

Building the Smartest Cities

2022 Technology Trends
in Municipal Government in
Canada



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with ready-to-use tools and templates that cover the full spectrum of IT concerns.
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Partner Perspective

In March 2020 Canadian municipal IT leaders and their teams redefined the art of the possible.

Surviving the pandemic required us to transform the entire operations of our organizations overnight while still meeting the needs of our community, businesses, and employees. Despite the potential problems and pitfalls, we were able to decentralize into offices of one, continued to deliver services, and invented entirely new ways to serve the people of our communities. **We must continue to fan the flames of innovation** that redefined the art of the possible into a **burning ambition that drives social, economic, and environmental prosperity** for everyone in our communities.

Cole Cioran
Managing Partner, Canadian Public Sector
Info-Tech Research Group



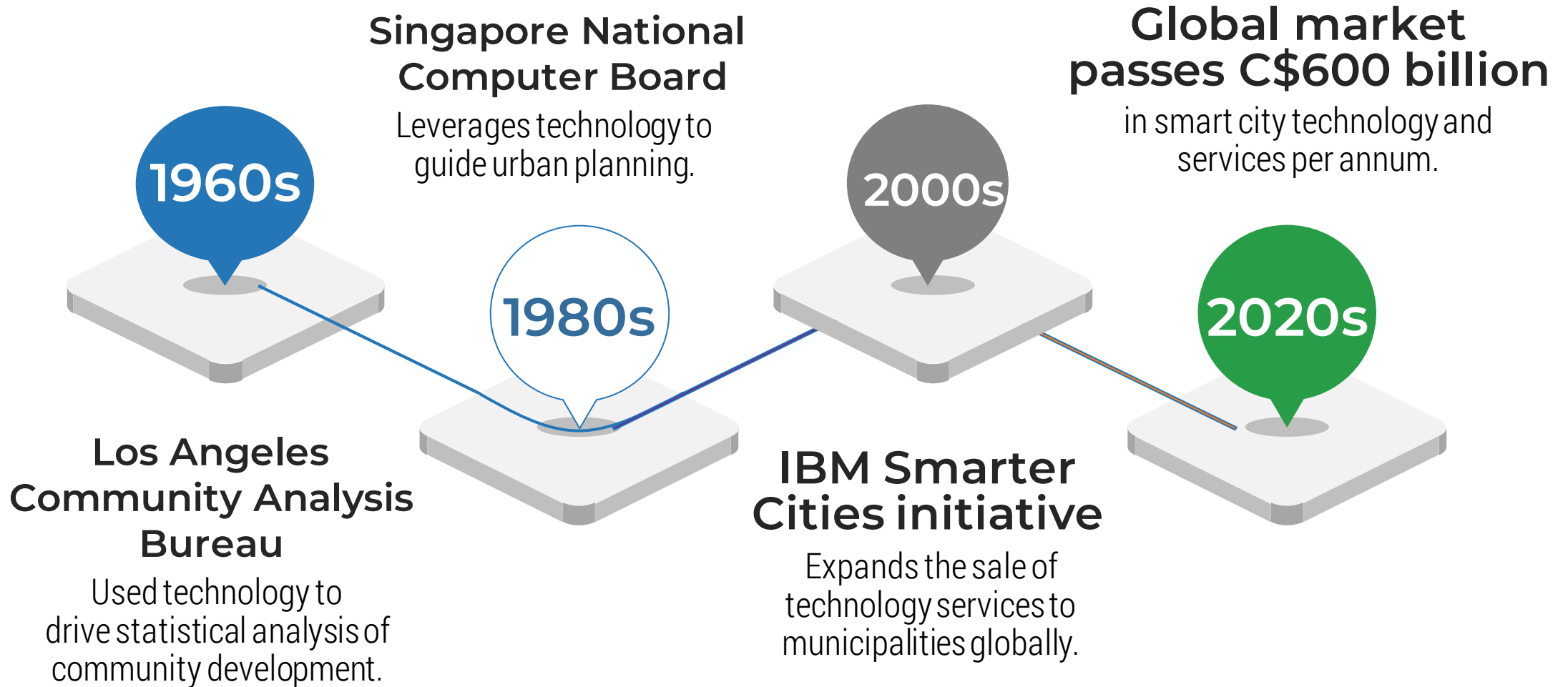
Building the Smartest Cities

2022 Technology Trends in Municipal Government in Canada

In this keynote, we explore:

1. Definitions for smart, smarter, and the smartest cities
2. Key technology trends that will impact Canadian cities
3. Why the smartest cities are digital
4. How to define the value of digital services for the smartest cities
5. Barriers and solutions for creating value through digital government

Smart cities are old news



Define “smart” from a user’s point of view

Everyone that interacts with a city is a “user” of that city as they live, work, and play.



A **smart city** is any city that provides a higher quality of life for all of its users.



A **smarter city** adapts data and technology to the environment and its users’ evolving needs.



The **smartest cities** integrate structure, politics, policy, data, and technology to create exceptional social, economic, and environmental prosperity for their users.

What is the smartest thing your municipality has done?

Up to 5 minutes

1. Discuss the smartest thing your municipality did to support its users during the pandemic.
2. What were the outcomes for the community?
3. Share examples!

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Output

- Definition of “smart cities” in your context

Participants

- Councillors
- Business and IT leaders
- Staff
- Community

The 2022 technology trends for municipal government in Canada are ...



SMART TOURISM

Become the destination of the future

The availability of data from integrated systems facilitates the development of intelligent solutions that attract, guide, and move visitors while protecting local interests and yet contributing to the city's culture and economy.



SMART PUBLIC HEALTH & SAFETY

Services at the speed of light

Connected municipalities can monitor traffic in real time to expedite EMS response times and deliver ER triage and assessment onsite with 911 telemedicine. Integrated mobile devices, geolocation data, and intelligent care streamline service delivery and optimize public safety.



SMART DATA & ACCESS

Open data means open for business

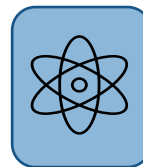
Governments analyze business and IoT data holistically and make integrated decisions, breaking down traditional silos. They are also making this data available to the public with performance dashboards, open data, and fostering public/private partnerships.



SMART WORKFORCE

Smart is the road to smart

A hybrid workforce expands the reach to talent and affords the connected rural municipalities growth. Leverage physical libraries and education to open learning opportunities to underserved persons. AI/ML augments talent acquisition.



SMART PUBLIC WORKS & UTILITIES

Gaining total visibility in real time

Connectivity is key. IoT sensors supported by connected systems drive long-term decision making, simplify maintenance management, and enable ecologically sound investments. Smart assets and data sharing drive down costs. Managed mobility options pave the way for smarter transportation options.

The 2022 technology trends for municipal government in Canada are ...reruns?



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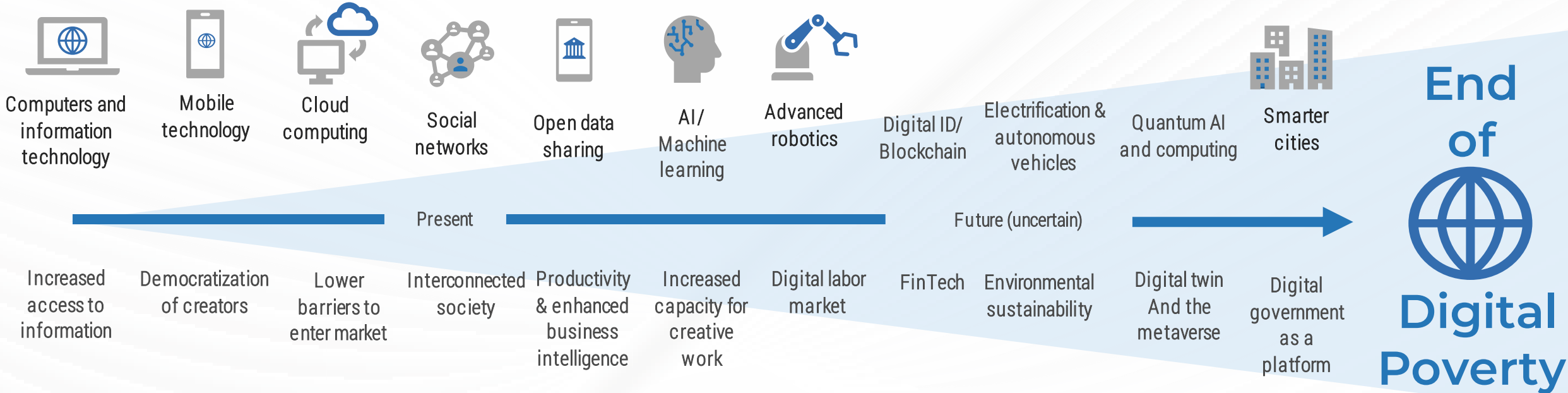
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The pandemic ensured technology is part of the equation for the smartest cities

The community's use of digital services and their expectations of those services have been transformed over the past two years.

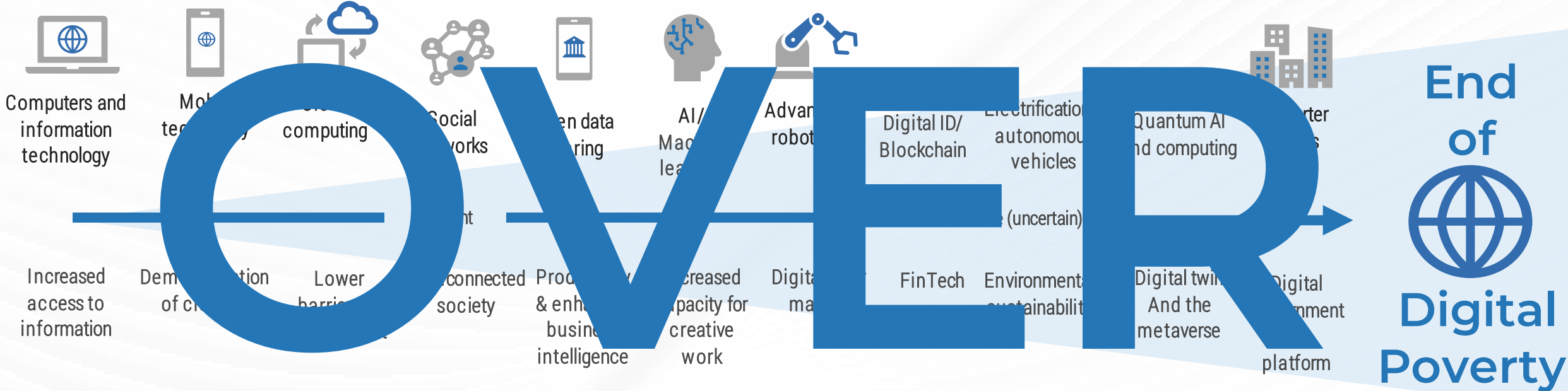


Technological Evolution and Revolution

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Social, Economic, and Environmental Prosperity



Technological Evolution and Revolution

Redefining “smart” in the context of cities



Which city was smarter?

“It’s easy to read the new Quayside competition criteria as a direct rebuke of the virtues espoused by Sidewalk Labs’ bid. Nearly all mentions of smart technologies have been scrubbed, replaced by an ethos of community, inclusivity, and resilience.”

Source: [The Architect’s Newspaper](#)

Toronto Quayside 2022

“We set out to make Quayside the kind of community that meaningfully improves the lives of its residents, neighbours and visitors. The proposal from Dream and Great Gulf will make a real difference in the lives of those who live near the waterfront or come to visit, by creating affordable rental housing, extensive public spaces, and new jobs and business opportunities”

Source: [Waterfront Toronto](#)

Toronto Quayside 2020

“The Sidewalk Toronto project aimed to advance a new model of inclusive urban development along Toronto’s eastern waterfront, striving for the highest levels of sustainability, economic opportunity, housing affordability, and new mobility.”

Source: [Sidewalk Labs](#)

Info-Tech Insight

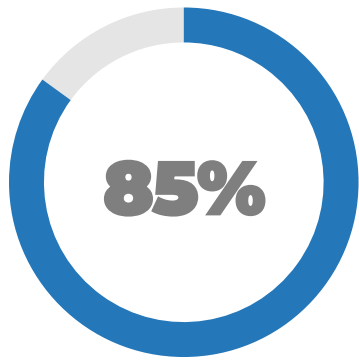
The 2001 Waterfront Toronto Innovation Center was the smartest city. All three levels of government collaborated to build a vision and strategy to transform neglected lands into for a highly thriving community **connected both physically and digitally** to the city as a whole. They built the technological foundation for both of these proposals without much ado about anything.



The Canadian digital challenge!

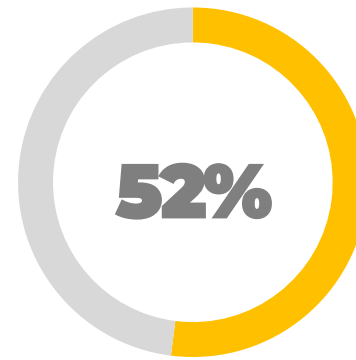
Leverage the demand for digital to enhance services and the talent that delivers them.

The shift in public sentiment is dramatic



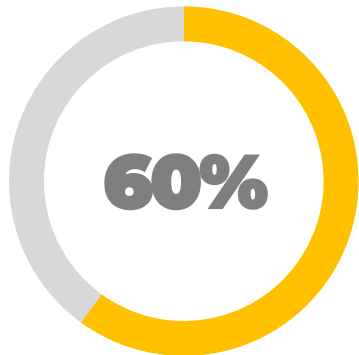
of Canadians say the pandemic has made them more open to accessing government services digitally and that they will continue to do so.

Difficulty getting support



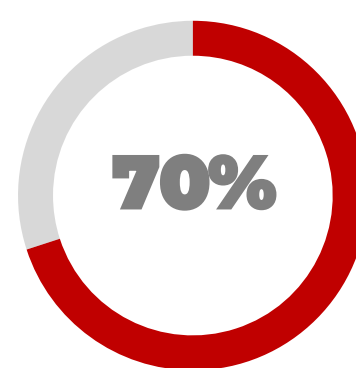
reported difficulties finding and getting through to support when there was a problem.

High error rate in online services



say they faced a problem while using online government services.

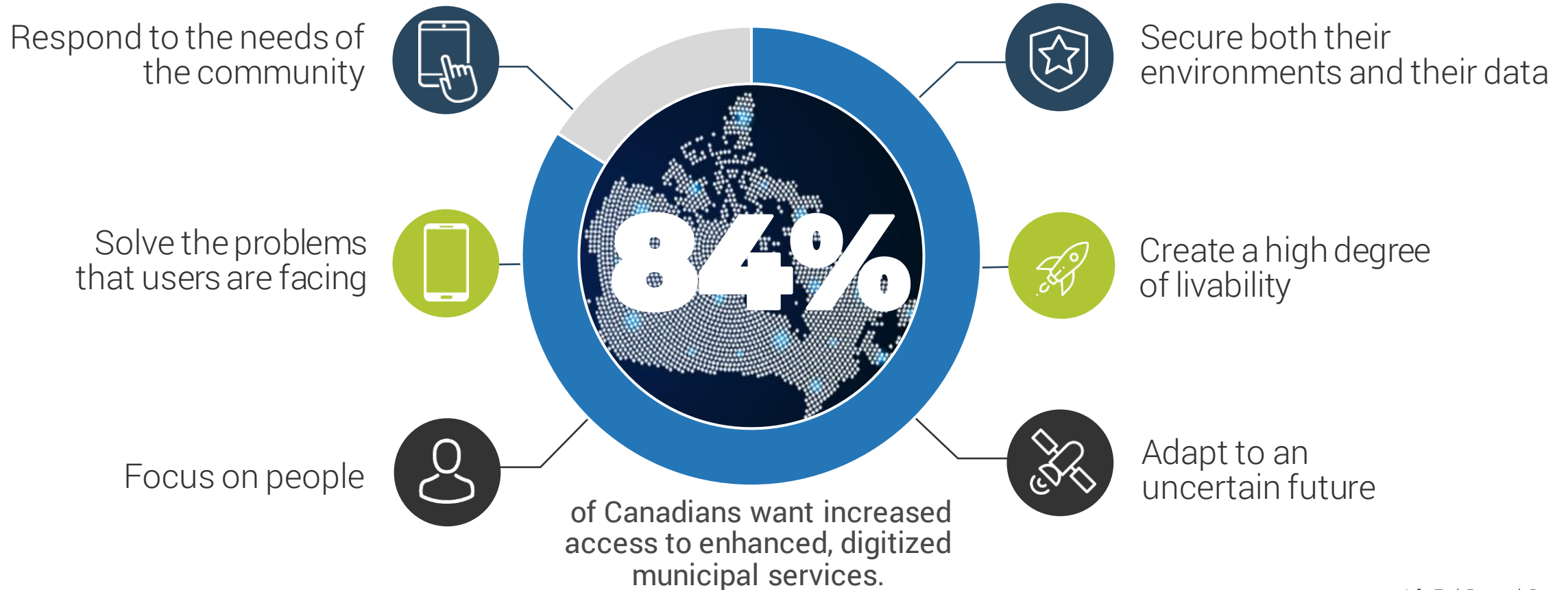
Canada is a tough crowd



report that a negative experience impacts their perception of government, while only 60% are swayed by a positive experience.

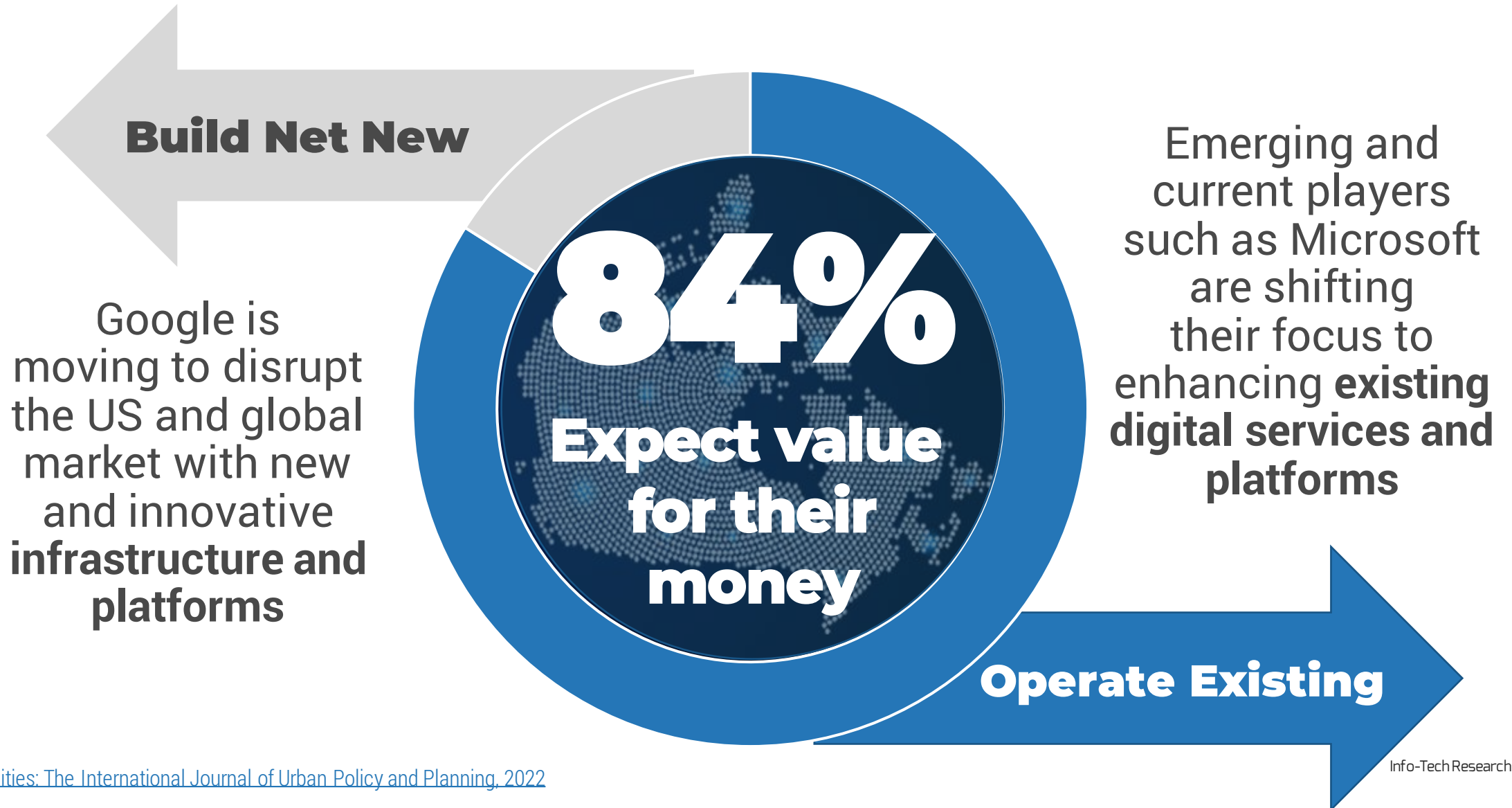
The smartest cities are digital

The people who live, work, and play in our cities have come to expect a robust ecosystem of digital services that:



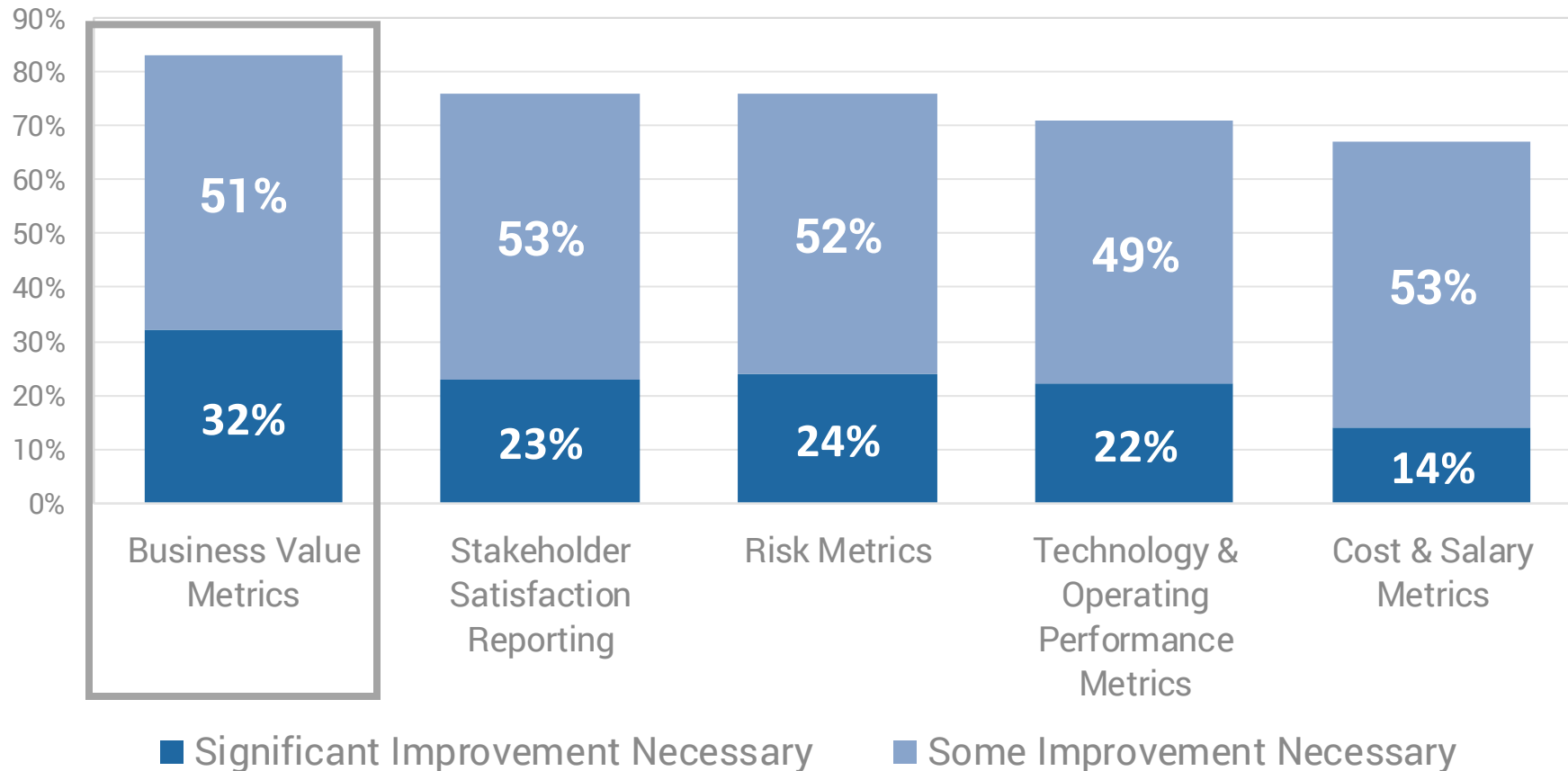
Source: [ServiceNow](#)

Vendors have followed the demand



The smartest cities are value-driven

Defining the value of digital services is the most difficult conversation municipal IT leaders face.



Source: Info-Tech's CEO/CIO Alignment Diagnostic; N=469 CxOs

Define value

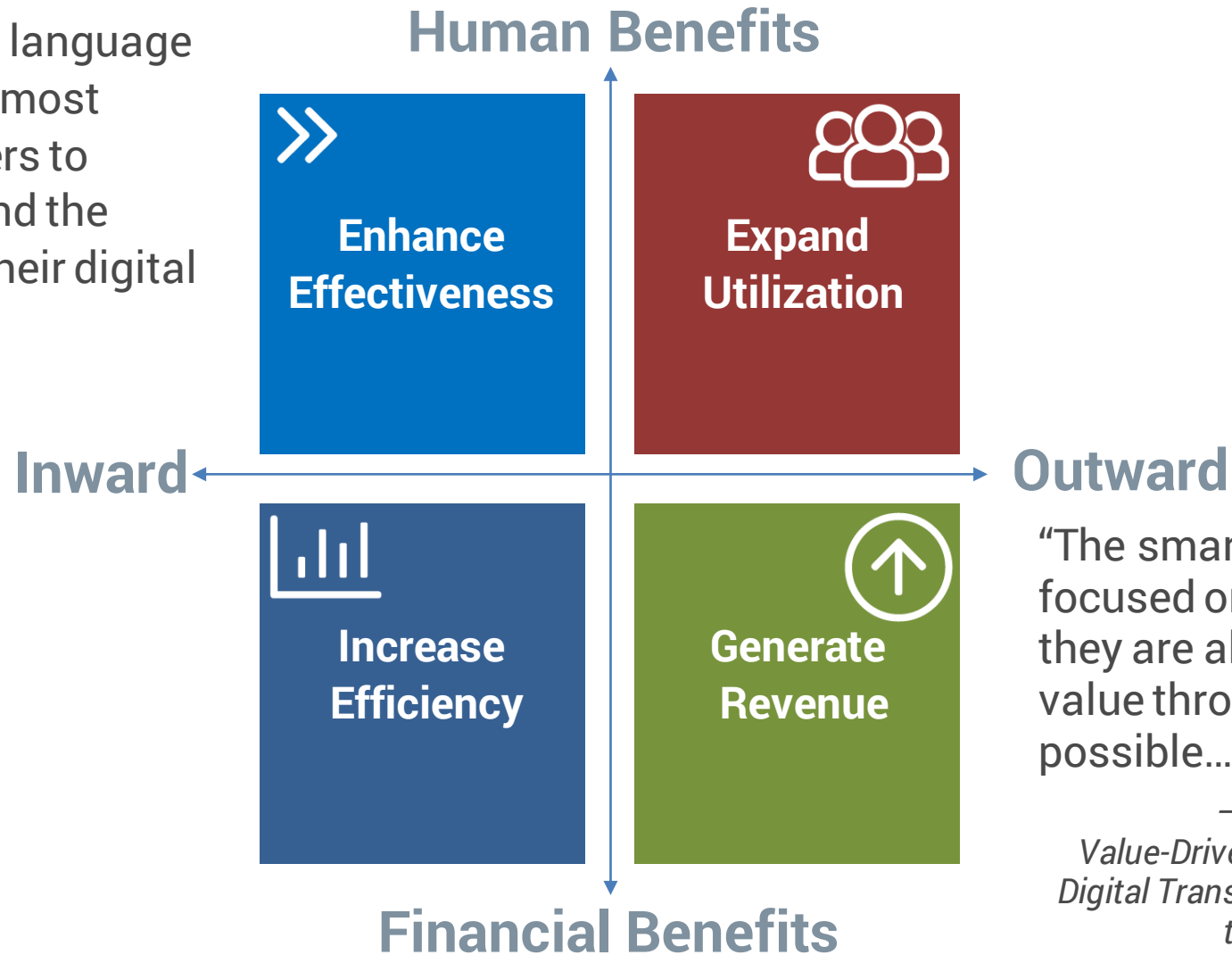
Up to 5 minutes

1. Discuss how you define the value of digital government in your municipality.
2. Share examples!

Output
<ul style="list-style-type: none">• Definition of “value” in your context
Participants
<ul style="list-style-type: none">• Councillors• Business and IT leaders• Staff• Community

Government in Canada defines value differently

Being able to speak the language of value is the first and most critical step for IT leaders to engage stakeholders and the community in making their digital ambitions a reality.



“The smartest cities aren’t focused on technology alone, they are about creating more value through EVERY means possible....”

– D. Brent Messer,
Value-Driven: The CIO’s Handbook for Digital Transformation and Innovation in the Public Sector

There are no shortage of barriers to creating value with digital government



Explore your barriers to creating value

Up to 5 minutes

1. What barriers to creating value in your municipality have you experienced?
2. Share examples!



Output

- Understanding of barriers in your context

Participants

- Councillors
- Business and IT leaders
- Staff
- Community

Embrace the smartest approaches to overcome the barriers to value

Structural

Smarter City:

- Pull a “Reverse Conway Maneuver” and advocate for a strategic re-architecture of the city to optimize digital services.



Smartest Cities:

- Work together to leverage shared solutions for digital service delivery and economies of scale.

Political

Smarter City:

- Build the foundational technologies that enable digital service delivery.



Smartest Cities:

- Focus on community engagement and outcomes over (but not instead of!) the technology.

Cultural

Smarter City:

- Modernize policies to build a diverse, equitable, and inclusive environment accessible to all.



Smartest Cities:

- Embrace flexible policies that are sensitive to the needs and preferences of individual members of the community to live, work, and play.

Enhance the IT practices that deliver digital value*



Strengthen Innovation

1. **Digital Strategy (0.69) & Business Value (0.69)**
2. IT Policies (0.67) & Stakeholder Relations (0.67)
3. Measurement (0.66)



Increase Throughput

1. **Quality Assurance (0.86)**
2. Application Maintenance (0.72)
3. Application Portfolio Management (0.61)



Optimize Selection of Applications for Digital Service Delivery

1. **Application Portfolio Management (0.75)**
2. Requirements Gathering (0.7)
3. Release Management (0.69)



Increase Data Quality & Accessibility

1. **Data Architecture (0.81)**
2. Business Intelligence & Reporting (0.72)
3. Quality Management (0.67)

* Ranking based on the highest correlation between target capability (i.e. goal) against all 45 Core IT Processes in Info-Tech's [IT Management & Governance Framework](#) as assessed by the IT Management & Governance Diagnostic; N=1,287.

The smartest cities require collective intelligence

Municipal IT leaders must integrate structure, politics, policy, data, and technology to deliver digital services for Canadians that:



The smartest cities:

1. Prioritize social, economic, and environmental outcomes **over technology trends**.
2. Integrate **structure, politics, policy, data, and technology** to create those outcomes.
3. Focus on **creating more value** through every means possible.
4. Embrace the **increased demand for effective digital services** to create more value.
5. Enhance **IT practices that deliver value** from digital services.

Building the Smartest Cities

**2022 Technology
Trends in Municipal
Government
in Canada**

Info-Tech offers various levels of support to suit your needs

For 25 years Info-Tech has provided comprehensive and connected research frameworks, diagnostics, and advisory services to our members.

DIY Toolkit

"Our team has already made this initiative a priority, and we have the time and capability, but some research along the way would be helpful."

Get unlimited access to Info-Tech's library of best-practice research.

Guided Implementation

"Our team knows that we need improve, but we need assistance to determine where to focus. Some check-ins with an expert would help keep us on track."

Get support from Info-Tech's team of IT and Industry subject matter experts.

Workshop

"We need to hit the ground running and get this project kicked off immediately. Our team has the ability to take this over once we get a framework and strategy in place."

Have analysts work with your team as they define a key initiative or solve a problem.

Counsellor Services

"We need a dedicated relationship with a technical expert or IT executive coach to support ongoing delivery and career development."

Build a dedicated relationship with a senior analyst to advise on key initiatives or your career.

Consulting Services

"Our team does not have the time or the knowledge to take this initiative on. We need assistance through the entirety of this project."

Leverage our consulting services team for hands-on support.

Where Do I Go Next?



[Define Your Digital Business Strategy](#)

- Identify what aspects of the business to transform, what technologies to embrace, what processes to automate, and what new business models to create.

[Redesign Your IT Organizational Structure](#)

- Build a product vision for digital services your organization can take from strategy through execution.

[Make Your IT Governance Adaptable](#)

- Meet the needs and velocity required from digital organizations and modern practices with embedded and automated IT governance that drives value.

[Deliver on Your Digital Product Vision](#)

- Build a product vision for digital services your organization can take from strategy through execution.

[Build a Value Measurement Framework](#)

- Prioritize products and services with value scores based on metrics and weighed organizational priorities.

[Application Portfolio Management Research Center](#)

- Discover, rationalize, and modernize your application portfolio for digital service delivery.

[Deliver Digital Products at Scale](#)

- Deliver value at the scale of your organization through defining enterprise product families.

[Gov 2.0: Government as a Platform](#)

- Define an operating model for digital delivery of services in government.

[Build a Software Quality Assurance Program](#)

- Ensure digital services create the expected value with a modern software quality assurance program.

[Build a Data Architecture Roadmap](#)

- Optimize data architecture to ensure the successful delivery of digital services.

[Local Government Industry Research](#)

- Strategy, trends, benchmarking, and software selection insights for municipal government leaders.

[Local Government Industry Reference Architecture](#)

- Unified and validated view of business capabilities that aligns initiatives, investments, and strategy to thrive in the municipal government.

InfoTech's industry analysts support our members through digital transformation

Industry research members have access to expert analysts, research, and tools to:



Visualize the Art of the Digitally Possible



- The Future of Your Industry
- Assess Your Digital Innovation Capability and Readiness



Evolve Your Digital Business Strategy



- Zero in on Business Objectives and Set Innovation Goals
- Build Your Digital Vision and Business Strategy
- Select and Prioritize Digital Initiatives



Execute With Confidence



- Build Your Business-Aligned Innovation Roadmap
- Govern and Manage Digital Execution



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