

An aerial photograph of a lush, green forested coastline. A winding road follows the edge of the forest, leading to a small white lighthouse perched on a rocky outcrop. The ocean is visible to the right, with a small boat in the distance. The sky is a soft, hazy blue.

UBCM 2023

BALANCING ~~A~~CT

**Art of the Possible:
AI Digital Transformations**



Art of the possible: AI Digital Transformations

Union of BC Municipalities 2023





Panelists

Doug Gilchrist

CAO | City of Kelowna

Jazz Pabla

Director of Information Services | City of Kelowna

Mike Palmer

Chief Information Officer | City of Victoria

John Weigelt

National Technology Officer AI Ethics | Microsoft

Sonia Hobbs

Director of Business Solutions | Land Title and Survey Authority

Bryan Sawers

Manager of Business Solutions | Land Title and Survey Authority

Agenda

City of Kelowna

- *Digital transformation and AI*
- *Permitting*
- *Development applications*
- *Data quality and why it's vital*

City of Victoria

- *People and Process*

Microsoft

- *Ethics and AI*

Land Title and Survey Authority

- *Innovation in real property market*

Kelowna

A City of the Future



Embracing innovation

Digital transformations in local governments

➤ Why Transform?

- The "business case"
- Quality and efficiency in public service

Embracing innovation

Digital transformations in local governments

➤ Innovation vs. Transformation

- Jump in with both feet

Embracing innovation

Digital transformations in local governments

➤ Set the standard

- Leadership ... not just "Municipal" Leadership



Let's get thinking!

What comes to mind when you think of digital transformation and AI?

- We have a plan
- Started, but not done
- I think we know what we want?

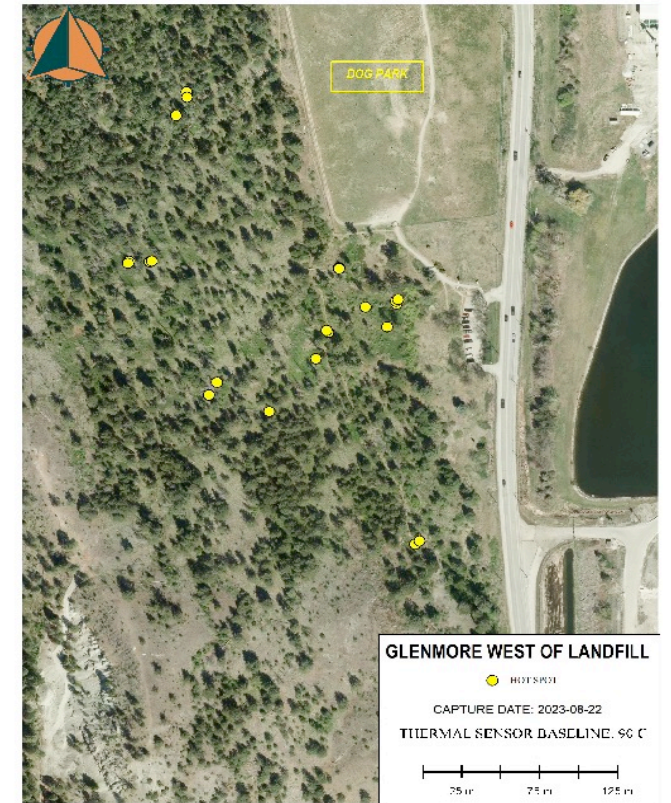
Wildfires & technology



Images in real time



How does this help?



Vision and Strategy - Kelowna's Digital Transformation Journey

- Defined strategic direction
- Optimized IS organizational structure

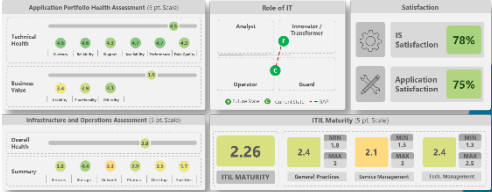


DATA STRATEGY

- Improved data governance
- Redefined **Data as an Asset**
- Focused on building capabilities



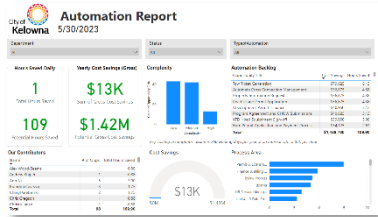
CITY OF THE FUTURE



IS STRATEGY

- Set a secure foundation
- Gained trust of the organization

CYBER SECURITY STRATEGY

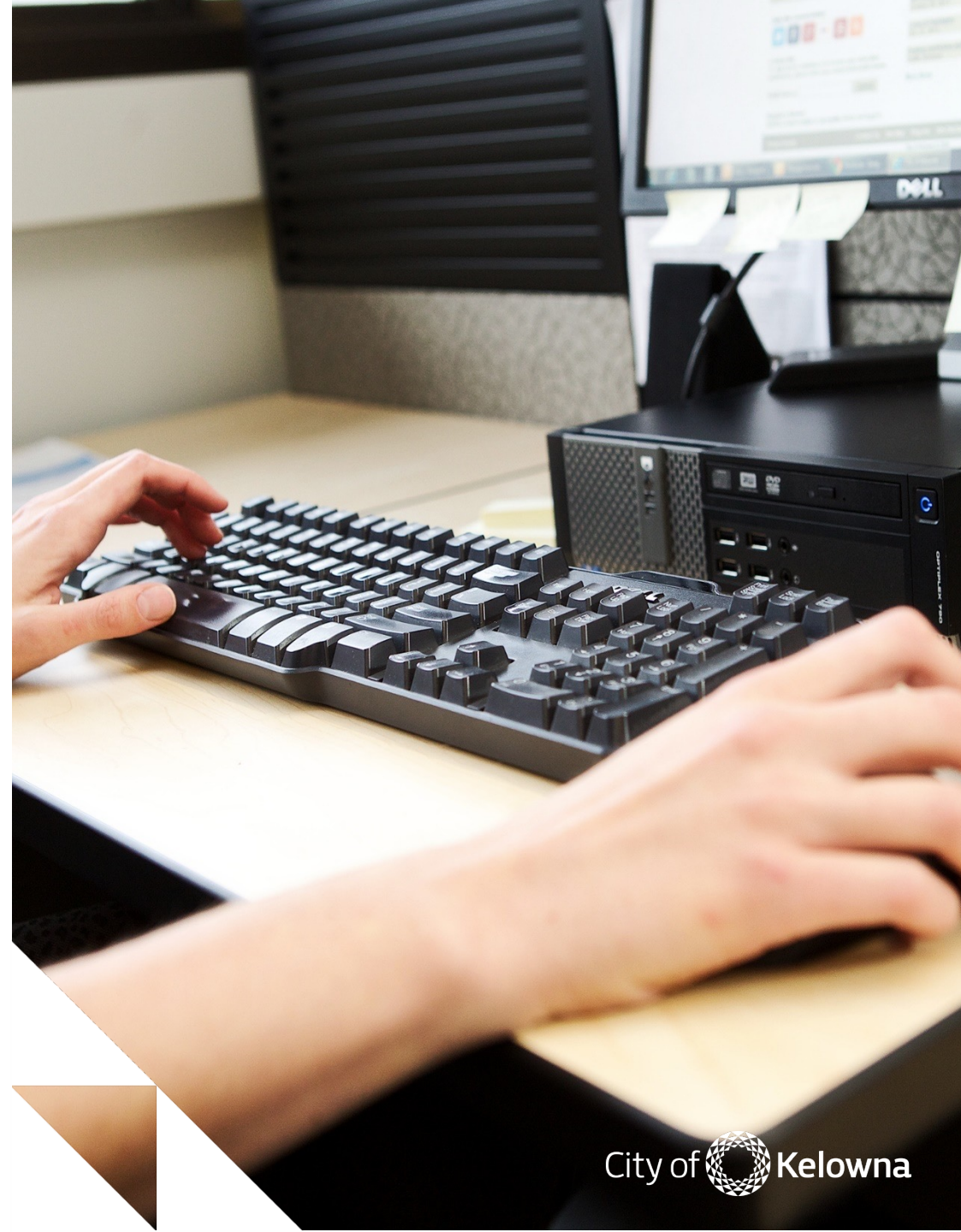


DIGITAL STRATEGY

- Identified **\$1.4M in automation savings**
- Building an automation centre of excellence and corresponding governance body
- Built BI dashboard to monitor and track automation opportunities

Citizens want change

- Digital services then and now
- Citizen expectations
- Beyond an online presence



Meeting and engaging with users where they are on their terms



Augmented Reality Use Case

University of British Columbia School of Immersive Technologies Partnership

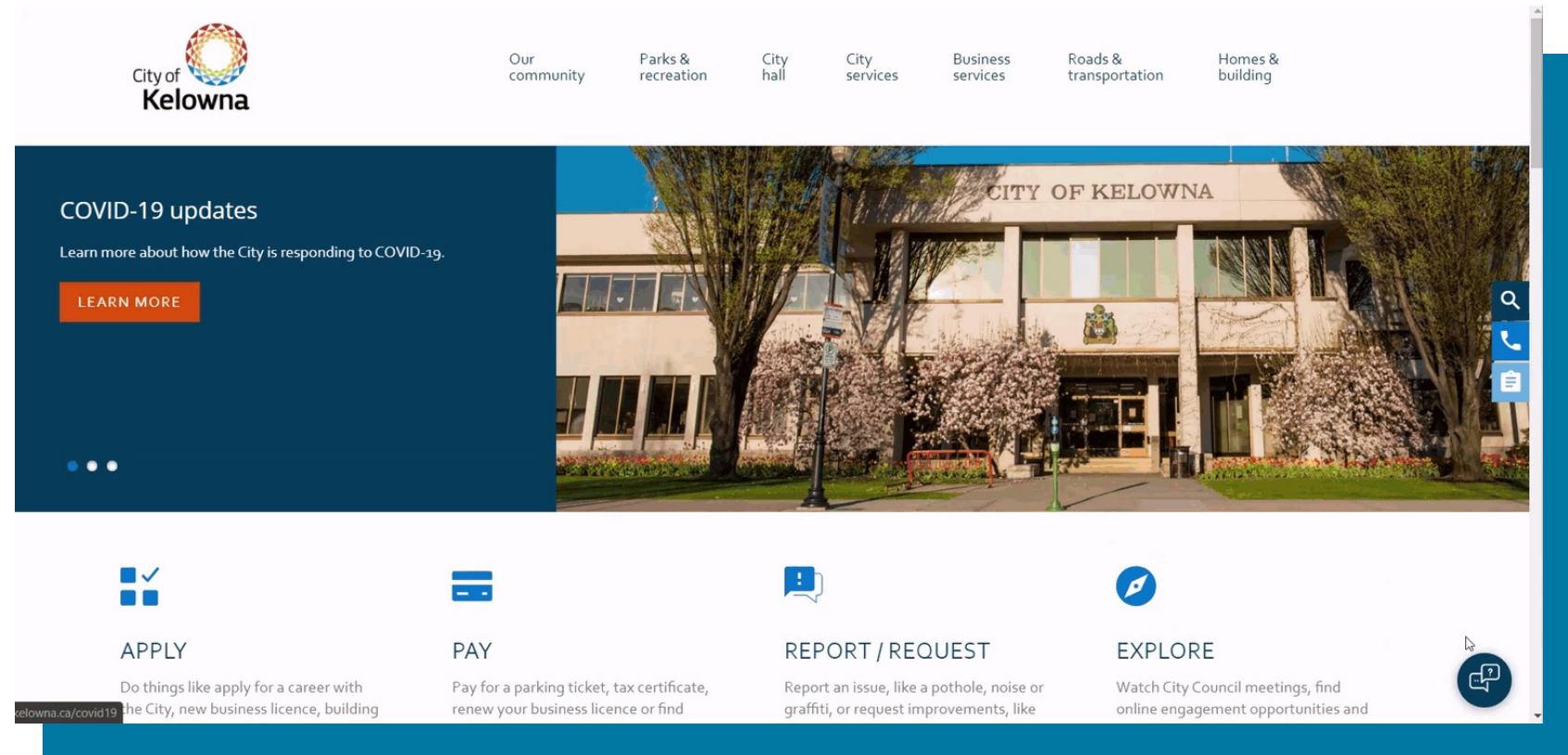


Omni channel AI interactions for City Services



OMNI Channel Use Case

All city departments have a vested interest in offering more services online. In doing this you offer 24/7 customer support and also free up staff time (not answering those common questions – focusing on real issues).



Digital Assistants



Digital Assistants Use Case

By the Numbers

12K

Unique Users

15,674

Unique Conversations

0.98

Avg Interactions per User

14,488

Questions Asked



Facility Requests



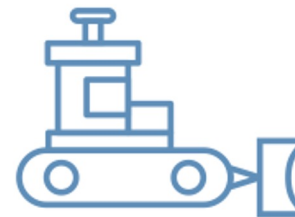
Garbage Schedules



General Requests



Development



Winter Maintenance



Airport Wait times

Voice Assistants



Voice Assistants Use Case



Winter Maintenance voice assistant

Total Voice Conversations

137

Asked to speak to an agent

35

Asked a question then asked to speak to an agent

23

Never asked for an agent

102

Percentage of calls diverted from staff

76%



Revenue voice assistant

Total Voice Conversations

1159

Asked to speak to an agent

946

Asked a question then asked to speak to an agent

542

Never asked for an agent

213

Percentage of calls diverted from staff

18%

Landfill Chatbot



Chatbot Use Case

Chatbot welcome

Kelowna's waste and recycling chatbot. 11:57 AM

Try our tools to find your collection schedule or lookup item recycling locations.

COLLECTION SCHEDULE

RECYCLE ITEMS

11:57 AM

Enter your message...

powered with ❤️ by zammo.ai

Collection schedule

Please wait while I search for your collection schedule. 11:59 AM

Address

Garbage	2023-01-31
Recyclables	2023-01-31
Yard Waste	2023-03-07

11:59 AM

Enter your message...

powered with ❤️ by zammo.ai

What goes where?

Mattresses

Furniture is not picked up curbside. Bring items that cannot be donated or sold to the Glenmore Landfill or Westside Transfer Station. For

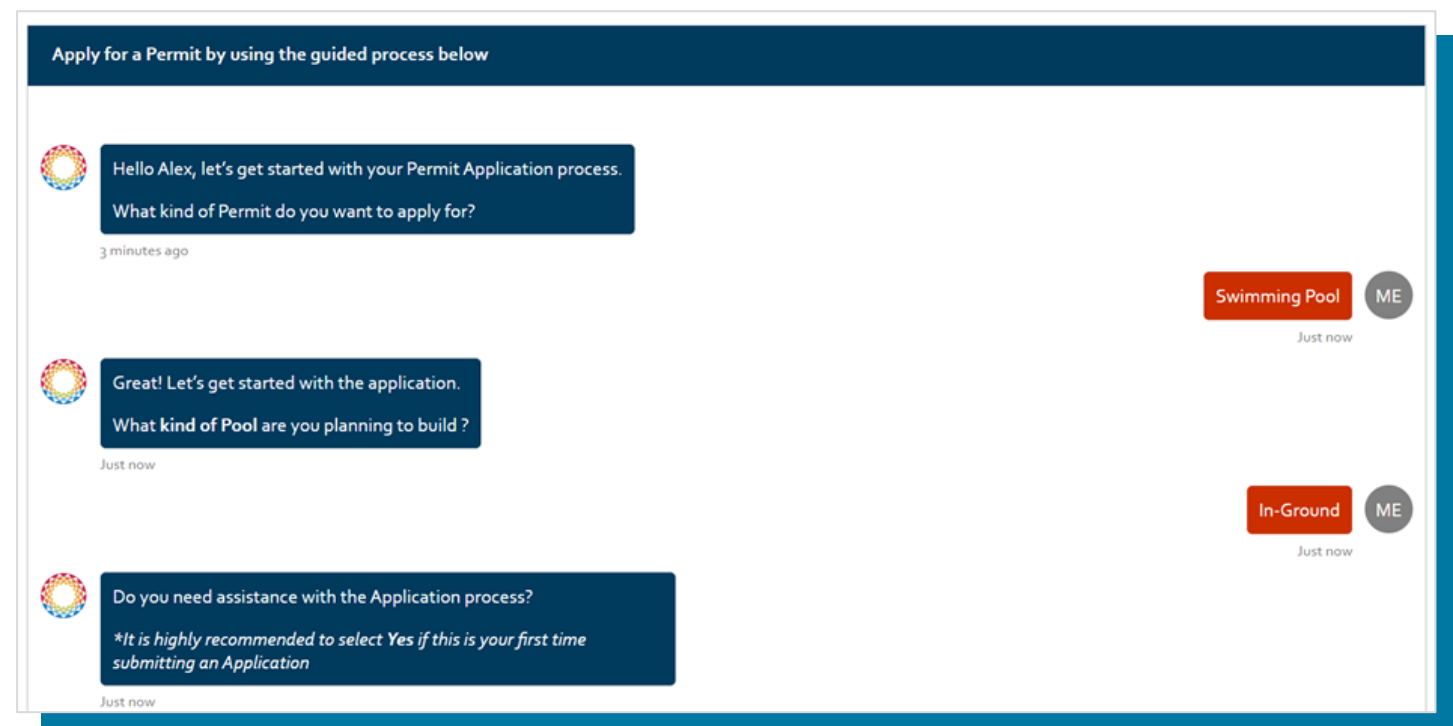
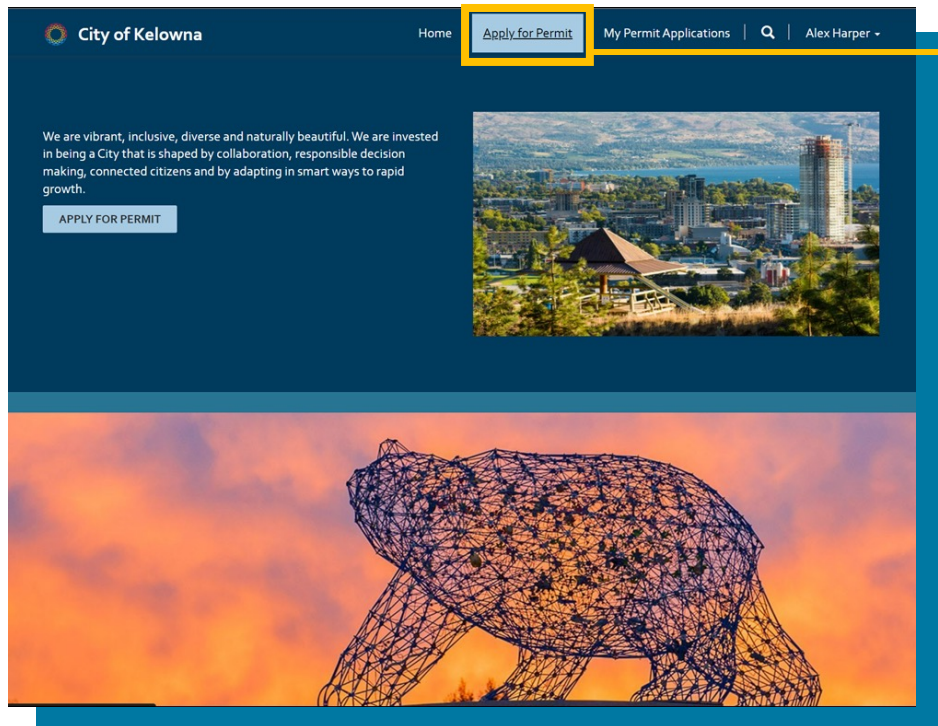
Enter your message...

powered with ❤️ by zammo.ai

OpenAI – Permitting Use Cases



OpenAI Permitting Use Case



OpenAI – Permitting Use Cases



OpenAI Permitting Use Case

Apply for a Permit by using the guided process below

Is your Address the same as a one where you are planning to build a Pool: 151 Taylor Rd?
Just now

Yes ME
Just now

What is the Construction Value?
Just now

25000 ME
Just now

Awesome! We have all the basic information we need.
Please wait as we generate the Application form for you...

The Permit Application form has been generated for you.
Please continue providing additional information by clicking the link below:
[CLICK HERE](#)

If you have further questions, please contact us.
Just now

City of Kelowna

Home | Apply for Permit | My Permit Applications | Alex Harper

Home > Application - Continue

Application - Continue

1 Application 2 Acknowledgement 3 Authorization 4 Above Ground Pool 5 Documents & Drawings

Permit Type

Application #
A-01006

Permit For *
Swimming pool

Permit For (Sub Type) *
In-Ground

Type of Application *
Single Family Dwelling

Property Information

Address Line 1 *
151 Taylor Rd

Address Line 2

City
Kelowna

Province
British Columbia

Postal Code *

Legal Description *

Description of Work *

OpenAI – Permitting Use Cases



OpenAI Permitting Use Case

City of Kelowna Home | Apply for Permit | My Permit Applications | Alex Harper

Home > My Applications

My Applications

Application #	Permit For ↑	Applicant	Property Address	Applicant Address	Created	Updated	Status	
A-01000	Swimming pool	Alex Harper	2125 Baron Rd	2125 Baron Rd	8/1/2023 8:49 PM	8/29/2023 4:57 PM	In Progress	▼
A-01002	Swimming pool	Alex Harper	1007 Fuller Ave	1007 Fuller Ave	8/2/2023 11:40 AM	8/29/2023 10:11 PM	Submitted	▼
A-01003	Swimming pool	Alex Harper	1007 Fuller Ave	1007 Fuller Ave	8/23/2023 3:03 PM	8/23/2023 3:03 PM	New	▼
A-01005	Swimming pool	Alex Harper	151 Taylor Rd	151 Taylor Rd	8/28/2023 7:35 PM	8/30/2023 9:55 AM	In Progress	▼
A-01006	Swimming pool	Alex Harper	151 Taylor Rd	151 Taylor Rd	8/30/2023 5:01 PM	8/30/2023 5:06 PM	In Progress	▼
A-01004	Swimming pool	Alex Harper	1007 Fuller Ave	1007 Fuller Ave	8/23/2023 3:06 PM	8/23/2023 3:06 PM	New	▼

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OpenAI – Permitting Use Cases



OpenAI Permitting Use Case

1 Application ✓ 2 Acknowledgement 3 Authorization 4 Above Ground Pool 5 Documents & Drawings

Property Details

Address Line 1: 151 Taylor Rd
 Lot # *: 52
 Plan # *: KAS3631

Owner's Acknowledgement

I acknowledge I am the owner/owner's agent (circle one) of the above noted property.

I acknowledge that I have read Section 4.9.6 of the [City of Kelowna Building Bylaw No. 7245](#). I further acknowledge that I understand the definition of damage with respect to the depositing of dirt, debris, and other material on the road right of way.


I understand that as owner of the property noted above, I am responsible for the cost of repair and/or cleanup of any damage to City works or property that occurs as a result of the construction on my property.

I understand that if the damage is not corrected within the time limit set by the inspector, the City will repair and/or cleanup the damage. Further, if the invoice for the cleanup is not paid within 30 days the amount will be added to the property taxes.

Inspected City Works and adjacent property and *

find it in good condition and I observed no damage

Owner's Acknowledgement Signature *



Owners Acknowledgement Signed On *

8/30/2023

1 Application ✓ 2 Acknowledgement ✓ 3 Authorization ✓ 4 Documents & Drawings

Upload Documents & Drawings

Document/Drawing ↑	Description	Upload Status	Uploaded On
Cross Sections	to include Lot elevations from property line to property line, Pool depths in relation to grade, Area of soil removal and redistribution (in reference to natural grade and/or existing subdivision contours), Location of all Easements, Right-Of-Ways, No-Disturb/No-Build zones, Covenants, and both existing and proposed retaining walls	Pending	↓
Developer's Approval		Pending	↓
Engineer Schedule 'B', 'D' and Insurance Certificate		Pending	↓
Engineer Sealed Drawing	to include Pool design, Retaining walls that form part of the pool structure (if applicable, see Retaining Walls - Bulletin)	Pending	↓
General Drawing	to include Zoning (is a pool allowed in your zone?)	Pending	↓
Geotechnical schedules 'B', 'D' and Insurance Certificate	if applicable	Pending	↓
Site Plan Drawings	to include Lot Dimensions, Pool Dimensions, Location of pool in relation to other structures, property lines, all registered Easements, Right-Of-	Pending	↓



What do you think?

**What are some questions
you would want to ask?**

How can I start?

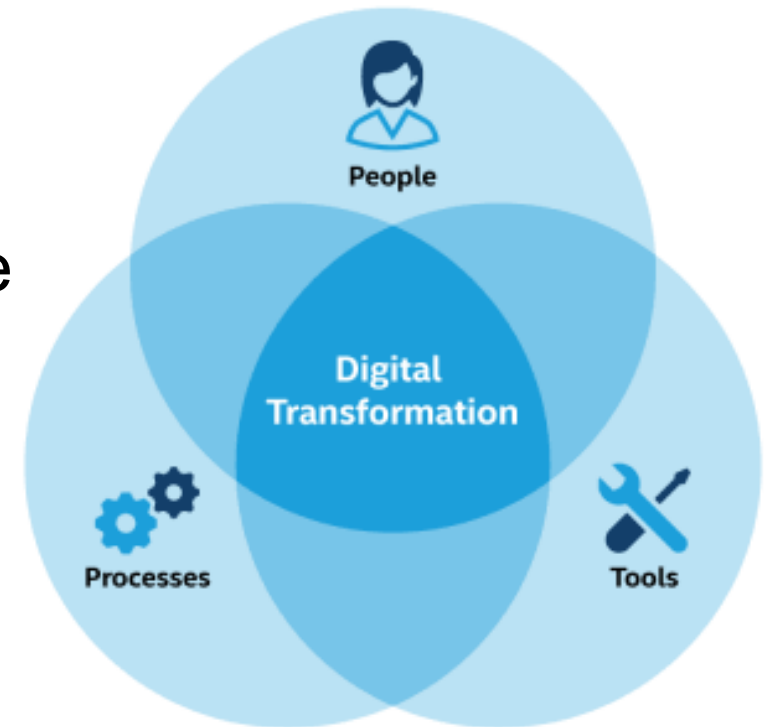
Making it work

- Build your strategy and know your why
- Invest in technology
- Understand your processes

Pioneering AI in Local Government

Q. How can we bring this innovation to our own communities?

- 3 foundational but equally important elements to successful AI:
 - **Technology**
 - **People**
 - **Process**
- Without strong foundational elements, even the most promising technology initiatives can fail
- IT leaders need to align technology with the business



People – What is the culture and conditions we need for success?



Strong Leadership and **clear** Vision



IT Department who is a **trusted** Business Partner

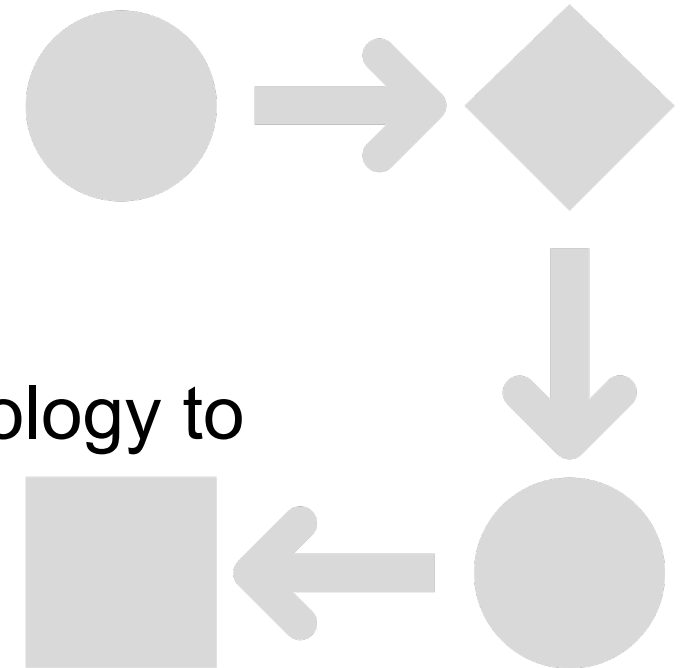


Training and upskilling of staff is ongoing



Build relationships outside the organization

Process – How do we prepare for the technology to be successful?



Understanding the limitations

- Technology can't fix poor processes
- Overcome the myths that you need new technology to make improvements and solve problems

The Path Forward

- Start small - streamlining and improving processes
- Enhance what you have!
- Digital transformation is business transformation

Development Process Review Project: A Case Study

- Housing crisis is a pressing issue in our province. To speed up development, we must address complexities in land development.
- In Victoria, a comprehensive review project is underway, involving multiple departments.
- The focus is on modernizing processes, updating bylaws, and leveraging technology.



Responsible AI

Thoughtfully innovating to realize the full potential of AI



Canada Lags in Trust in AI

Deloitte. Services ▾ Industries ▾ Careers ▾

Search CA EN

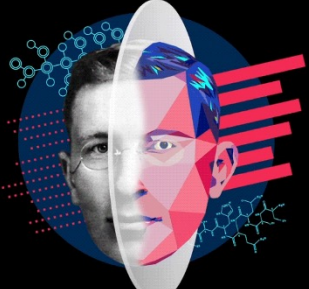
English | Français

Omnia AI AI Services | Products | Insights | Connect with us

Canada's AI imperative:

Overcoming risks, building trust

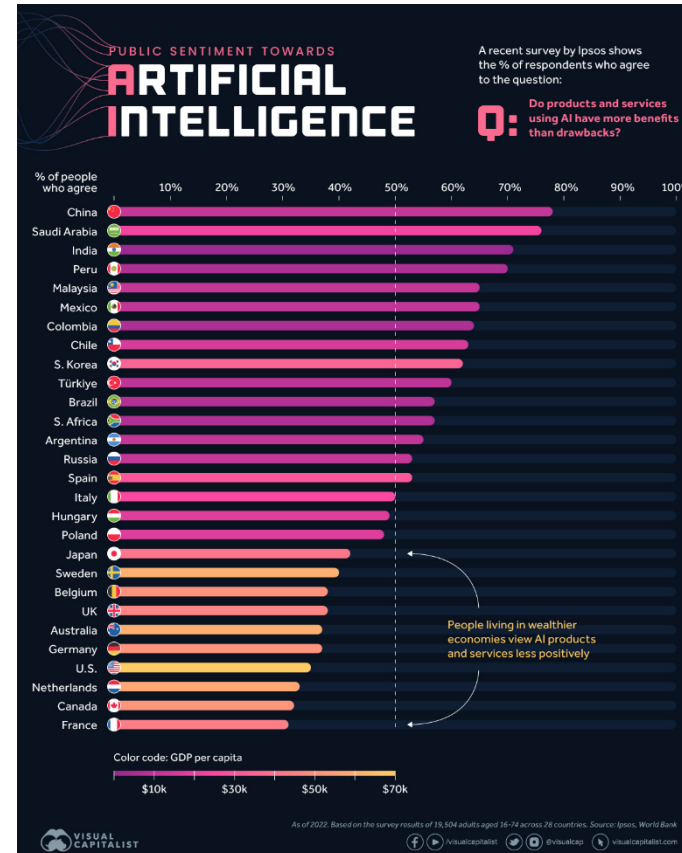
AI has the potential to be the catalyst for an era of unprecedented innovation, progress, and prosperity. Yet Canadians still do not truly understand AI, or see how its benefits outweigh the risks. We heard concerns about AI's impact on privacy, security, bias, consumer protection and more – and Canadians are looking to business and government leaders to provide answers and solutions to those questions. Left unaddressed, this lack of trust could have a serious impact on Canada's future prosperity.



This report outlines five key perceptions Canadians have about AI and examines the root causes of their distrust. While there's no question AI presents its fair share of risks, this report highlights that it is possible to develop AI that reflects Canadian values—and promotes prosperity for all.

Read *Canada's AI imperative: Overcoming risks, building trust* to learn more.

[Download the report](#)

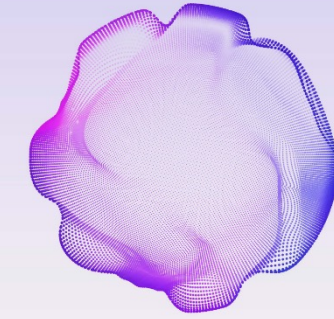


KPMG | THE UNIVERSITY OF QUEENSLAND AUSTRALIA
CREATE CHANGE

Trust in Artificial Intelligence

A global study

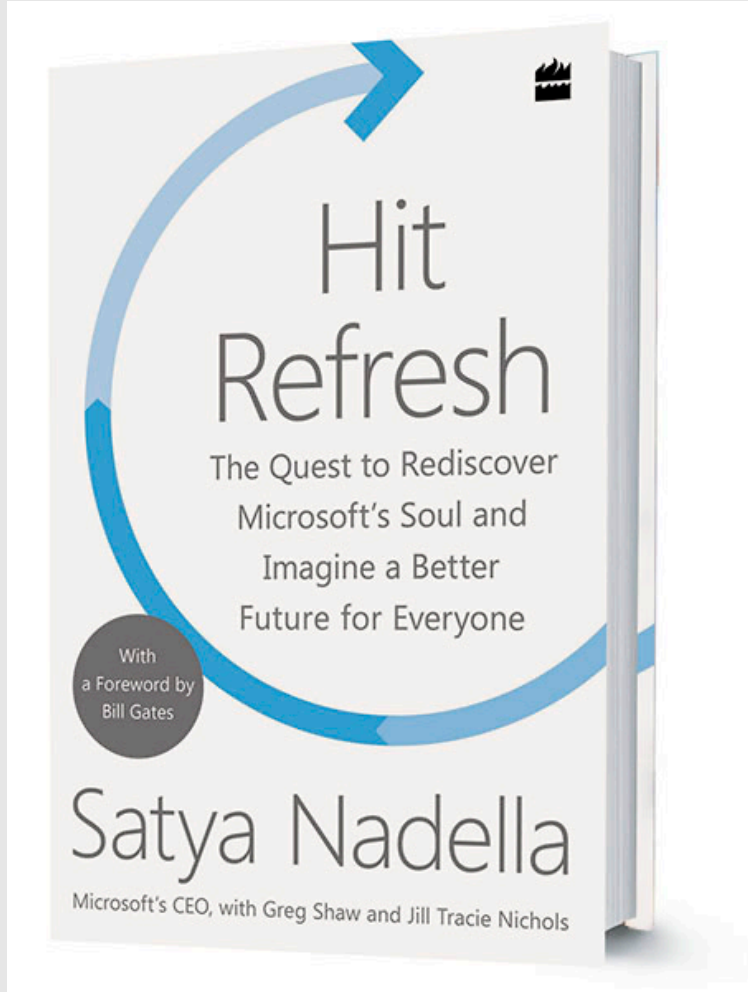
2023



uq.edu.au
KPMG.com.au

Microsoft is optimistic about the future of AI systems empowering and augmenting individuals' and organizations' abilities to address broad societal issues such as poverty, security, justice, education and healthcare.





on the planet to achieve more



eat more



Reinvent productivity



Build t

Microsoft's AI principles



Fairness



Reliability
& Safety



Privacy &
Security



Inclusiveness



Transparency



Accountability

Our Approach to Responsible AI



Advanced research

Practice and tooling innovations

Company-wide governance



AI Business School

Industry case studies

Practical tools and guidance



Industry working groups

Shaping public policy

AI for Good grants

Microsoft Cloud

Runs on **trust**

Your data is your data

Data is stored encrypted in *your Azure* subscription

Your data from any fine-tuning is not used to train the foundation AI models

Azure OpenAI Service provisioned in *your Azure* subscription

Model fine tuning stays in *your Azure* subscription and never moves into the foundation AI models

Your data is protected by the most comprehensive enterprise compliance and security controls

Encrypted with Customer Managed Keys

Private Virtual Networks, Role Based Access Control

Soc2, ISO, HIPPA, CSA STAR Compliant

Responsible AI built into Azure AI



Fairness

Assess fairness and mitigate fairness issues to build models for everyone.



Explainability

Understand model predictions by generating feature importance values for your model.



Counterfactuals

Observe feature perturbations and find the closest datapoints with different model predictions.



Causal analysis

Estimate the effect of a feature on real-world outcomes.



Error analysis

Identify dataset cohorts with high error rates and visualize error distribution in your model.



Responsible AI scorecard

Get a PDF summary of your Responsible AI insights to share with your technical and non-technical stakeholders to aid in compliance reviews.

Tools: Transparency Documents



The basics of the new Bing

Introduction

In February 2023, Microsoft launched the new Bing, an AI-enhanced web search experience. It supports users by summarizing web search results and providing a chat experience. Users can also generate creative content, such as poems, jokes, and letters. The new Bing runs on a next-generation model from OpenAI that is more powerful than ChatGPT. We worked with this OpenAI model to develop a customized set of capabilities and techniques to join cutting-edge AI technology and web search.

At Microsoft, we take [our commitment to responsible AI](#) seriously. The new Bing experience has been developed in line with Microsoft's AI Principles, [Microsoft's Responsible AI Standard](#), and in partnership with responsible AI experts across the company, including Microsoft's Office of Responsible AI, our engineering teams, Microsoft Research, and Aether.

In this document, we describe our approach to responsible AI for the new Bing. Ahead of release, we have adopted state-of-the-art methods to identify, measure, and mitigate potential harms and misuse of the system and to secure its benefits for users. As the new Bing becomes available to users, we know we will continue to learn and evolve our approach. This document will be updated periodically to communicate our evolving processes and methods.

Key terms

The new Bing is an AI-enhanced web search experience. As this is a powerful, new technology, we start by defining some key terms.

Term	Definition
Classifiers	Machine learning models that help to sort data into labeled classes or categories of information. In the new Bing, we use classifiers to help detect potentially harmful content submitted by users or generated by the system in order to mitigate generation of that content and misuse or abuse of the system.
Grounding, Grounded responses	The new Bing is grounded in web search results. This means that we center the response provided to a user's query on high-ranking content from the web, and we provide links to websites so that users can learn more. Bing ranks web search content by heavily weighting features such as relevance, quality and credibility, and freshness. We describe these features in more detail in Bing's Webmaster Guidelines (see "Quality and Credibility" in "How Bing ranks your content").

<https://aka.ms/ResponsibleAI-NewBing>

Characteristics and Limitations

How AI works to produce insights

The edge device includes computer vision skills (AI models) that detect human presence and movement from in-store camera video footage to derive data such as people count and dwell time. The derived data (or inference data) is sent to the Connected Spaces cloud to generate insights. The Connected Spaces service and web app is a multi-tenant software as a service (SaaS) that processes the data from the Connected Spaces edge gateway and correlates with other business data to generate aggregate and actionable insights for each customer.

- The goal of computer vision AI skills is exclusively to detect and locate human presence in video footage and
that detect people and their
er the identities or

Guidelines for choosing a use case

- **Carefully consider region of interest and camera placement for skills** – When defining a region of interest for a skill, consider avoiding capturing more data than is needed for a skill. Avoid positioning cameras towards sensitive areas of a store (e.g. restrooms, employee break rooms) or public spaces outside of the store (e.g. sidewalks, mall concourses).
- **Carefully consider the impact on the work-life of retail employees** – Connected Spaces was not designed or intended for employee surveillance, evaluating employee performance, modifying employee behavior, or just-in-time shift scheduling. Using the system to engage in such behaviors could be detrimental to employee well-being, and thus is not a recommended use case.
- **Avoid discovery or disclosure of sensitive information** – Avoid using the system in a way that reveals personal private information about the identity of individuals, such as inferring religion based on clothing, of shoppers and employees.

Excerpts from the Connected Spaces Transparency Note

Microsoft's Transparency Notes are intended to help you understand how our AI technology platform services works, the choices system owners can make that influence system performance and behavior, and the importance of thinking about the whole system, including the technology, the people, and the environment.

Azure AI

Applications



Partner Solutions

Application Platform

AI Builder



Power BI



Power Apps



Power Automate



Power Virtual Agents

Scenario-Based Services

Applied AI Services



Bot Service



Cognitive Search



Form Recognizer



Video Indexer



Metrics Advisor



Immersive Reader

Customizable AI Models

Cognitive Services



Vision



Speech



Language



Decision

Azure OpenAI Service

ML Platform



Azure Machine Learning



Business Users



Developers & Data Scientists



*Ensure that artificial
general intelligence (AGI)
benefits humanity.*



*Empower every person and
organization on the planet
to achieve more*

GPT-4

Generate and Understand Text

Codex

Generate and Understand Code

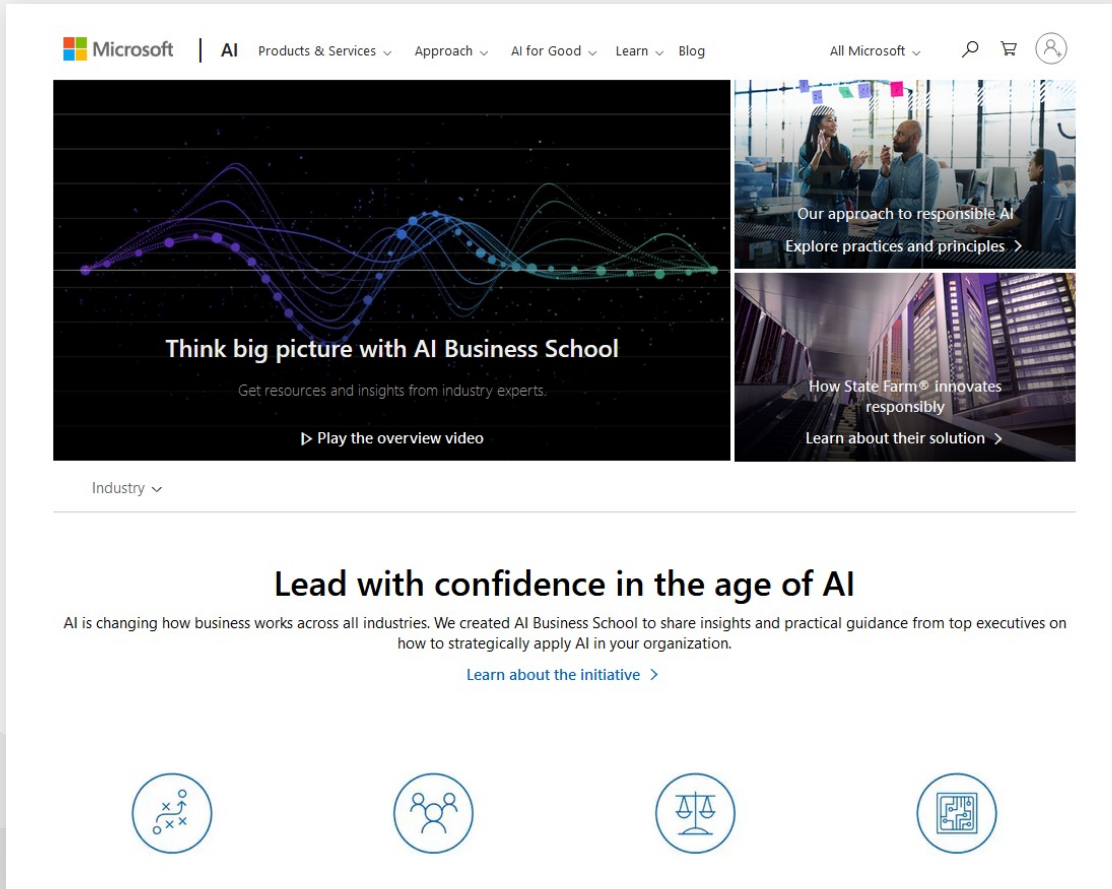
DALL·E *preview*

Generate images from text prompts

ChatGPT *public preview*

Chat Bot, Avatar, Contact Center Reply

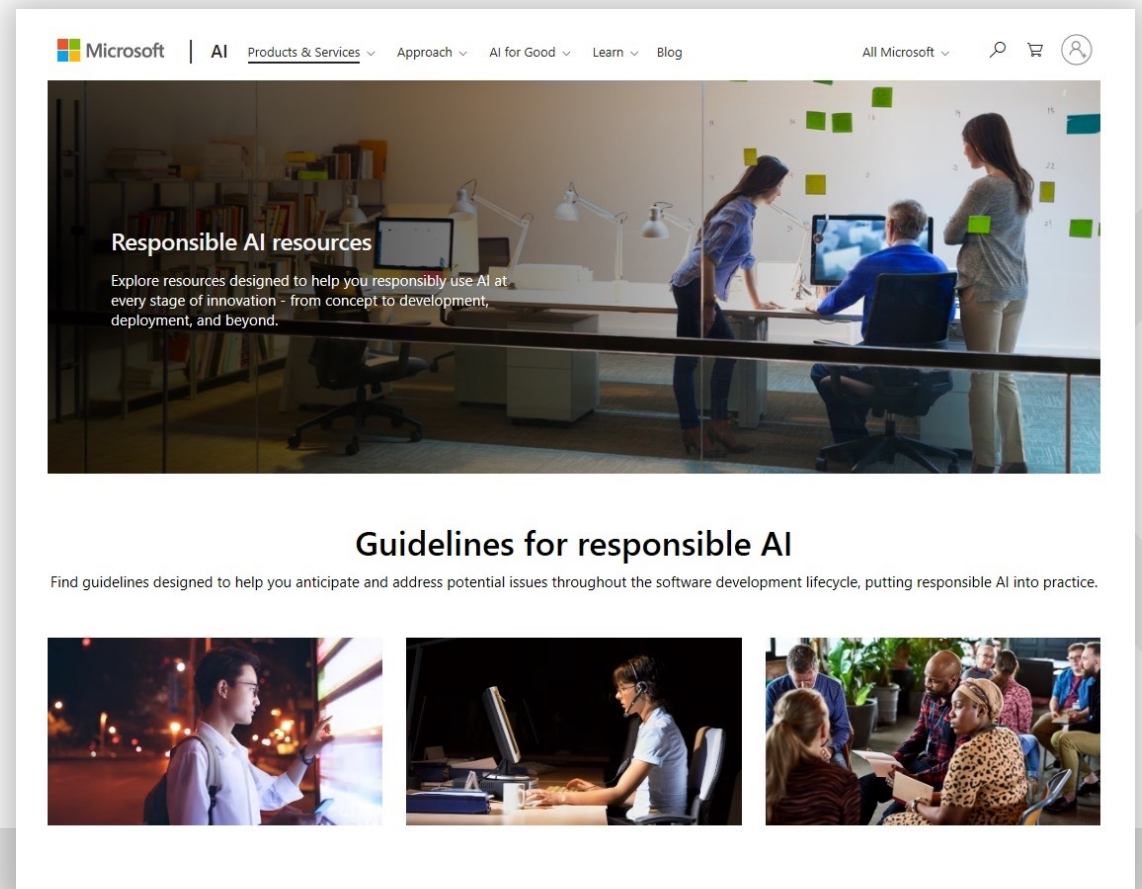
Empowering Responsible AI



The screenshot shows the Microsoft AI Business School landing page. At the top, there is a navigation bar with the Microsoft logo and links for AI, Products & Services, Approach, AI for Good, Learn, and Blog. The main content area features a large dark banner with the text "Think big picture with AI Business School" and a sub-headline "Get resources and insights from industry experts." Below this is a "Play the overview video" button. To the right, there are two smaller video thumbnails: "Our approach to responsible AI" and "How State Farm innovates responsibly". At the bottom, there is a section titled "Lead with confidence in the age of AI" with a sub-headline "AI is changing how business works across all industries. We created AI Business School to share insights and practical guidance from top executives on how to strategically apply AI in your organization." and a "Learn about the initiative" link. Four icons are displayed at the bottom: a network diagram, a group of people, a scale of justice, and a circuit board.

Establish a responsible AI strategy

[Aka.ms/AIBS](https://aka.ms/AIBS) >



The screenshot shows the Microsoft Responsible AI resources landing page. At the top, there is a navigation bar with the Microsoft logo and links for AI, Products & Services, Approach, AI for Good, Learn, and Blog. The main content area features a large image of people in an office setting with the text "Responsible AI resources" and a sub-headline "Explore resources designed to help you responsibly use AI at every stage of innovation - from concept to development, deployment, and beyond." Below this is a section titled "Guidelines for responsible AI" with a sub-headline "Find guidelines designed to help you anticipate and address potential issues throughout the software development lifecycle, putting responsible AI into practice." At the bottom, there are three small images: a person pointing at a screen, a person working at a computer, and a group of people in a meeting.

Design, build, and manage your AI solution

[Aka.ms/RAIresources](https://aka.ms/RAIresources) >

Operationalize Responsible AI, your way.

A suite of tools for a customized, end-to-end responsible AI experience

[GET STARTED](#)

AI Customer Commitments

Sharing our learnings about developing and deploying AI responsibly

Creating an AI Assurance Program

Supporting you as you implement your own AI systems responsibly

A five-point blueprint for governing AI

1. Implement and build upon new government-led safety frameworks
2. Require safety brakes for AI systems that control critical infrastructure
3. Develop a broader legal and regulatory framework based upon a technology architecture for AI
4. Promote transparency and ensure academic and public access to AI
5. Pursue new public-private partnerships to use AI as an effective tool to address the inevitable social challenges that come with new technology

Innovation in the Real Property Market



Sonia Hobbs – Director of Business Solutions
Bryan Sawers – Manager of Business Solutions
September 21st, 2023

Innovation. | Integrity. | Trust.

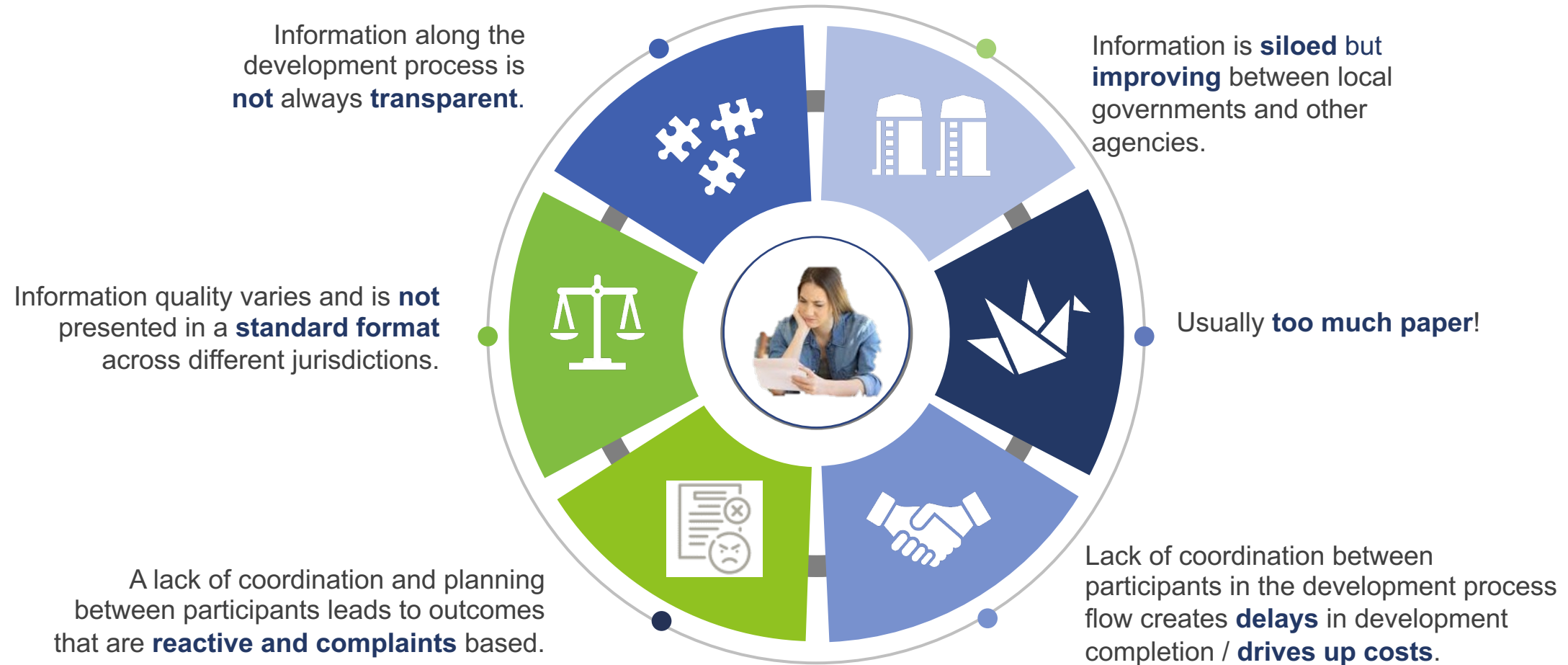


Challenges Connecting the Land Base



- Multiple areas of public concern are affecting the land base in BC including:
 - housing affordability
 - population growth
 - economic growth
 - emergency management
 - climate change adaptation
- These areas would benefit from interconnected sources of information to inform decisions and speed up coordination.

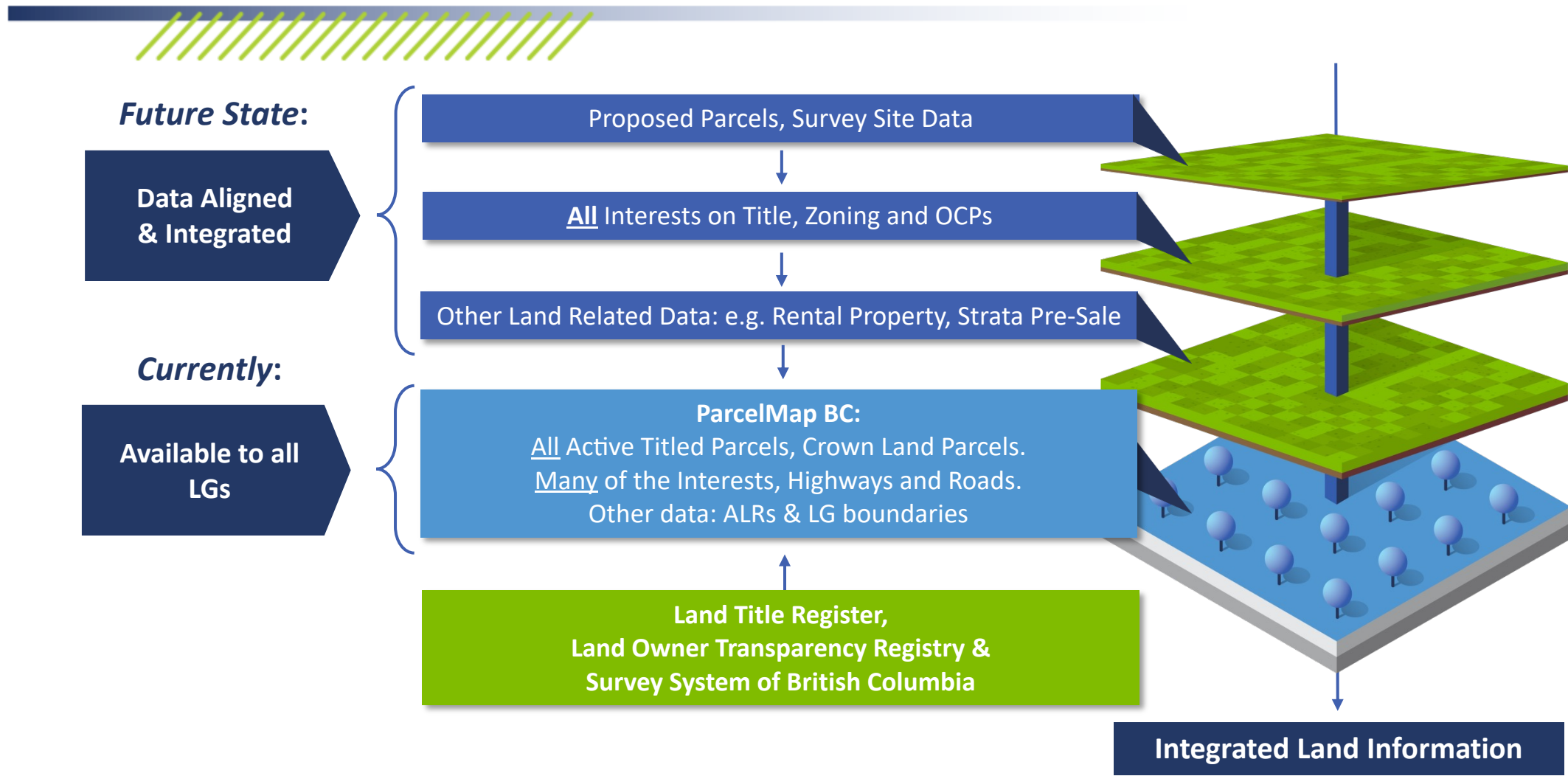
Current State and Challenges



LTSA and the Real Property Market

- With BC real estate valued at \$2.72 trillion, land ownership represents the highest valued asset for many British Columbians.
- Real property is a fundamental element of the economy which links people, business, and government.
- That activity relies on trust, proof of ownership, and the establishment of precise boundaries that define the location of real property within the land base.
- LTSA's systems provide the foundation for real property ownership and land information in the Province and rely on accurate & reliable data.

A Proposed Future State: Integrated Information



Key Themes and Benefits



- ✓ Information is collected and shared earlier in the process to improve planning and coordination.
- ✓ Data sources can be added incrementally: no “big bang” required.
- ✓ Save time and improve decision making for developers and other stakeholders by accessing a single trusted source of information.
- ✓ Visually enables regional and municipal cross-boundary land use analysis and issues management.

Who is the LTSA: Our Products & Services

Statutory Services

- Land Registry
- Surveyor General Services
- Land Owner Transparency Registry (LOTR)
- Condo Strata Assignment Register (CSAIR)
- Digitization / Preservation of Historic Records

Data Aggregation Services

- ParcelMap BC
- AUTOPROP

Service Aggregation

- For the Province (PTT, Crown Grants, etc.)
- For Legal / Real Estate Professionals (Tax Certificates Online, eStrataHub, etc.)

The screenshot displays the ParcelMap BC Search interface. On the left, the 'Adjust Map Layers' panel is visible, showing options for 'Active Parcels', 'Interest Parcels', 'Parcel Boundaries', 'Parcels By Class' (including Subdivision, Absolute Fee Book, Building Strata, Bare Land Strata, Common Ownership, Park, Air Space, Road, Crown Subdivision, Primary, Part of Primary), and 'Parcels By Owner Type'. The main map area shows a grid of parcels with various colors and labels, such as '028-231-619 BCP44933 LOT C', 'Building Strata BCS4345', '004-343-638 VAP17051 LOT A', '007-241-500 VAP17908 LOT A', '008-538-794 VAP13597 LOT 1', '007-945-850 VAP14147 LOT E', '014-942-933 VAP1233 LOT B', '007-854-081 VAP14350 LOT C', '014-912-228 VAP1241 LOT F', '010-069-925 VAP8518 LOT 1', '008-939-608 VAP12164 LOT A', and '009-880 VAP5001 Title & Sur'. A search results table is on the right, showing a list of plans with a dropdown menu for 'VAS138'.

Plan	Plan Type
VAS629	-
VAS138	-
VAS1188	-
VAP17664	-
VAP14350	-
VAP14147	-
VAP1241	-
VAP13597	-
VAP1233	-

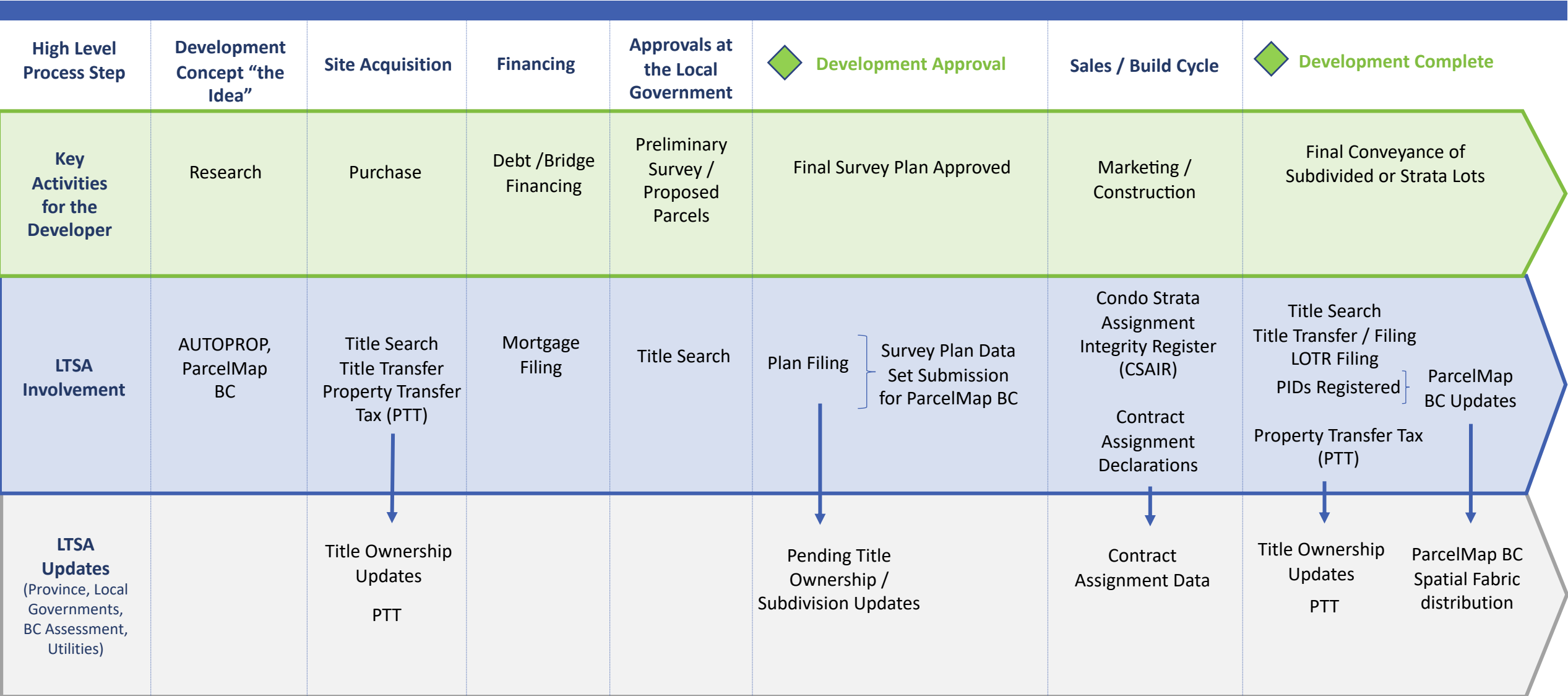
About the LTSA

Our **Vision**: A real property market that is trusted and transparent.

Our **Mission**: We deliver innovative trusted expertise and reliable land-related solutions to support the economy in the public interest.

- LTSA provides **land title information data** to the Province, local governments, BC Assessment and other authorized organizations with an interest in real property information.
- LTSA has established systems at scale for all parcels in BC in support of Local, First Nations, Regional, Provincial, & Federal governments.
- Publicly accountable, statutory corporation formed in 2005 responsible for administering the land title and survey systems of British Columbia.

Land Development Process and the LTSA



The Kelowna Pilot – A collaboration with the LTSA



Journey map the entire land development application process from the context of the applicant.

Identify opportunities to lever LTSA systems to create province-wide information sources that benefit the public through a shorter, and more streamlined approval process.

Ensure that all local governments can take advantage of LTSA systems and land information across jurisdictional boundaries.

What's Next?

**Get involved! Reach Out! Ask Questions!
We're here to help.**

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Questions and Comments

Let's connect:

*We'll be available after the session,
share your name and organization
to stay in touch.*

Salal Sexual Violence Support Centre

In appreciation of our speakers today and with thanks for your contribution, UBCM has made a donation to the Salal Sexual Violence Support Centre. The Salal Support Centre was founded 40 years ago, and is the largest sexual assault centre in British Columbia. They provide free-of-charge support services to survivors of sexualized violence