent) of respondents said their third-party IT partner does not support with the adoption of IoT.

Not all third parties have kept pace with developments in IoT and emerging technologies, as over half of respondents (54 percent) indicated IoT adoption was outside of their IT partner's scope. Similarly, another 16 percent indicated a lack of partner expertise and 14 percent cited a lack of budget.

Selecting the right third-party IT partner with a fulsome scope of IoT and security capabilities is critical as organizations look to expand their digital solutions while maintaining a robust cybersecurity posture. In addition, third-party IT partners can help ensure organizations experience seamless transformations, maximize the utility of IoT and capitalize on all the business functions and related benefits.

A man in a blue shirt and glasses is shaking hands with a woman in a white blouse in a modern office setting. They are standing near a large window with a view of greenery. A red horizontal bar is positioned above the quote.

“Working with the right external IT partner can enable organizations to maximize the value of IoT, from installation to maintenance and updates, and everything in between.”



**WHAT WE'RE SEEING
IN DIFFERENT INDUSTRIES**



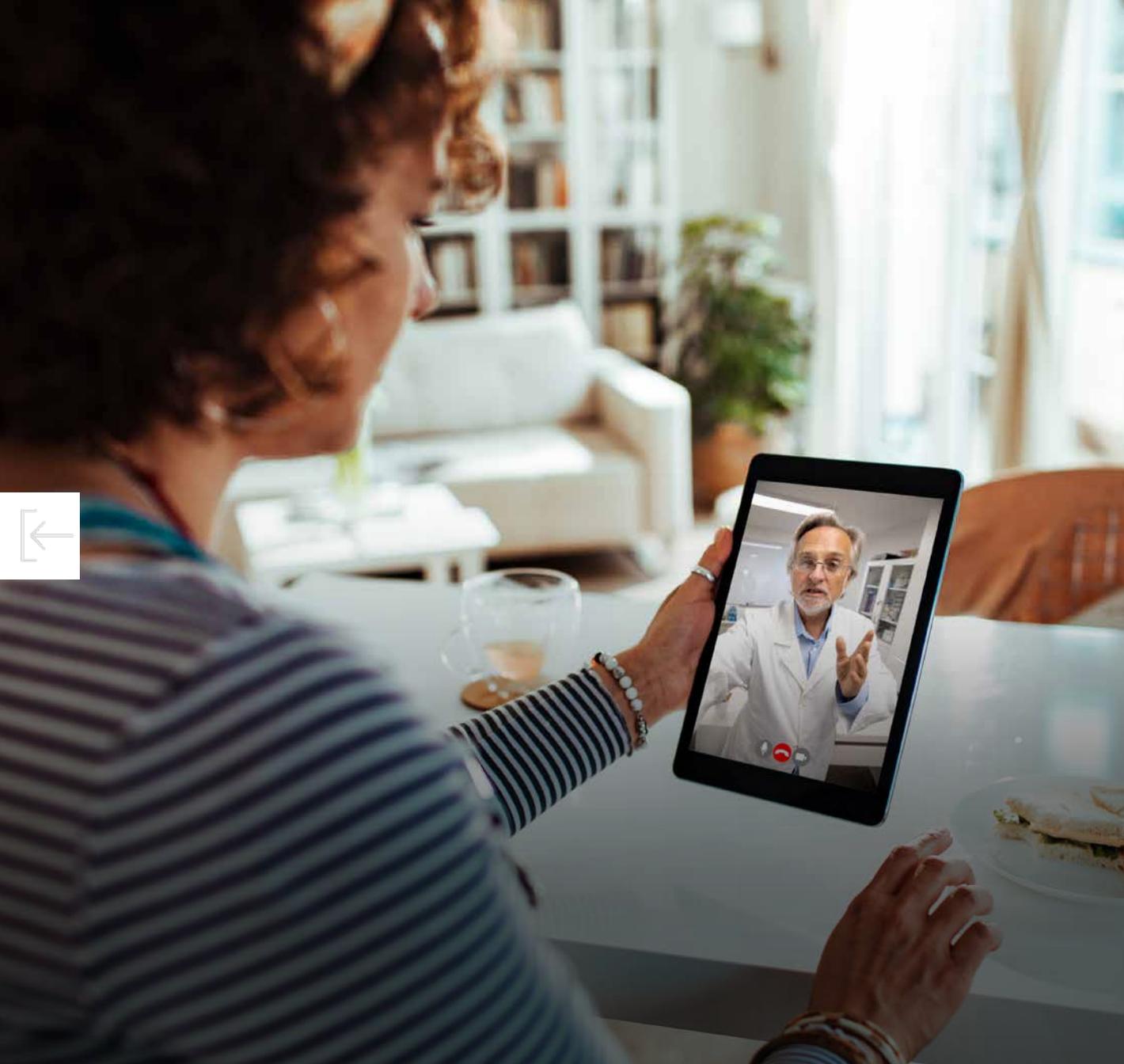


Financial Services

When it comes to the adoption and investment in IoT, the financial services sector is leading the way. Nearly three-quarters (71 percent) of respondents working in financial services have adopted these technologies. In addition, 71 percent of financial services professionals said their organization invests more than \$100,000 annually in IoT, the highest of all industries. Financial services were most likely to invest in artificial intelligence (73 percent), business process transformation tools (68 percent) and high-performance computing (46 percent), which are all crucial to an industry dealing directly with their customers' and clients' finances.

Business/Professional Services

One-quarter (25 percent) of business/professional services professionals reported their organization invests more than \$100,000 annually on IoT and emerging technologies, the lowest investment amount of all industries. Despite not leading the pack in emerging technology investments, business and professional services organizations are most likely to use these technologies in the future. Over half (60 percent) of organizations who currently do not invest in IoT and emerging technologies said they have plans to use this technology in the future. Furthermore, most plan to act fast in adopting these technologies, with 86 percent reporting their organization will implement these technologies within the next year, the highest of all industries.



Healthcare

While overall adoption of IoT and emerging technologies in healthcare was the lowest across industries (39 percent), those that did were early adopters. Nearly all (90 percent) of IT professionals working in healthcare said their organization began adopting emerging technologies before the COVID-19 pandemic, the highest of all industries. Interestingly, less than one-quarter (24 percent) of healthcare professionals reported that their organization highly values emerging technologies, the lowest of all industries. Healthcare respondents (55 percent) were the most likely to cite budget as a key barrier to adoption.

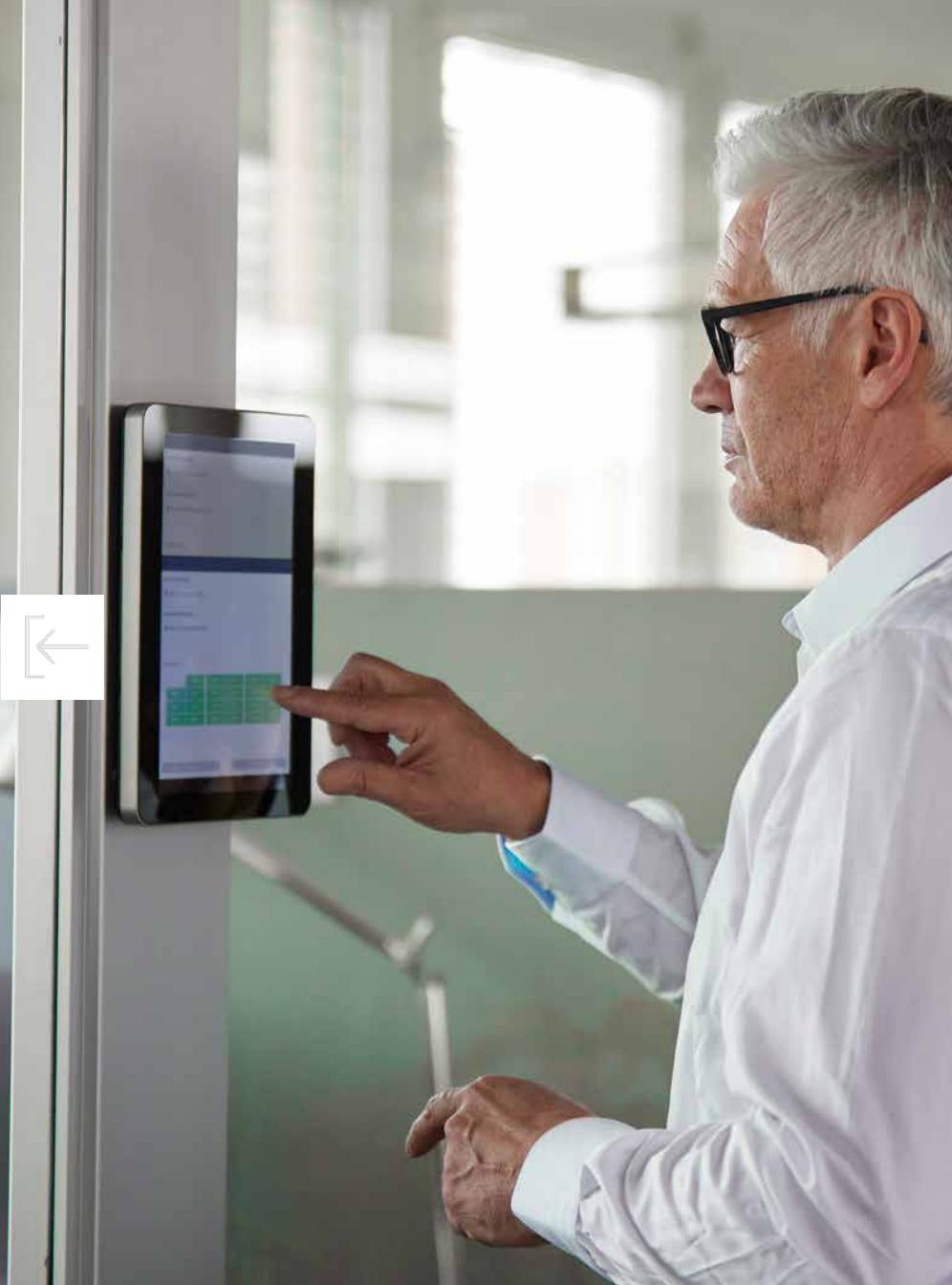
Government

Government respondents indicated a lack of employee expertise and talent (46 percent) as a key barrier to adoption of IoT and emerging technologies, despite having the highest level of third-party IT partnerships (92 percent) across industries. Comparatively, only one-third of respondents (36 percent) in business/professional services and education reported engaging with third-party IT partners. Interestingly, government, crown corporations and other publicly funded organizations reported the lowest level of pre-pandemic adoption of IoT across industries (77 percent). This may explain the skills gap, as other industries got a head start on securing talent by investing in IoT early.



Education

The education industry has had a particularly difficult experience when it comes to IoT application and investments. Interest and investments in IoT in the education industry were low, with only 37 percent of education professionals reporting that their organization highly values emerging technologies. The top-cited reasons for not adopting IoT amongst IT professionals working in education was it not being a company priority (64 percent) and lack of budget (44 percent). Interestingly, just over half (52 percent) of IT professionals in the education sector reported that their third-party IT partners supported their organization in the adoption of IoT and emerging technologies. This is the lowest of all industries, and low internal interest combined with a lack of external support are two factors causing the education industry to fall behind.



Where Do We Go From Here?

There is no better time than the present for an organization to begin its digital transformation journey. Across all industries, Canadian organizations have begun to experience the benefits of IoT and emerging technologies, including maximizing business efficiencies, driving business growth and enhancing their bottom lines.

As Canadian organizations continue implementing IoT, our CDW experts recommend the following top three considerations to keep in mind:

- 1. Recognize the important link between IoT and successful business outcomes such as operational efficiencies, increased data and information availability and a better overall customer experience.**
- 2. Partner with a third-party external IT partner with a fulsome scope of IoT and security capabilities to alleviate internal pressures and ensure a successful and smooth digital transformation. This can also help manage and address the various challenges that can come along with widespread adoption of IoT, including cyberattacks, technology failures and maintenance requirements.**
- 3. Provide continuous education to internal teams around how to apply and maximize the benefits of emerging technologies. This can help organizations receive buy-in from senior leaders and decision-makers to ensure investments are being made in IoT.**

At CDW, **WE GET** IoT, so you don't have to. Our highly trained and industry-leading team of IT experts can help orchestrate a digital transformation strategy that propels your organization to successful business outcomes. By partnering with an external IT partner who understands your needs and has the solutions to bring your vision to life, your organization can leverage all the new data that IoT provides, minimize cybersecurity exposure and lighten the burden on your IT staff, while meeting your targeted business goals.

To learn more about how to start revolutionizing your business today, visit cdw.ca/digitaltransformation.

