



Treasury Board of Canada  
Secretariat

Secrétariat du Conseil du Trésor  
du Canada

Canada

# The Canadian Digital Exchange Platform (CDXP)

## *CANADA'S DIGITAL BACKBONE*

Prepared by:

- Treasury Board of Canada Secretariat
- Office of the Chief Information Officer of Canada
- 2019



THE BIG PICTURE

A photograph of a family in a warm, indoor setting. On the left, a woman with dark hair is smiling and looking towards a young girl with blonde hair who is looking at a tablet. On the right, a man is holding a young boy with brown hair, who is also smiling. The scene is lit with soft, warm light. A large white circle is overlaid on the center of the image, containing text.

## WHAT IF

Government services were so well integrated into citizen's daily lives... they faded into the background



## WHAT IF

Citizens had a view of  
which government  
programs accessed their  
data, when, and why

## **WHAT IF**

Businesses could integrate  
their processes with  
government to become  
even more competitive



# This isn't just a dream

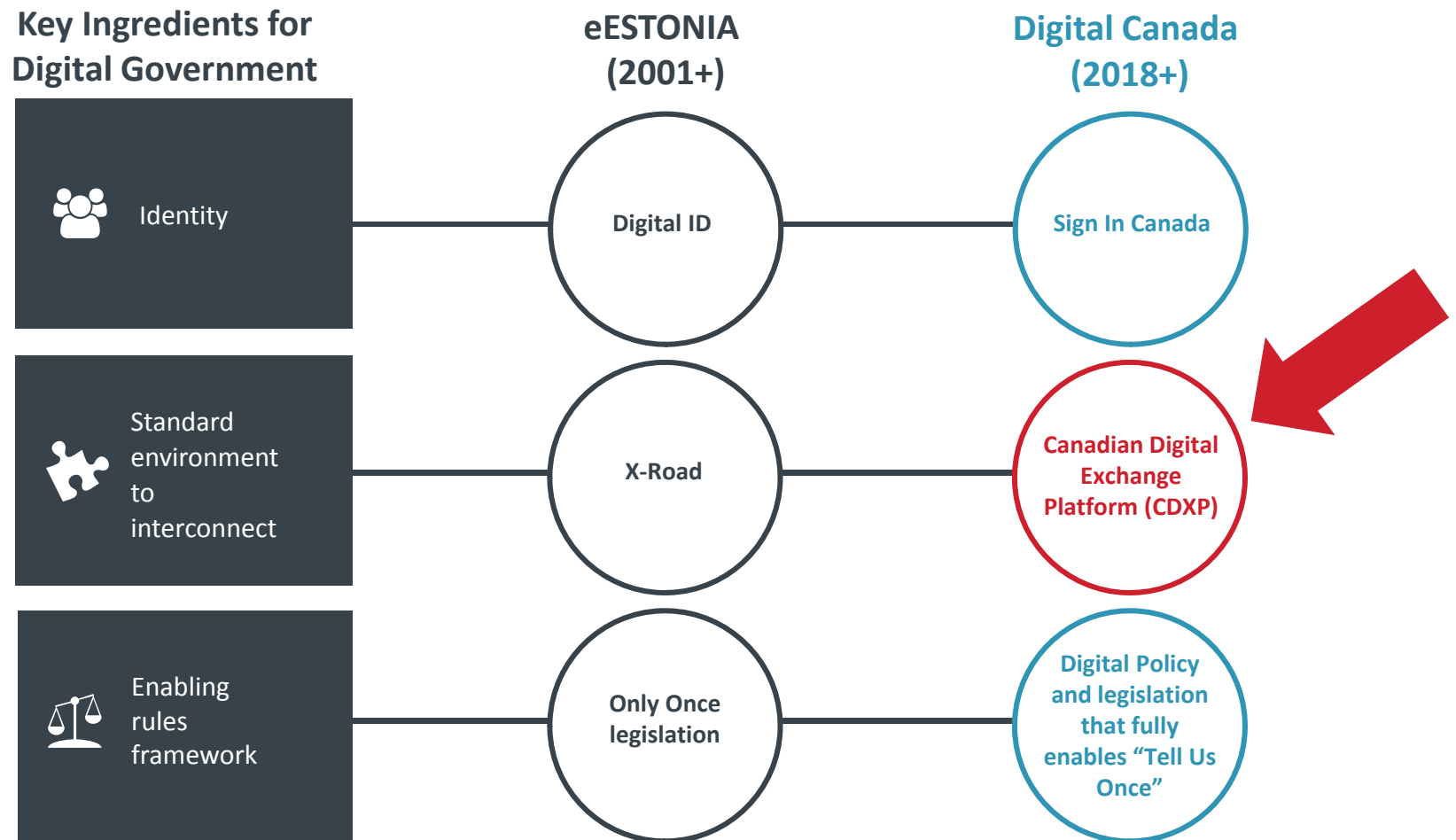


## **Estonia is one of the world's leading digital nations**

- 99% of public services are online
- 900 connected organizations
- Few hours to start a business
- Automated taxation
- Digital health and prescriptions
- Once only legislation
- Citizens have the right to see how their data is being used

**Only marriage, divorce, and selling your house are not digital (yet)**

# Building the foundation of Digital Government



# To keep up, Canada needs to be...

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## **FAST**

Provide **services in real-time**  
in order to give businesses a **competitive advantage**



## **SAFE**

Ensure the **secure transmission** of data  
in order to **protect citizen's personal information**



## **NIMBLE**

Be able to **shift quickly and seamlessly** without affecting citizens' experiences  
in order to **combine services** in ways we haven't yet envisioned



## **CONNECTED**

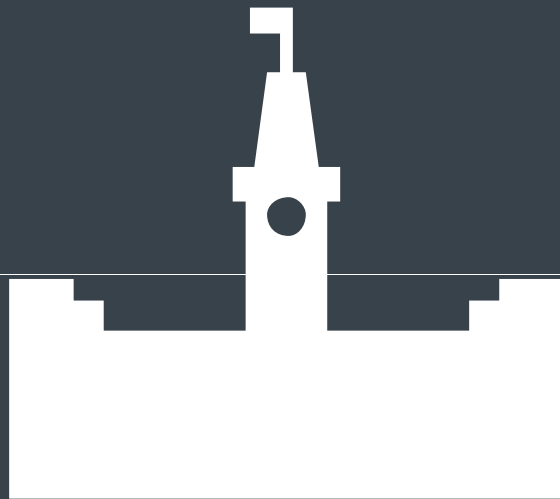
Allow for **easy data sharing** between programs  
in order to provide **better integrated services** and information to Canadians,  
quickly and securely



## **SEAMLESS**

Allow for **any service, any platform, any device, any partner**  
in order to meet citizen's **digital expectations**

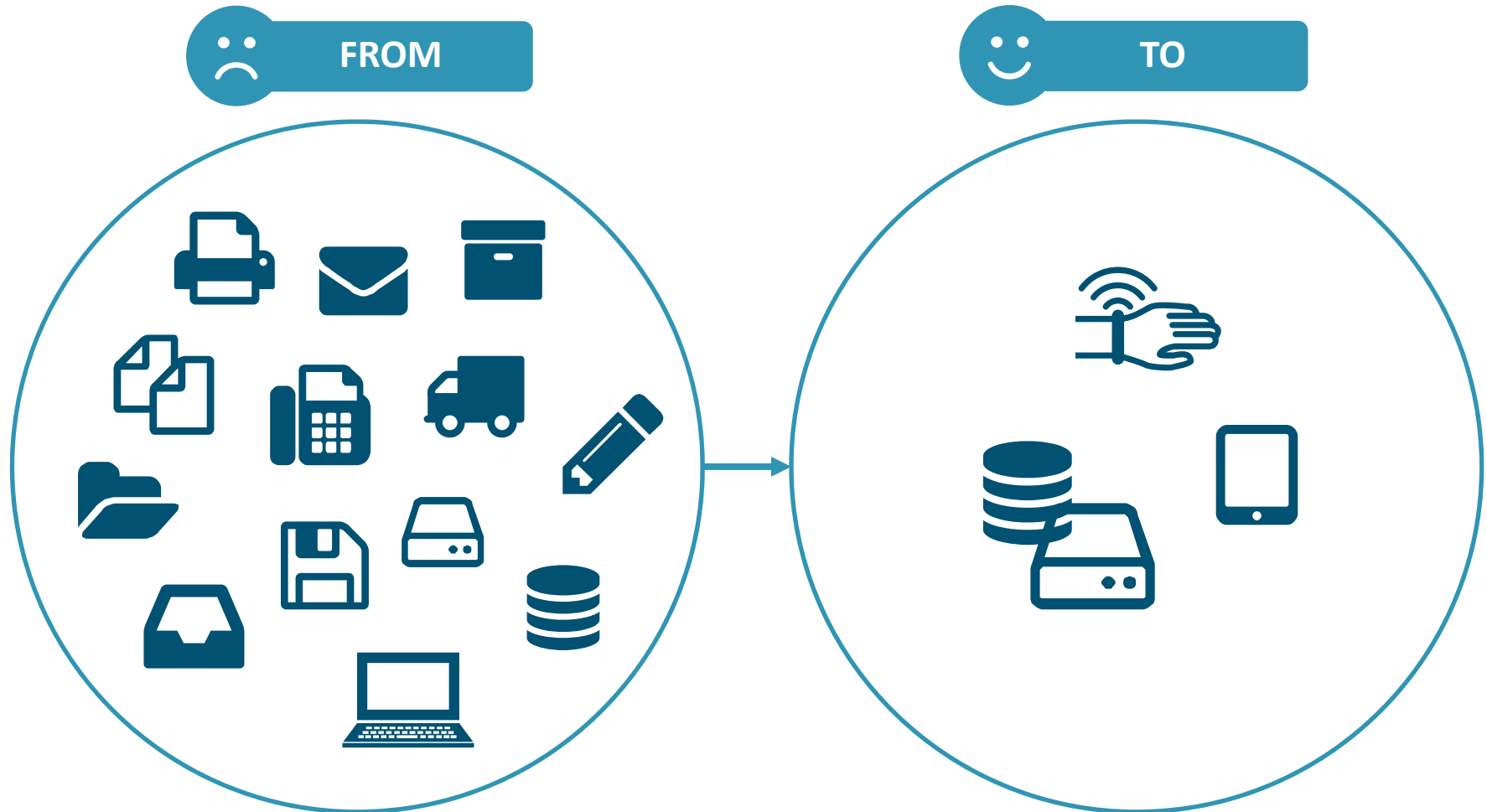




GOVERNMENT AS A PLATFORM

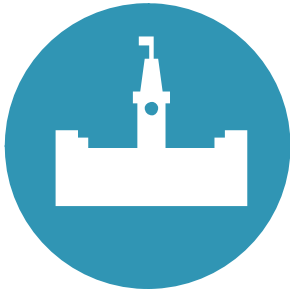
# Improving how we exchange data

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# Government as a Platform (GaaP)

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- All information and government functions should be **available as a service**, for example:
  - Filing a tax return
  - Life event notification
  - Identity verification
  - Employment verification
  - Business registration
  - Licensing and permitting
- Services should be available through a variety of **open industry standard technologies and platforms**
- Services should be **secure and ensure privacy** where applicable
- Service Providers make **data and business processes** available to Service Consumers

# Digital Exchange

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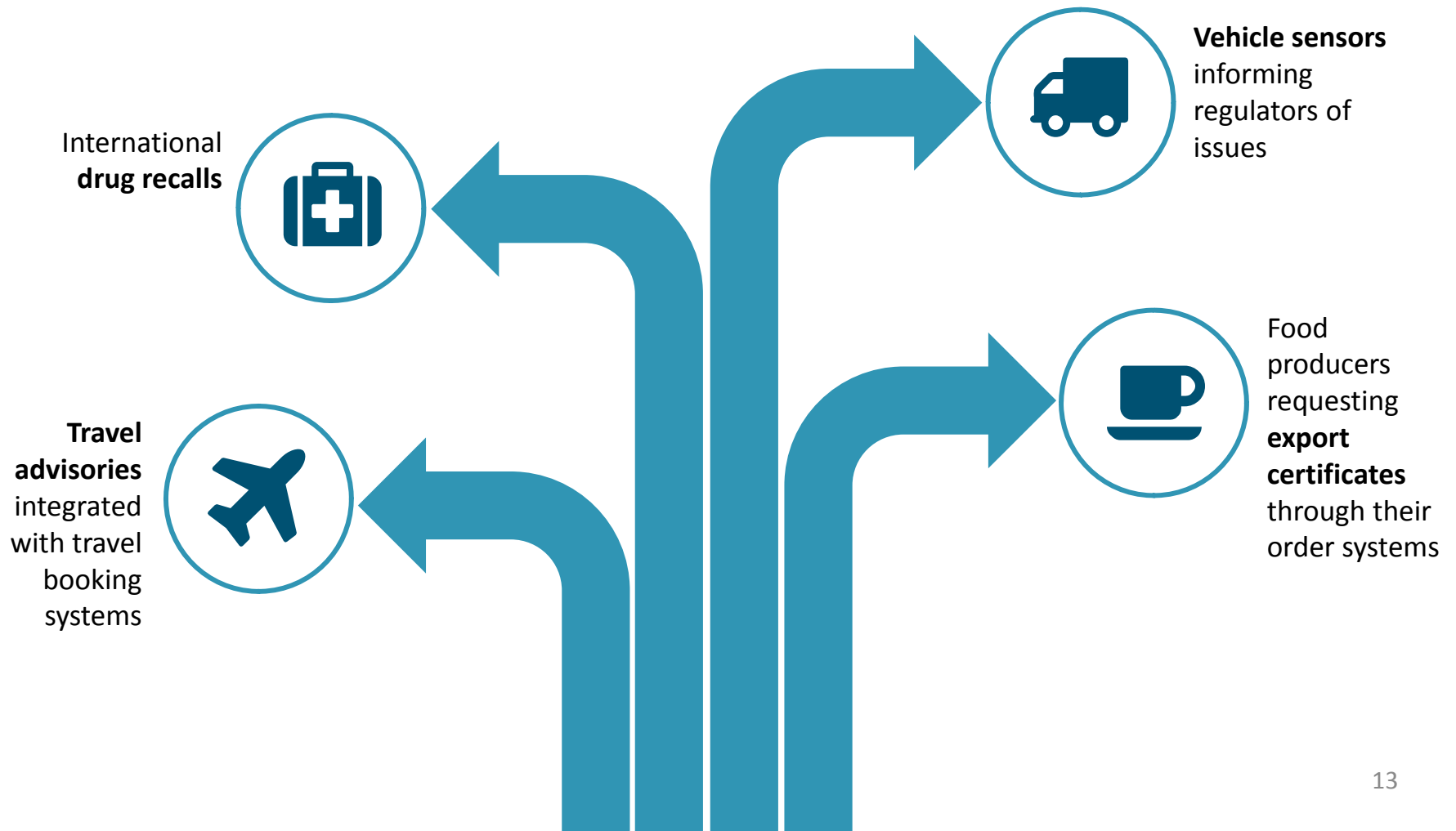
In order to deliver **services**,  
**humans** need to communicate with each other



In order to deliver **digital services**,  
**applications** need to communicate with each other

# Digital Exchange is the backbone of GaaP

- **Enables secure, private, real time** information sharing
- Allows **systems to connect** and function in harmony to support citizens and businesses



# Examples of GaaP



Making government services **more accessible and more convenient** for the citizen

- Automatic requests for **passport renewals** through travel booking systems
- **Travel advisories** integrated with online booking services
- Automatic **registration of drones** through retailers
- Voice-based access to **election information**

# Examples of GaaP



Allowing multiple government **business processes to be automated** based on life events

- **Birth notification** automatically launching **benefits for the family** at the municipal, provincial/territorial, and federal levels (e.g., Social Insurance Number)
- **Death event triggering updates** for veteran benefits, passport status, and Old Age Security

# Examples of GaaP



## Improving Canada's ability to share data with international partners

- **Sharing of drug recalls** issued by the World Health Organization
- Exchanging **import and export clearance data** before the shipment lands
- Real-time sharing of **arrest warrants** across multiple levels of government



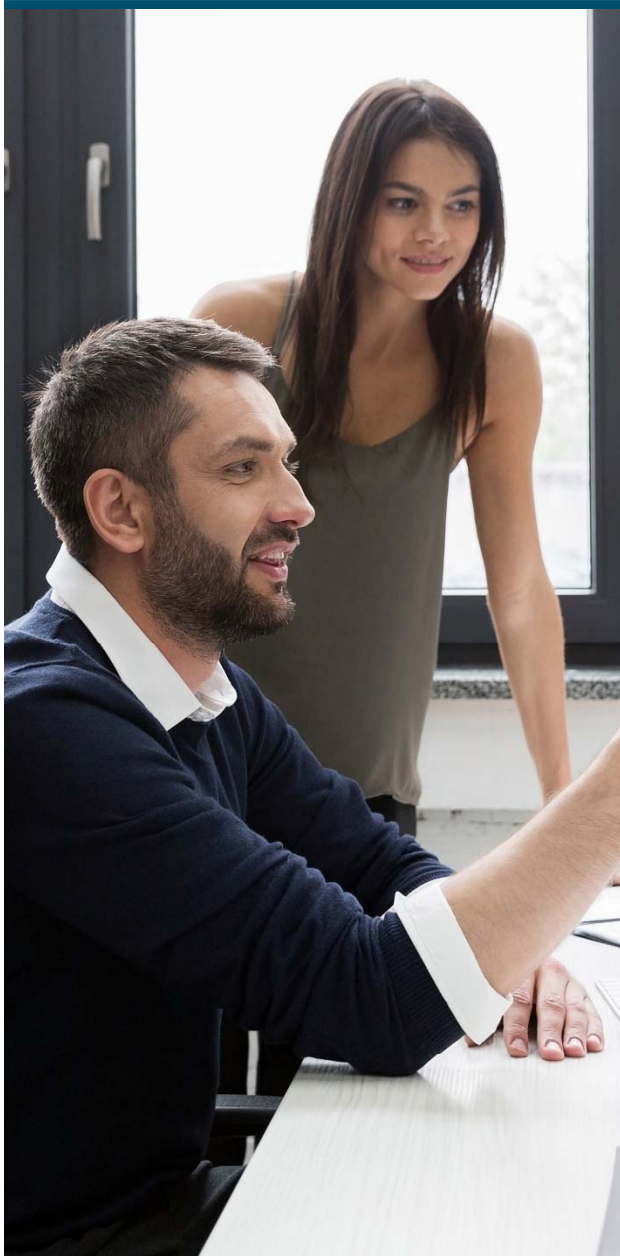
# Examples of GaaP



## Removing the friction of business interactions with the GC

- Food exporters **automatically applying for export certificates** before the product even rolls off the production line
- Real-time submission of **regulatory compliance data** from various regulated sectors such as automotive, pharmaceutical, and resource development (e.g., mining)

# Examples of GaaP



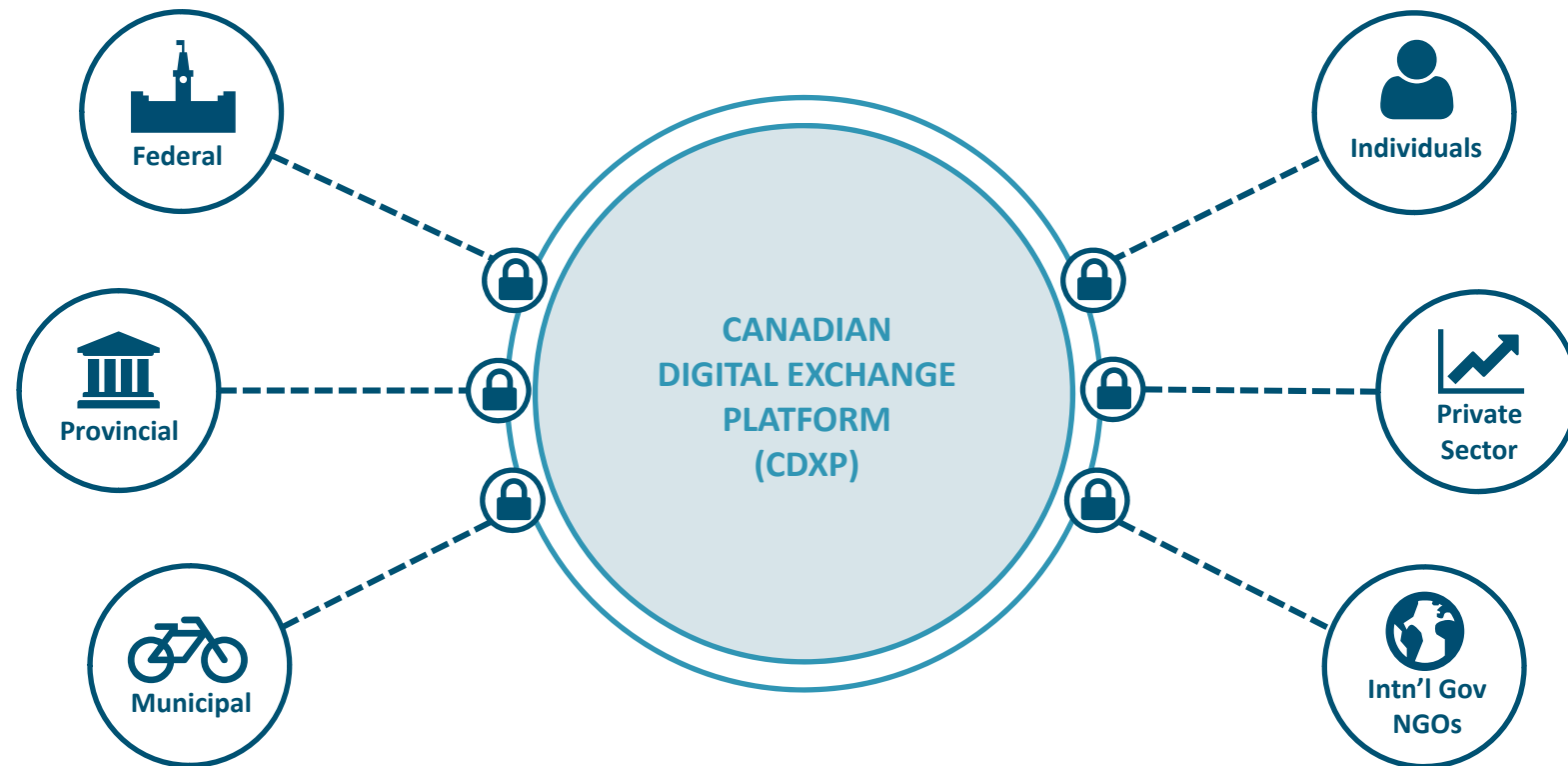
Making internal government services **more accessible and more convenient** for employees

- Making payroll and human resources **information available to employees in real time**
- **Seamless movement of employees** across the GC due to integration between departmental systems
- **Effortless employee onboarding** from initial job posting to fully functioning team member



FOCUS ON CANADIAN DIGITAL EXCHANGE PLATFORM

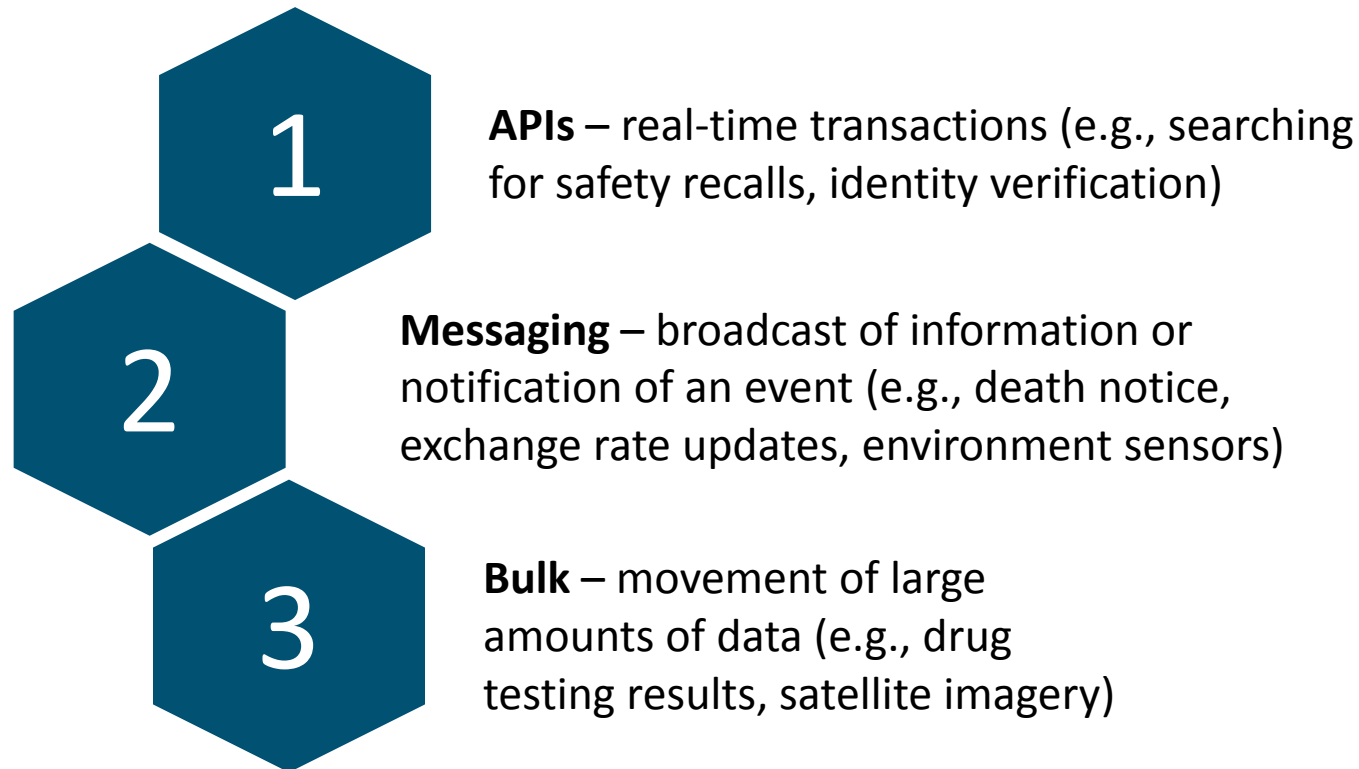
# CDXP Supporting GaaP



 Secured based on the level of sensitivity of the information being exchanged

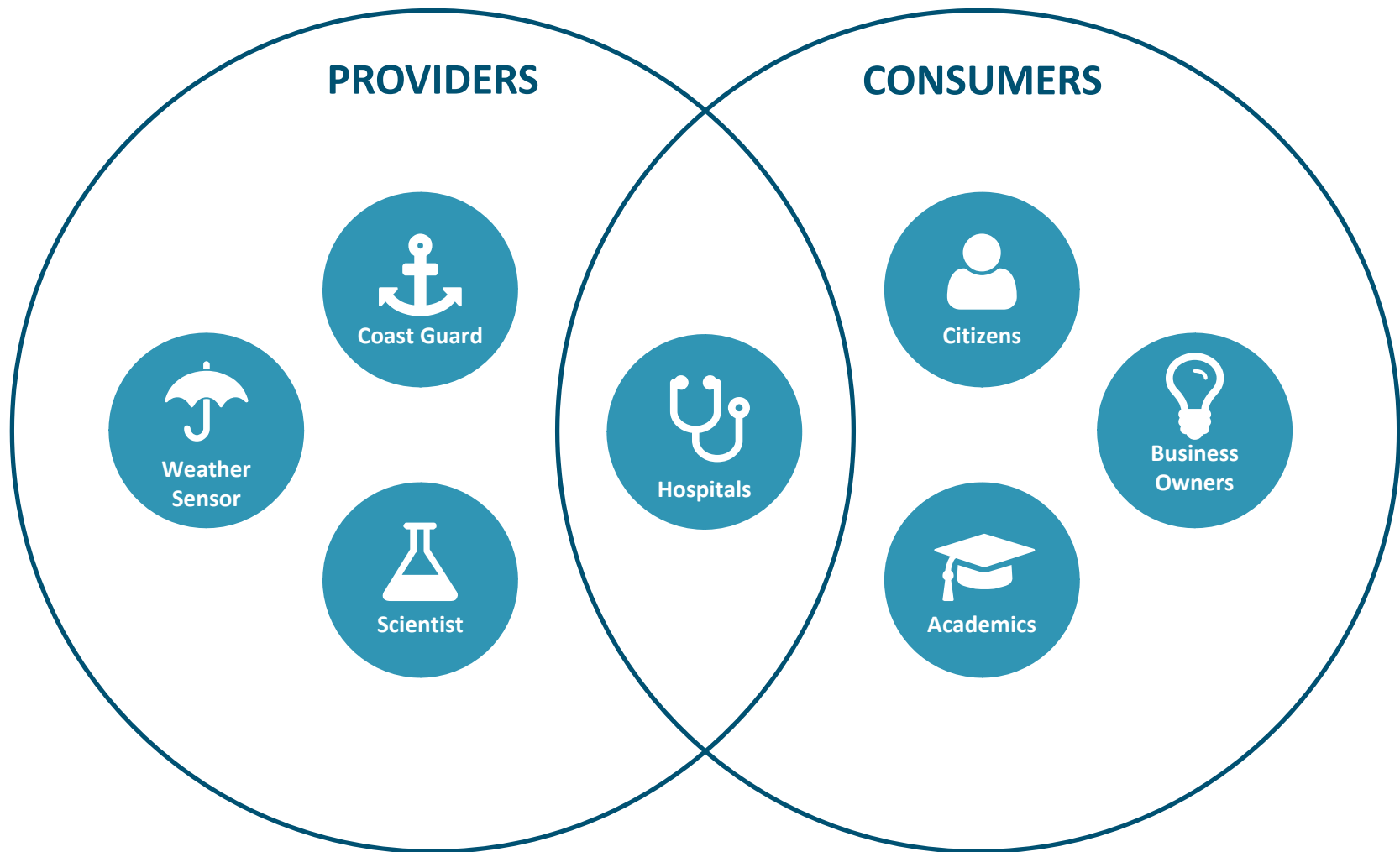
# CDXP data exchange models

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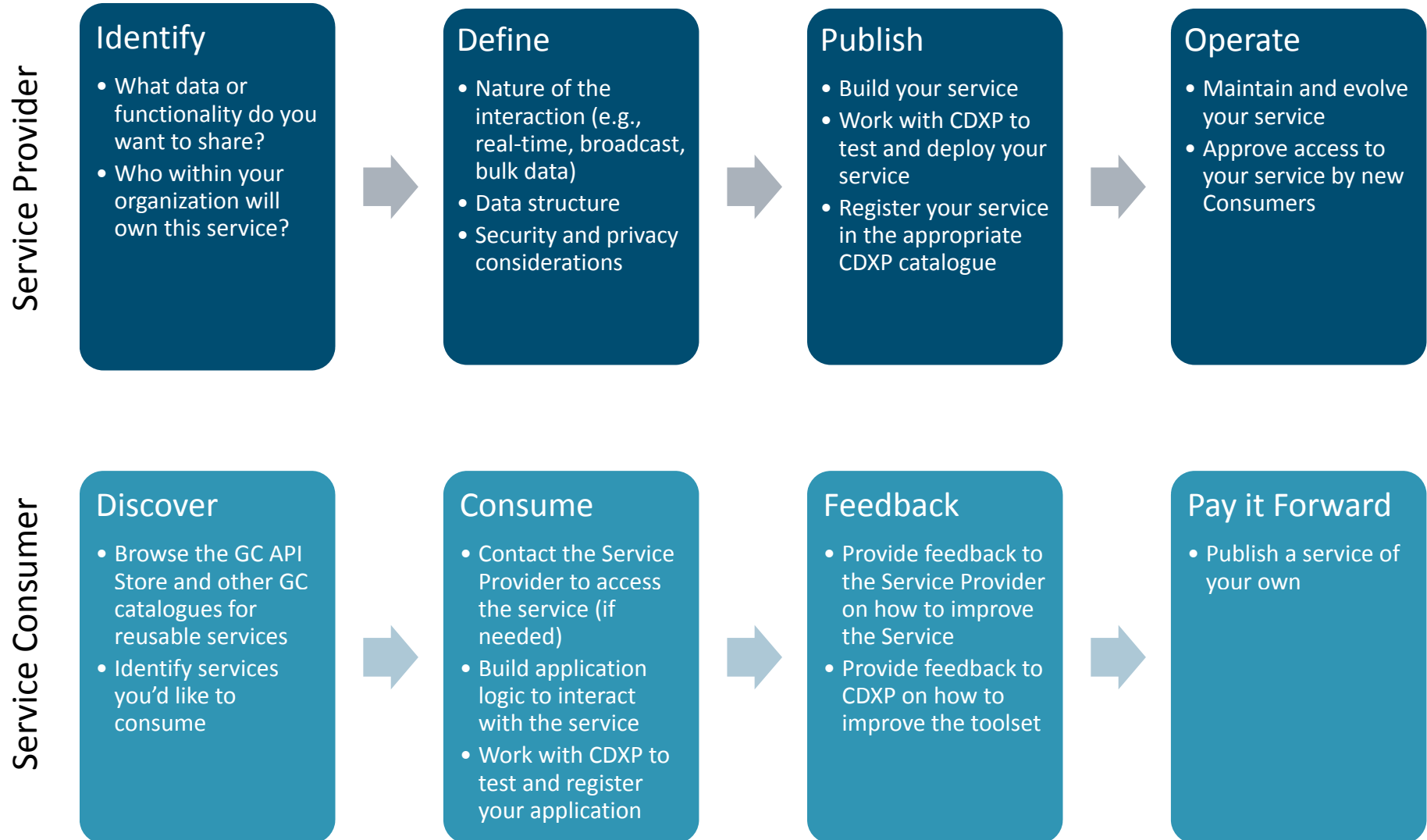


# Service Providers and Service Consumers

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# Onboarding onto CDXP



# CDXP Considerations

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- **Cost**
  - It's **free to use**
  - CDXP does not charge non-GC Service Providers or Consumers to use the tools, but each Service Provider may charge a fee to consume their service
- **Technology**
  - Relies heavily on **open source** technology and **open standards**
  - Reference architecture is open for any other government organization to leverage
- **Tenancy**
  - CDXP components do support **multi-tenancy for any non-GC organizations** wanting to leverage them for their own purposes on a cost recovery basis





WHO BENEFITS?

# Citizens Benefit

Meeting citizens' fast paced **digital expectations**

**Saving people time** and providing convenience

Ensuring citizens have a better understanding of **how their data is processed and used**



# Canadian Economy Benefits

Spurring **innovation** and building new businesses around the **reuse of open data**

**Reducing burden** on entrepreneurs by making submission of business data **quick and seamless**

**Increasing competitiveness** by enabling faster product to market



# Our Government Benefits

Improving the Government's **data quality**

Enabling **Tell Us Once**

**Sharing information securely and in real time** with other programs, jurisdictions, nations, and organizations



# International Community Benefits



Plugging Canada into the  
**international ecosystem**

Sharing information with international partners to better address global  
issues e.g., **export and trade, intelligence, health**

**Securing data exchange** with high integrity, confidentiality,  
and availability to support **public safety**



## ASK YOURSELF

What *role will you play*  
in writing Canada's digital story?



THANK YOU.