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| SUMMARY | HYBRID CLOUD OPERATING MODELS | DIGITAL MATURITY | WHY HYBRID CLOUD? | KEY CAPABILITIES | CDW SECURITY | HOW WE CAN HELP |

Accelerating and Enhancing Business Digitization With Hybrid Cloud.

**It's Not About Where You're Operating,
It's How You're Operating.**

Executive Summary

The best of on–premises and cloud

Digital transformation implies major changes to how organizations approach customer experience, operational processes and business models. The hybrid IT approach allows businesses to preserve in-house IT investment, capabilities and control. When combined with cloud–based services, this allows them to gain the agility, scalability and specialized tools of public cloud that are needed to support digital delivery of new services and revenue opportunities.

CDW's *Accelerating and Enhancing Business Digitization with Hybrid Cloud* provides answers for why the hybrid IT approach has become preferred and how you can advance your hybrid cloud strategy, whether you're just starting or already underway.

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Cloud Underpins Digitization and Complements the Traditional Data Centre in Hybrid Cloud Operating Models

Software as a Service (SaaS) adoption pushes Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) adoption; COVID–19 has further accelerated PaaS and IaaS adoption.

SaaS adoption and COVID–19 have accelerated public cloud adoption

Cloud adoption of Paas grew as SaaS became more popular, pure IaaS less so until 2020

Adoption of PaaS and IaaS expected to accelerate further in 2021 due to COVID–19

IDC

IT respondents from =organizations with more than 100 employees
Sample sizes: 2014 n=113, 2015 n=113, 2016n=104, 2017 n=128, 2018 n=112, 2019 n=100, 2020 n=103
Sources: IDC Canada Business and IT Advisory Panel series

"All [of our] applications and services going forward will be buy first and SaaS rather than build and SaaS. Any internal development will also be cloud–first, utilizing major PaaS/IaaS services, but it's all going to be containerized, so technically speaking we want that sort of flexibility to run things where [in our on–premises environment or public cloud] it turns out best to do so."
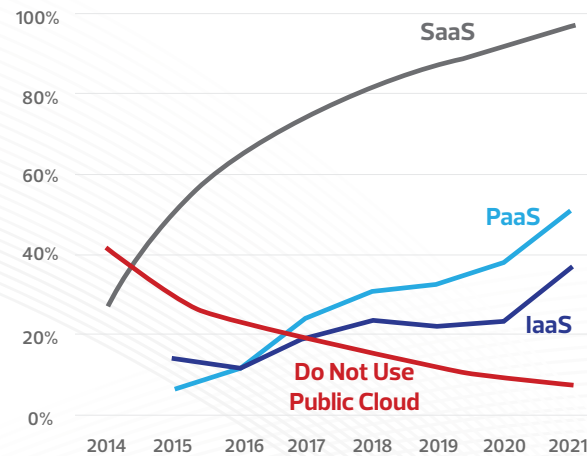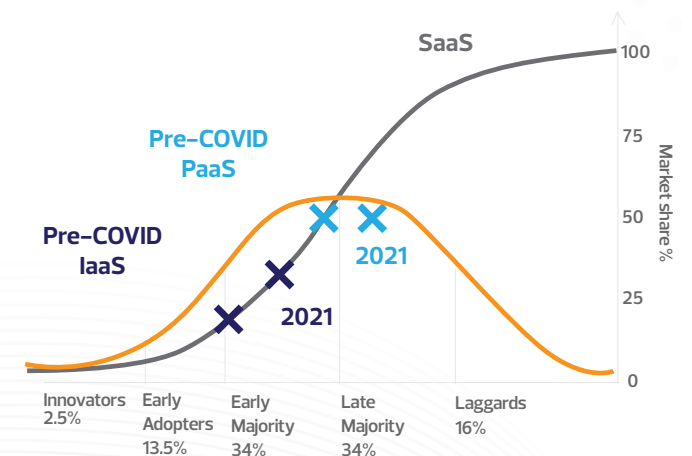
—*CTO, major Canadian asset management firm*

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Hybrid Cloud and your Journey to Digital Maturity

Operating in a hybrid cloud model means working with the business to run applications where they provide the most benefit to customers at the best value to the business. This is the heart of digital transformation: giving your organization the flexibility to operate workloads and applications where business needs dictate initially and then relocate them as needs shift. One of the biggest advantages your organization can have is an understanding that getting to this level of digital maturity requires more than just investing in technology and tools; iden–tifying and implementing the process and people changes you need to take full advantage of flexibility and automation are the other key building blocks for successful digital transformation.

A key aspect of making digital transformation and hybrid cloud work for you is following a process or framework. Implementing new development and deployment models, technologies, solutions and tools and cloud capabilities should follow a roadmap that ties technology implementation, supporting capabilities development and specific IT and business objectives together — all wrapped in the investment in the people and process changes necessary to digitally transform how you do business.

While there are many existing digital transformation frameworks, they all generally cover three key transformational pillars:
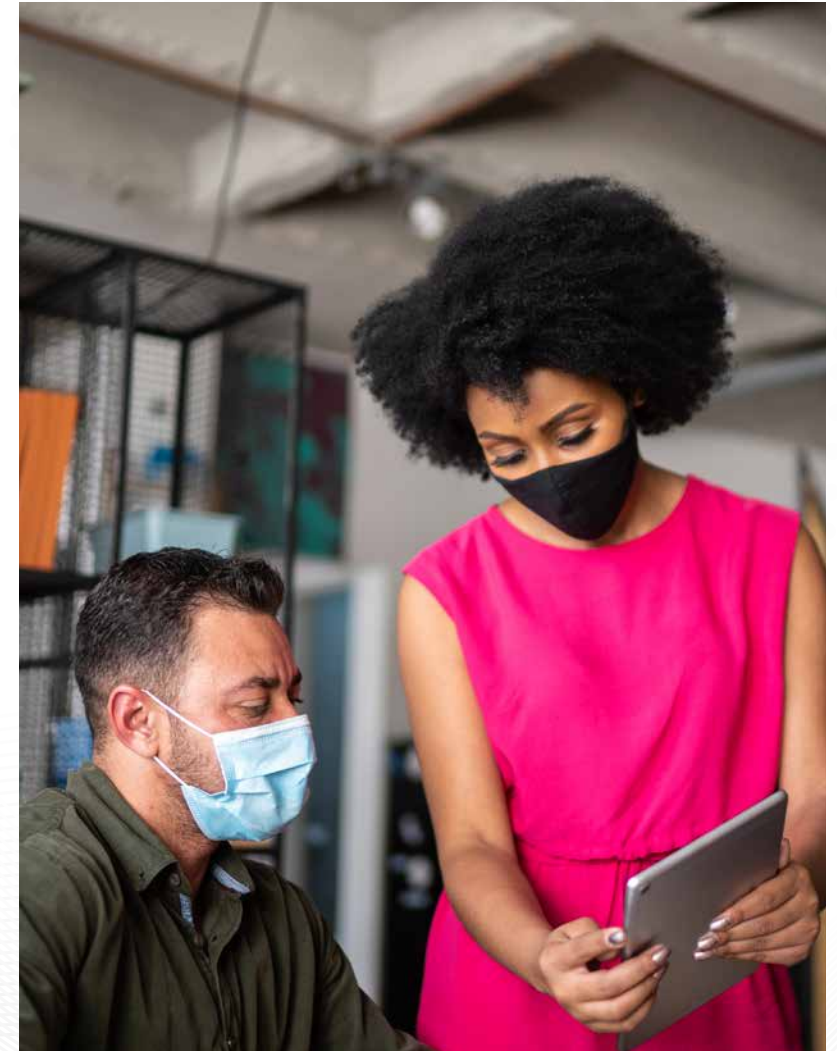
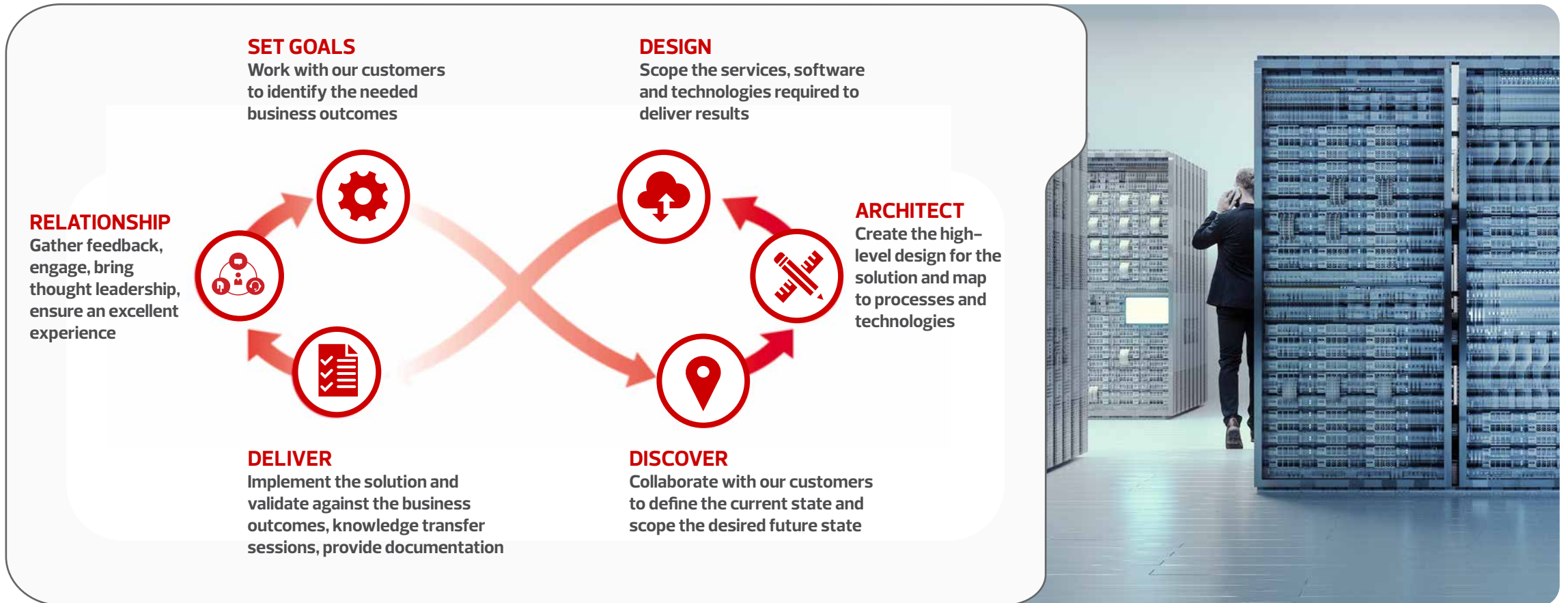Customer experience   Operational processes   Business models

Solution integration partners can be leveraged to help organizations assess and plan for digital transformation. For example, solution integration partners can help your organization define specific transformation elements within each pillar to address your needs, requirements and objectives. This planning helps strategically guide organizations' hybrid cloud capabilities' development, from skilling up teams to updating legacy processes and investing in modern tools.

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Our Approach to Digital Transformation

SET GOALS
Work with our customers to identify the needed business outcomes

DESIGN
Scope the services, software and technologies required to deliver results

RELATIONSHIP
Gather feedback, engage, bring thought leadership, ensure an excellent experience

ARCHITECT
Create the high–level design for the solution and map to processes and technologies

DELIVER
Implement the solution and validate against the business outcomes, knowledge transfer sessions, provide documentation

DISCOVER
Collaborate with our customers to define the current state and scope the desired future state
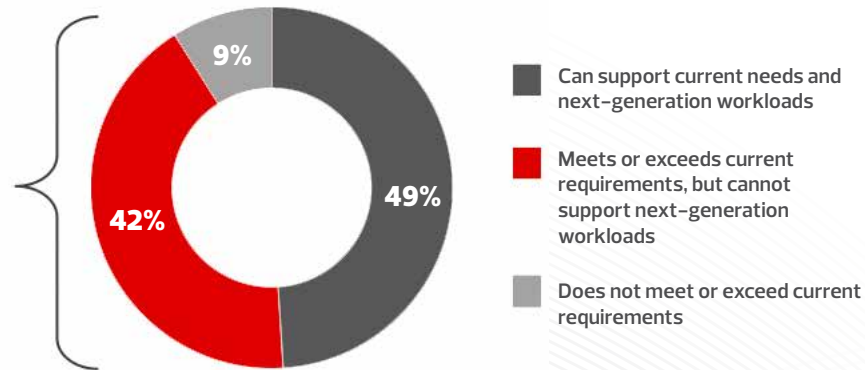
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Why We're Headed to Cloud

A primary factor leading organizations to hybrid cloud is their lack of confidence in the traditional data centre's ability to support digitization and next-generation workloads. These cloud-based and Infrastructure as Code (IaC)–reliant workloads — such as distributed architecture, modular design and stateless applications — are crucial building blocks for digital transformation.

How do Canadian organizations feel about their traditional infrastructure's ability to handle future requirements on its own?

More than half of Canadian organizations lack confidence in their infrastructure to support digital transformation initiatives and next-generation workloads

9%

49%

42%

- Can support current needs and next-generation workloads
- Meets or exceeds current requirements, but cannot support next-generation workloads
- Does not meet or exceed current requirements

79% of IT admin time is spent in non-value-added activities...climbing since 2015

≡IDC

Source: IDC Canada ITAP n4 2021 Survey, July 2021, n=304

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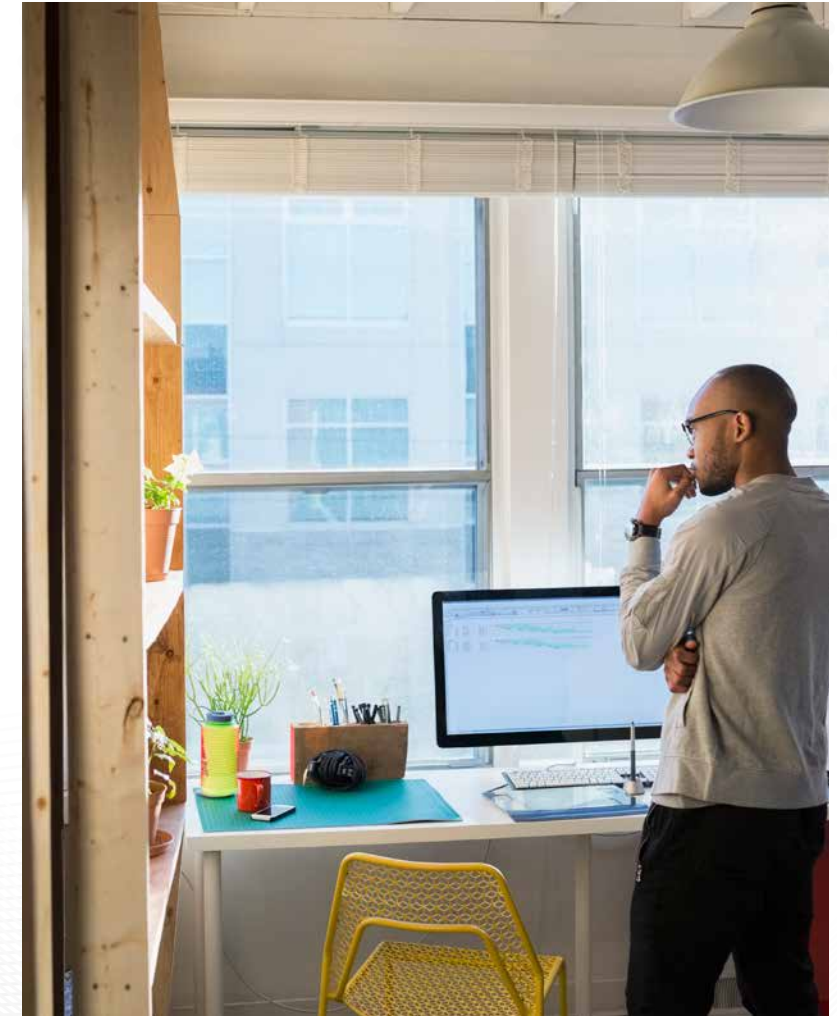
Even with modernization investments, a large percentage of Canadian organizations do not see a path forward for the traditional data centre alone: Almost half described their level of data centre modernization investment as inadequate for supporting new initiatives.

How would you describe the level of data centre modernization in your organization?

Category	Percentage
Good for core operations, and for new initiatives where the value is clear	44%
Sufficient for core operations, but tight for new initiatives	31%
Readily available across the board with a good business case, even for experimental development	11%
Tight, barely covering essential operations	8%
Not nearly enough for what we need to do	6%

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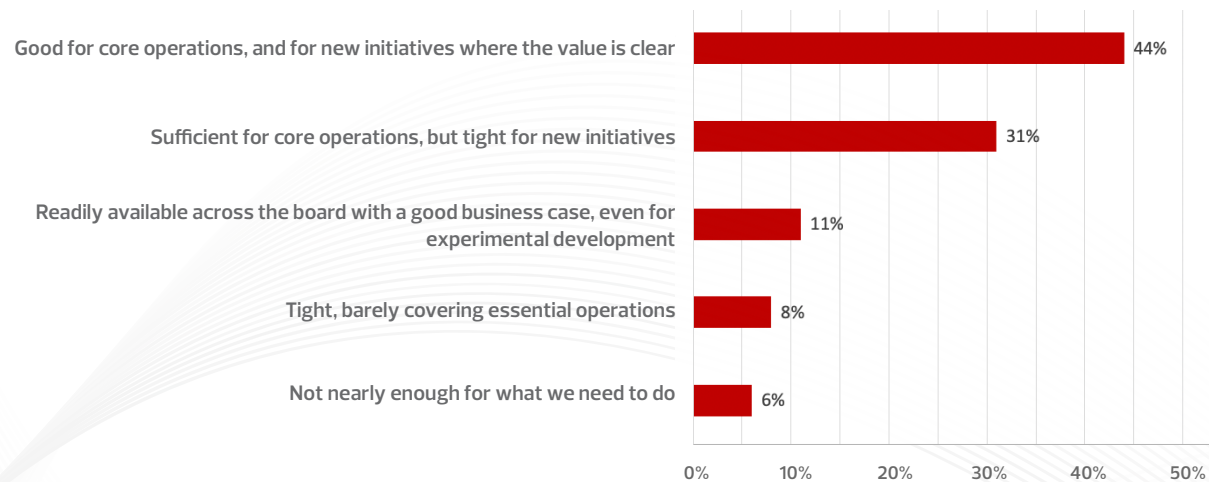
n=288
Source: IDC Canada ITAP Advisory Panel (ITAP) n4 2021 Survey, June 2021

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Start by Identifying Hybrid Cloud Use Cases and Developing Key Capabilities

Canadian organizations' planned use cases for hybrid cloud show how it complements the traditional data centre with optimal workload placement, resiliency, agility and scalability in development and operations. The use cases also indicate how hybrid cloud can act as a bridge to public cloud for workloads and applications — helping overcome traditional data centre barriers.

Which of the following best describes how your organization uses or plans to use hybrid cloud?

- **62%** To have the flexibility to move workloads/applications depending on the optimal location for running them
- **53%** For resilience using public cloud backup/disaster recovery for workloads/applications running on-premises and/or in private cloud
- **50%** For testing and development agility across different environments
- **50%** As a transition stage for migrating specific workloads/applications into public cloud
- **49%** For scalability/cost efficiencies using public cloud for data and storage tiering for workloads/applications running on-premises or in private cloud
- **26%** For agility/scalability using public cloud for "burst" capacity to meet short-term/seasonal compute/storage needs for workloads/applications running on-premises and/or in private cloud

Source: IDC's IT Infrastructure Plans for 2021 Survey, December 2020, n = 147

Keep in mind that these benefits can only be realized if the organization develops its cloud toolset starting with workload and applications portability.

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Key Capabilities

As organizations mature their hybrid cloud strategies, they should primarily be concerned with developing their portability, observability, manageability, resiliency and security capabilities. Measuring growth in these key areas will help IT organizations gauge their ability to support business objectives for cloud and digitization.

- **Portability**
  Architecting an infrastructure that supports the portability of workloads and applications allows for change as business needs shift. This is important, as organizational objectives over the life span of any application may change and requirements may be fluid; e.g., seasonal surges in customer demand may be best served by temporary "bursts" to cloud.

- **Observability**
  Monitoring alone is not enough when you have applications spread across multiple sets of infrastructure. To better ensure positive (internal and external) customer experiences, it is critical to have a real-time view of how your applications are being used and monitor and troubleshoot them to meet customer experience expectations, service-level agreements (SLAs) and other business requirements.

- **Manageability**
  Automated operational support is critical as IT teams need to support more services spread across private and public infrastructure. Orchestration of activities and tighter integration with development teams are key to the success of application deployments. IT teams need mature processes and tools to manage not only physical and virtual servers but also the containers and cloud-native services that come with digital transformation.

- **Resiliency**
  With the increased complexity of managing private and public infrastructure and the addition of containers, microservices and cloud-native solutions, the way applications are architected must be adapted in order to take advantage of the benefits of these new tools to and to be resilient against the intermittent partial failures that are part of distributed cloud-based systems.

- **Security**
  To mitigate the risk of migrating sensitive data to the cloud, organizations need to buy in to the reality that digital transformation has great advantages but requires congruent organizational, people and process security responsibilities. A comprehensive, framework-based approach to cloud security that enables your organization to prepare, defend and respond to threats is essential in hybrid IT environments. This framework should align with your existing/on-premises security program and needs to include:
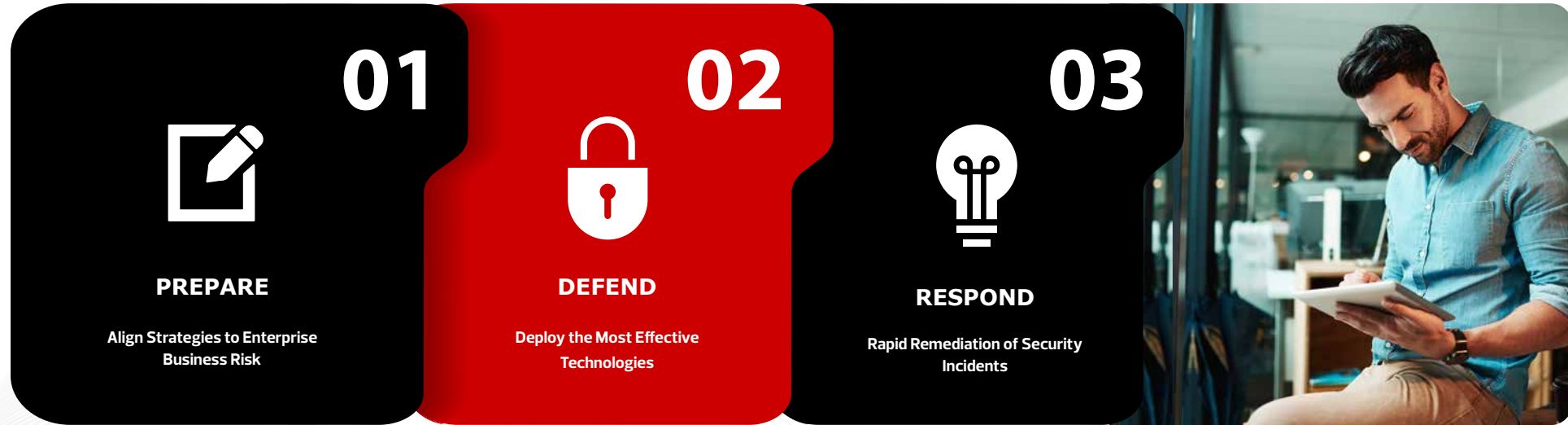
  - Governance, risk and compliance (GRC)
  - Identity and trust
  - Monitoring and controls
  - Threat intelligence
  - Vulnerability management
  - Data loss protection
  - Cyber resilience best practices
  - The shared responsibility model for cloud security

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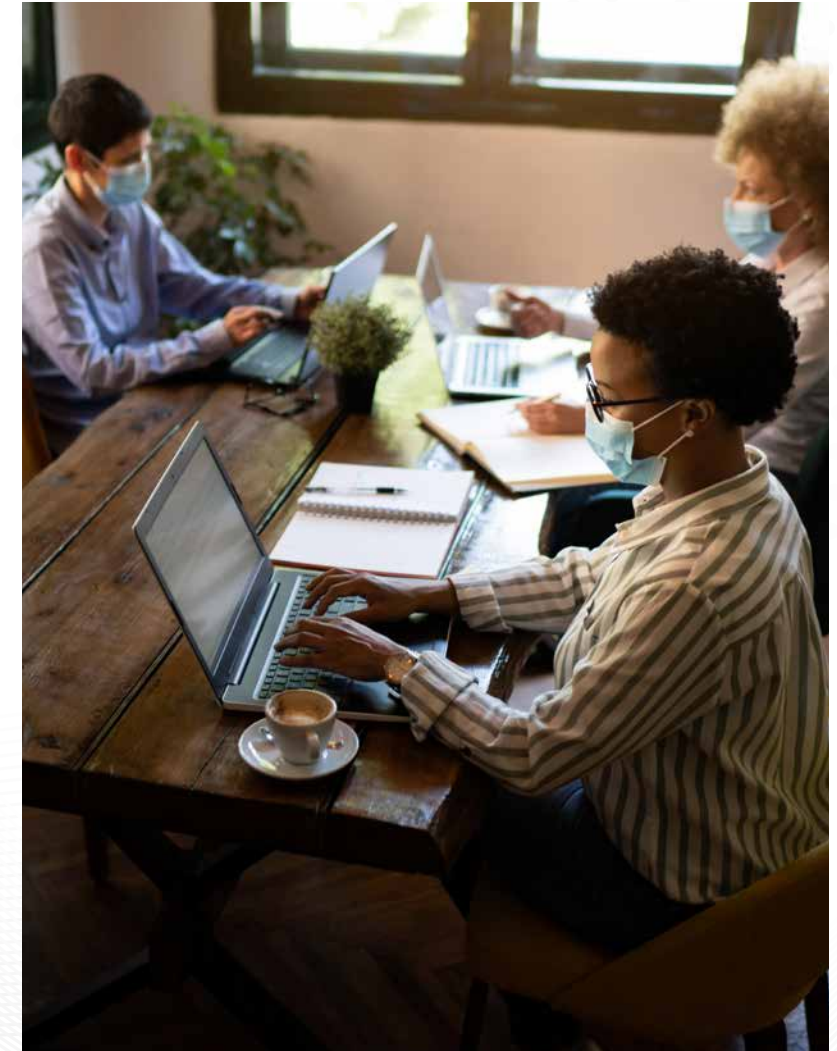
CDW Security Framework

We meet you where you are – whether on-premises, hybrid, or cloud – to help you create a flexible and scalable infrastructure from end-to-end.

01 PREPARE

Align Strategies to Enterprise Business Risk

02 DEFEND

Deploy the Most Effective Technologies

03 RESPOND

Rapid Remediation of Security Incidents

NIST Cybersecurity Framework

IDENTIFY   **PROTECT**   **DETECT**   **RESPOND**   **RECOVER**

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Investing in your journey to mature hybrid cloud processes, technologies and services is the most effective way for your business to get all of the gain but none of the pain from the public cloud. Adopting a hybrid cloud model also better supports application modernization initiatives. Leveraging IaC, containers and cloud-native services to provide a modern IT infrastructure empowers developers to use the tools and services they prefer to use to meet the business' goals and objectives. Application modernization further supports increased agility, faster innovation cycles and better operational efficiencies both for on-premises and in the public cloud. Ultimately, this is the foundation your organization needs to support digital transformation and new digital revenue streams and opportunities.

Download full **CDW's** *Accelerating and Enhancing Business Digitization with Hybrid Cloud* **report here.**

How CDW can help

CDW Canada's hybrid cloud approach is a solution-based method that marries the need for modern technology with management of critical business requirements and legacy application needs. We work with organizations of all sizes and levels of maturity to help move them forward on their journey to an optimized, secure and mature hybrid cloud operating model. CDW Canada offers comprehensive discovery, architecture, implementation and managed services to ensure our customers receive personalized end-to-end support regardless of where they are in their journey.

At CDW, we are laser-focused on enhancing our hybrid cloud solutions to best support your organization in the evolving digital landscape. To learn more about our approach to hybrid cloud or to further discuss any of the trends from this report, please reach out to our solutions team at 800.972.3922 or visit CDW.ca/cloud.

About CDW

CDW Canada is a leading provider of technology solutions for business, government, education and healthcare. CDW Canada helps customers achieve their goals by delivering integrated technology solutions and services that help customers navigate an increasingly complex IT market and maximize the return on their technology investment. Areas of focus include software, networking, unified communications, data centre and mobility solutions. CDW Canada is No. 1 on the Channel Daily News Top 100 Solutions Provider list in Canada, and is a wholly owned subsidiary of Vernon Hills, Illinois-based CDW Corporation, a Fortune 500 company. For more information, visit **CDW.ca**.

About IDC Canada

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services and events for the information technology, telecommunications and consumer technology markets. IDC Canada is part of a network of over 1100 analysts providing global, regional and local expertise on technology, industry opportunities and trends, with more analysts dedicated to understanding the Canadian market than any other global research firm.