IM Aware

RPA, GovLab.ai, and Compliance

Thanks for tuning in.
The Live Event will begin shortly!

Ask questions using the Q&A function.

Your microphone is automatically muted.

Your camera will not be in use.

Turn your audio up to ensure you can hear the presenter.

Director Update

IM Aware Sept 2023

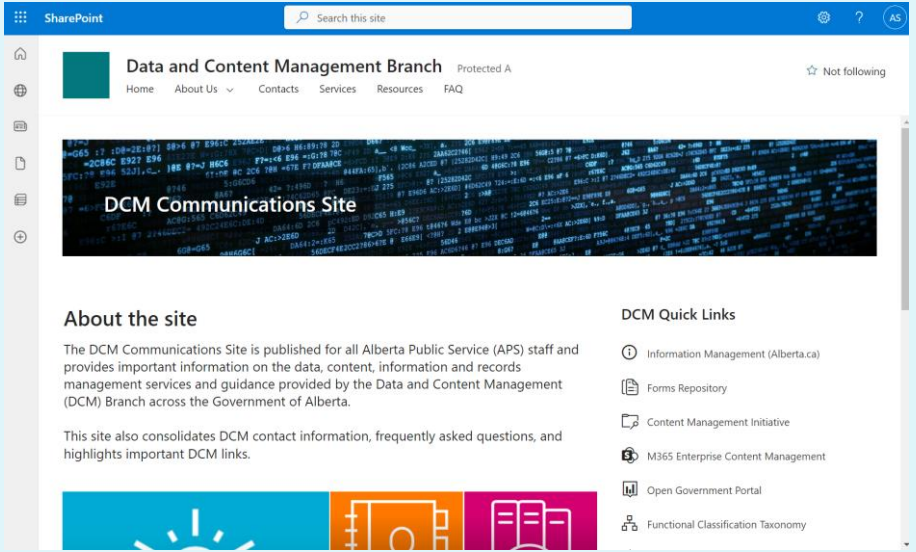
Dan Arnold, Director IM Programs
Data and Content Management Branch

Data and Content Management Updates

- Content Management Requirements and Risk Assessment/Risk Acceptance Guideline
  - Will allow us to consistently review applications that store and manage content, and identify risks associated with those systems.

Data and Content Management Updates

- **DCM Communication Site**
  - IM Hub for Internal GOA Clients
  - Branch Org Structure
  - Info about program areas
  - Contacts
  - Services Offered
  - Quick links to projects and other important information
  - FAQs



IM Programs Team

- New Staff

- IM Advice and Consultation RITM is the best way to get in touch.

Alberta

IM Programs Team

- APS Week
- Tuesday is “We aim for excellence”

Alberta

Thanks

RPA Awareness

Robotic Process Automation Program

Alberta

Agenda

- Vision and guiding principles
- RPA overview
- Demo
- Case study
- Process attributes for automation
- RPA project delivery
- Next steps: submitting your opportunities

Vision and Guiding Principles

Vision and Guiding Principles

OUR VISION

To make life better for Albertans, Service Alberta's Robotics Process Automation (RPA) Center of Excellence (COE) will enable digital transformation of the ministries to modernize and improve the quality and effectiveness of their services, by building a digital workforce to automate repetitive, manual, and mundane processes.

Our Guiding Principles

Serving Albertans

Empowering Staff

Building Trust

Digital Mindset

Our Strategy

Putting People First

We are your trusted automation advisors and commit to serving Albertans, building trust, and improving our processes.

- Build strong partnerships with the sectors & ministries to serve citizen better
- Building internal RPA capabilities & skillsets
- Enable ministries to upskill & empower employees

Transforming Work

We challenge the status quo and transform the way we work so that we can work better and faster

- Create a community-driven ideation hub to identify meaningful opportunities
- Provoke the "Art of the Possible" mindset
- Enable our teams to leverage unlocked capacity

Ensuring Quality

We tackle the right opportunities at the right time and deliver tangible results

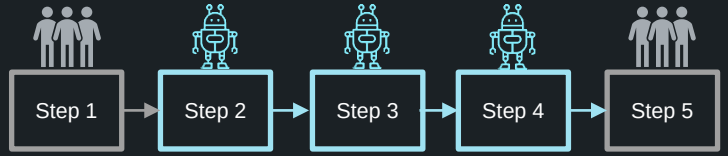
- RPA repeatable framework & common standards
- Standard selection & prioritization criteria
- Assess and share tangible results

RPA Overview

What is

RPA?

Robotics Process Automation (RPA) is a software that *mimics human behavior*.
For RPA to be effective the candidate process should be *stable*, *rule-based*, and leverage *digital inputs*.



Humans and bots can **work together** to derive maximum efficiency

ROBOTS
deliver repetitive, deterministic, high-volume tasks efficiently, accurately, and consistently

PEOPLE
build relationships, provide subjective judgement, deliver low-frequency tasks, and manage change and improvement

RPA is a software

RPA is a computer software that runs repetitive, rule-based processes. The software is trained based on functional specifications and can be adjusted at any time.

RPA simulates an employee

The software robot has access to diverse applications with an ID or a password. The robot can gather information, perform calculations and update data. As a result, business and administrative processes can be fully automated.

RPA is integrated in an existing IT infrastructure

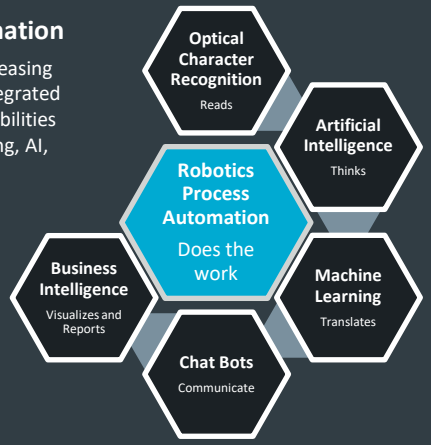
As a renewal of the existing IT landscape is not required, a high level of automation can be reached without major IT infrastructure effort. RPA uses established control mechanisms and can communicate with all systems. Therefore, no interface is required.

Robotics Process Automation

Technology that is apart of the larger Intelligent Automation landscape that aims to reduce costs while increasing employee engagement, speed and quality through intelligent automation

RPA within Intelligent Automation

RPA is a gateway technology, with increasing value to be generated when RPA is integrated with other intelligent automation capabilities such as OCR, chatbots, machine learning, AI, etc.



KEY RPA BENEFITS

- ☑ Scale up/down to match demand
- ☑ Improved accuracy & quality
- ☑ Enhanced employee engagement
- ☑ Decreased audit risks
- ☑ Deploy without altering existing IT systems or infrastructure
- ☑ Consistency & standardization
- ☑ Speed, i.e. do more faster
- ☑ Cost reduction

RPA Centre of Excellence

- Deployed and supporting automations across 6 government ministries
- Experienced team of RPA personnel including process analysts and developers
- Returned over 2,500 monthly hours to ministries, with annual savings exceeding $1.2M

KEY PROCESS CHARACTERISTICS TO DETERMINE AUTOMATION ELIGIBILITY

1. High volume and repetitive
2. High levels of manual data capture and/or entry
3. Interaction with multiple applications or systems
4. Definable business rules and expectations

RECOGNITION

- Awarded 2023 **Minister's Award for Transportation Innovation** for Driver Fitness & Monitoring automation of Ignition Interlock Program Eligibility Calculations
- Nominated for Premier's award

Ministries with Automations Delivered by RPA Centre of Excellence

- Transportation & Economic Corridors
- Seniors, Community and Social Services
- Trade, Immigration and Multiculturism
- Municipal Affairs
- Public Safety and Emergency Services
- Environment and Protected Areas

Process Attributes for Automation

What Makes a Good Process for RPA?

Automation Suitability Criteria

Identify processes where teams are manually…

	**Accessing, validating, manipulating and gathering** data from multiple systems
	**Moving data** from one system to another – throwaway or less frequency high volume data movements
	**Checking data consistency, and updating the same info** in multiple systems
	Extract and process structured content from documents, applications for **foundational daily activities**
	**Remediating data** across several accounts
	**Quick interfacing** multiple systems through front end or through API's

Ideal Process Attributes

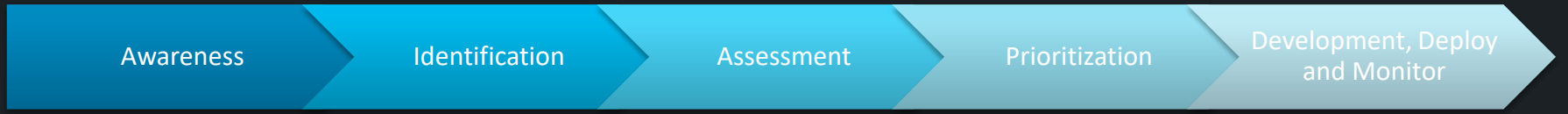
- Well defined, rule-based processes
- Mundane, time consuming, repetitive tasks that are critical to business operations
- High transactional volume
- Require transacting in multiple systems and/or multiple screens/fields in source system
- Stable systems and processes
- Processes where quality and accuracy are critical
- < 50 % of processes fully automated
- Direct control of tools and processes
- Little human judgement or insight required
- Data is available in digital format or can be converted
- Processes that are constantly battling backlogs and/or constrained people resources

Unsuitable Process

- × Systems/applications are unstable or change frequently
- × Other solution is already in place
- × High variability throughout process where full human judgement is required
- × Process cannot be digitized for RPA processing

RPA Project Delivery

The RPA Model



Build Awareness

Introduce sectors / ministries to RPA COE and challenge stakeholders to identify process candidates for RPA

Opportunity Rationalization

- Discuss identified opportunities
- Collect process data to evaluate potential benefit
- Perform deep-dive workshops with business stakeholders to identify the scope and depth of process
- Analyze prioritized process candidates based on collected data from process observations
- Validate prioritized candidate processes with development stakeholders for technical feasibility
- Obtain approval for prioritized list of process candidates

Delivery and Support

- Solution development, testing, and deployment
- Production stabilization with increased monitoring and support
- Sustainment support and monitoring for life of solution

Project Complexity and Timeline

Complexity of automation*

Complexity — **Process parameters**

	Low	Medium	High
Target applications	1	2-3	2-3
# of keystrokes	1–100	101-499	500-1000
# of input variations	1-2	3-4	High with multiple exceptions
# of platforms, interfaces, DBs			Multiple Systems, interfaces
Level (type) of automation application	Standard (screen recorder)	Standard w/ some surface automation	Advanced (surface automation, OCR, Document Understanding, AI, ML)

Development effort — **Duration**

Low

Total: 3-6 weeks

- ✓ Up to 2 weeks of design and development recommended
- ✓ Up to 2 weeks of testing recommended
- ✓ 2 week of Hyper Care

Medium

Total: 6-8 weeks

- ✓ 3-4 weeks of design and development recommended
- ✓ Up to 2 weeks of testing recommended
- ✓ 2 week of Hyper Care

High

Total: 12-14 weeks

- ✓ Minimum 5-10 weeks of design and development recommended
- ✓ 2 weeks of testing recommended
- ✓ 2 week of Hyper Care

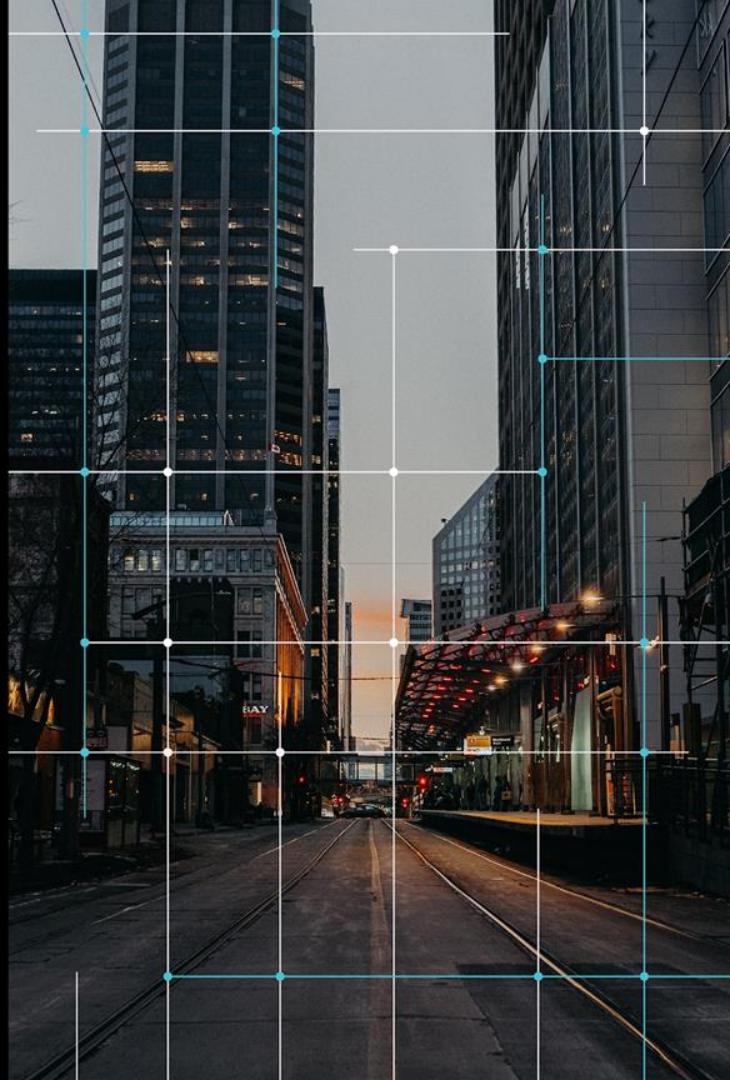
Project Lifecycle

Solution Design	Development	Testing	Deployment/Stabilization	Support
1 week	*3-14 weeks*	*1-2 weeks*	*1-2 weeks*	*On-going*

Thank You!

GovLab ai

AI for Innovation and Growth



POWERED BY AltaML

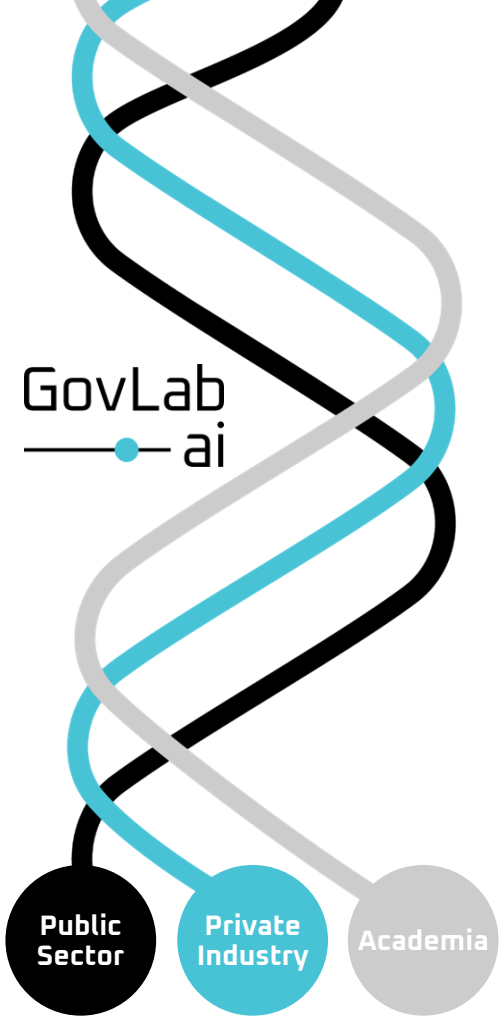
What is GovLab.ai?

The Triple Helix Model

First proposed by Henry Etzkowitz and Loet Leydesdorff in 1995, the Triple Helix model of innovation serves as a framework to bring the Public Sector, Academia, and Private Industry together in order to create meaningful transformation.

GovLab.ai is based on the triple helix model and connects the public sector with private sector innovation to **upskill talent** and create smart software solutions powered by **ethical AI**.

By unlocking the value of data, GovLab.ai can help solve public sector's most complex problems, optimize service delivery, and improve the lives of all citizens.



Mission & Objectives

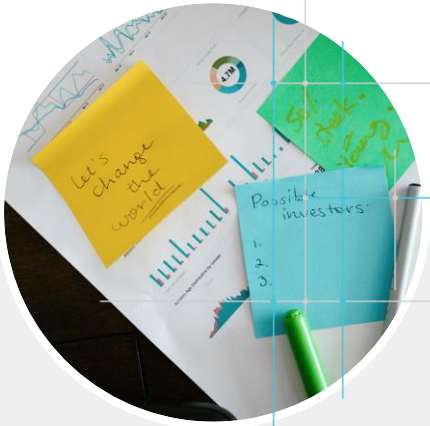
Mission: Build a sustainable innovation practice that will launch products powered by data and AI to benefit citizens and governments first while accelerating economic prosperity

IMPROVED SERVICES TO CITIZENS

Efficiencies gained are transformed into additional transparency, better quality and faster turnaround for service delivery

INNOVATION ECOSYSTEM

Strong partnerships in public and private sector allow the public sector to take a lead role in AI/ML adoption



ECONOMIC PROSPERITY

Revenue from participating shares flow back into GovLab.ai, creating a self-sustaining Innovation Practice

The Opportunity

Upskill / reskill the public sector workforce in AI/ML and digital transformation

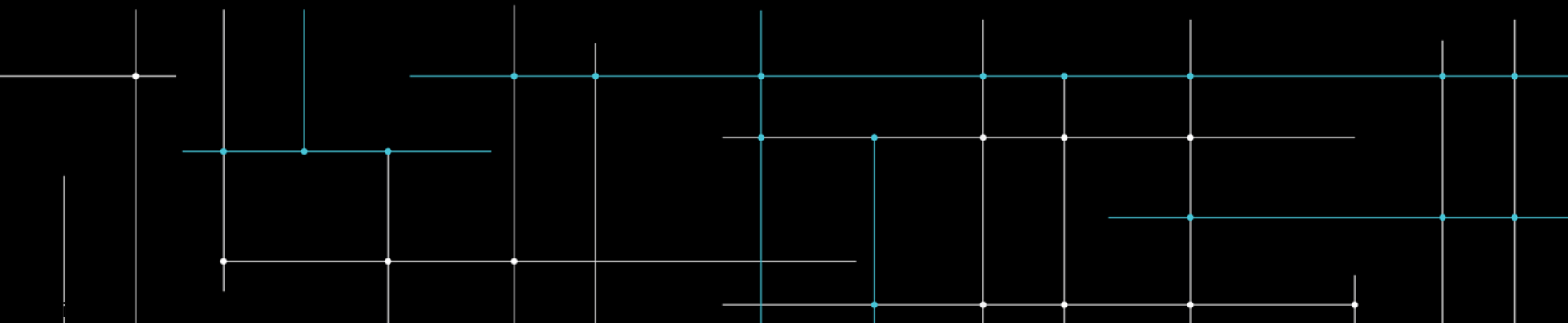
Attract students / recent graduates to consider public sector employment given the ability to make an impact in so many people's lives

Create solutions that can be operationalized and start **saving costs, creating efficiencies, testing out new service offerings** and/or increasing quality of service delivery to citizens

Create a **network of peers in the public sector** to increase the opportunities for knowledge and information sharing

Use emergent tech to create new **intellectual property** and **strengthen the local economy**

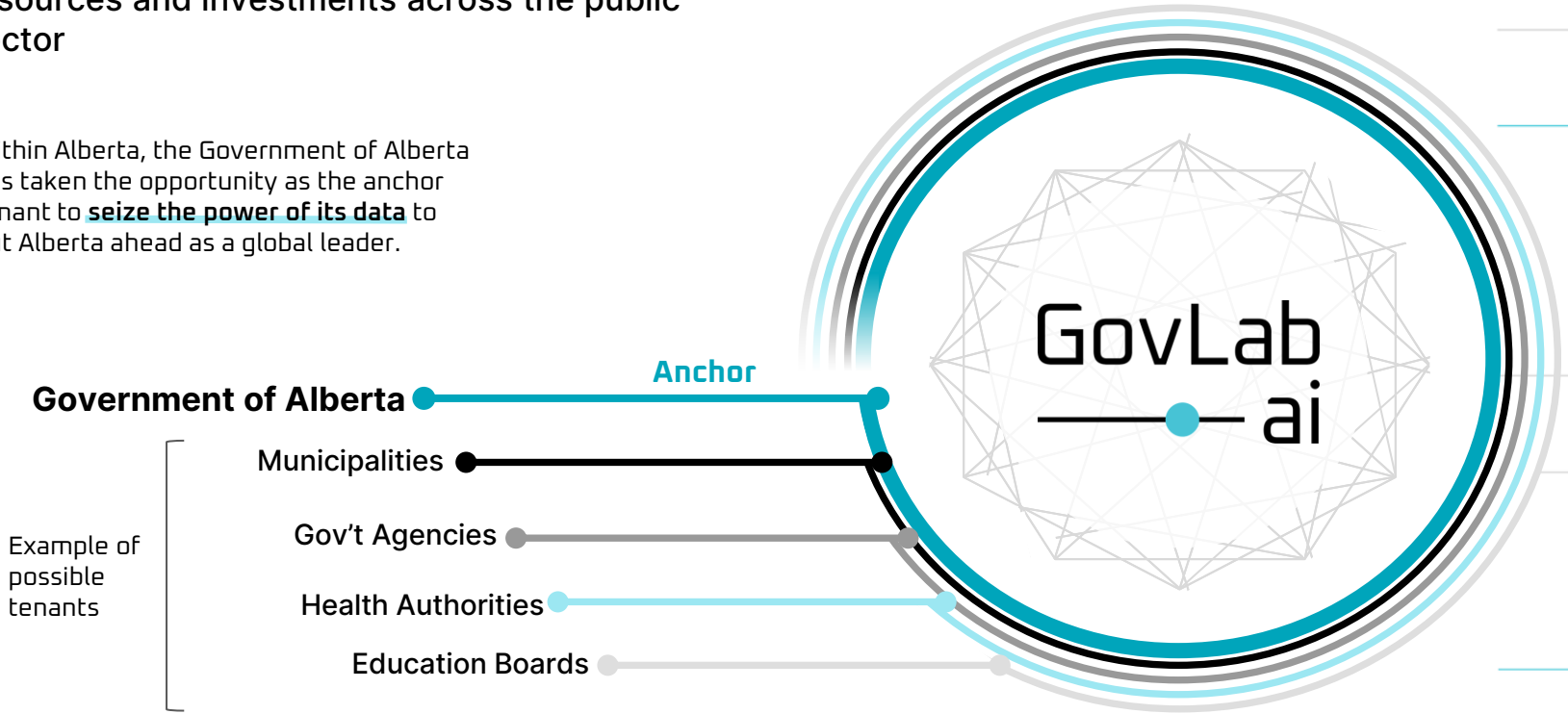
How does GovLab.ai work?



A Multi-Tenant Model

Leveraging economies of scale by sharing resources and investments across the public sector

Within Alberta, the Government of Alberta has taken the opportunity as the anchor tenant to **seize the power of its data** to put Alberta ahead as a global leader.



A Proven Model

We are seeing incredible success in a similar model at the Applied AI Lab in Calgary with private industry partners.

AltaML

Program Lead

Delivery Managers

Data Science Leads

ML Developers

Business Consultants

+

Tenant

Project Lead*

Business SMEs*

Data SMEs*

Residents *(employees to be trained in AI/ML)*

+

Academia

Tech Interns *(students with AI/ML knowledge to experience public sector)*

Business Interns *(students with business knowledge to experience public sector)*

The Factory Delivery Model

Stream 0 - Ongoing Backlog Updates

While a current cohort is executing Proof of Concept (PoC) projects, AltaML works with appropriate stakeholders to identify, define, prioritize and select new use cases that can be executed in upcoming cohorts. AltaML will also complete feasibility assessments for selected use cases to maximize the chance of success in future cohort-based experimentation.

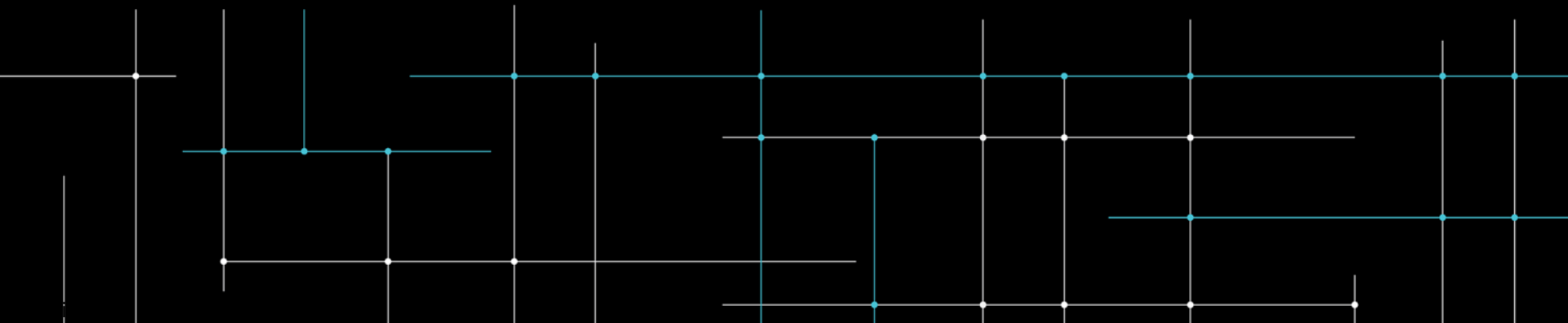
Stream 1 - Proofs of Concept

AltaML, Mitacs interns and residents complete a proof of concept (PoC) AI/ML project in a 4-month cohort. Use cases are predefined and framed in advance so the cohorts can execute on these projects within the cohort timeframe.

Stream 2 - Pilots and Operationalization

After a successful, PoC from a previous cohort, AltaML works closely with the tenant to build, test, pilot and operationalize AI/ML powered software products.

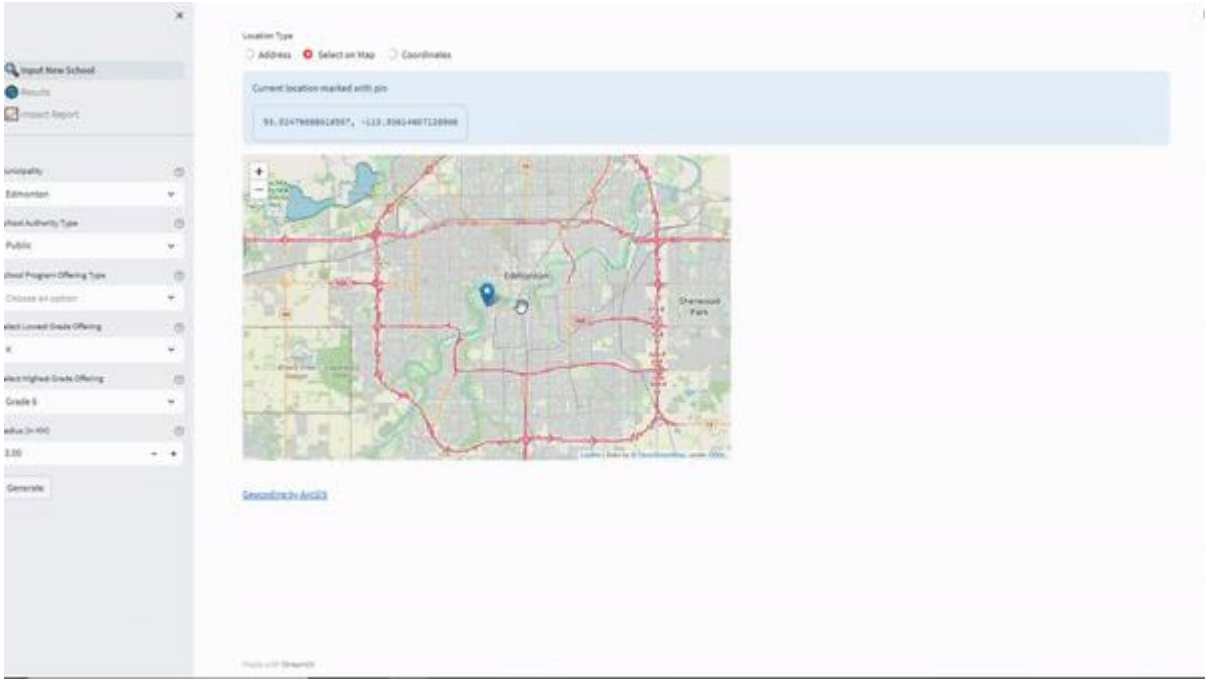
A Closer Look at the Use Cases



Solutions - Education Capital Planning

Optimizing school utilization rates

- Input school location type
- Select multiple program offerings
- Choose school type
- Choose grade levels
- Select the distance from the school to be considered



Results will display the predicted enrollment at the new and surrounding schools

Solutions - Predicting Wildfire Occurrence

Optimizing presuppression resource planning

Alberta

Wildfire Pilot

Duty Officer Dashboard

2021-10-09 (AM)

Selected Date

Selected Date: Latest

Forecast Time: Latest

Fire Prediction Colors
- No Fire Risk
- Afternoon Fire Risk
- All Day Fire

Prediction Results by Forest Area

Forest Area	DSR (mean)	Morning Probability	Afternoon Probability	Prediction
Calgary	13.14	39.9%	23.1%	No Fire Risk
Edson	3.19	32.0%	15.9%	No Fire Risk
Fort McMurray	1.34	18.5%	10.9%	No Fire Risk
Grande Prairie	1.23	19.2%	18.7%	No Fire Risk
High Level	0.34	24.0%	22.9%	No Fire Risk
Lac La Biche	3.87	39.8%	30.3%	No Fire Risk
Peace River	1.12	23.7%	24.6%	No Fire Risk
Rocky Mountain House	9.20	57.2%	34.2%	All Day Fire Risk
Slave Lake	5.04	40.2%	40.9%	No Fire Risk
Whitecourt	3.27	31.7%	21.9%	No Fire Risk

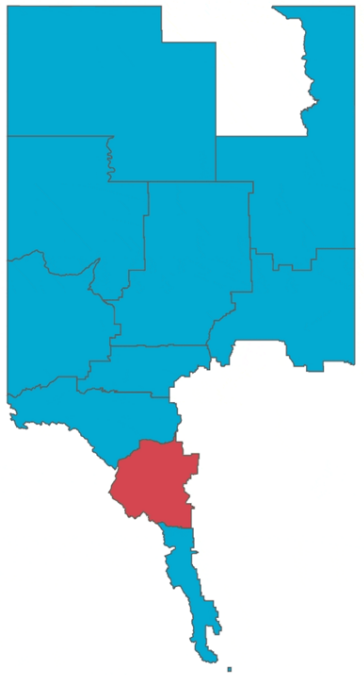
DSR colors correspond to common fire risk and FWI ranges:

- Low Risk
- Moderate Risk
- High Risk
- Very High Risk
- Extreme Risk

Values shown above have been aggregated using daily station forecasts from FIRES. Values may differ

gifcap.dev is sharing your screen. Stop sharing Hide

Alberta Prediction Map



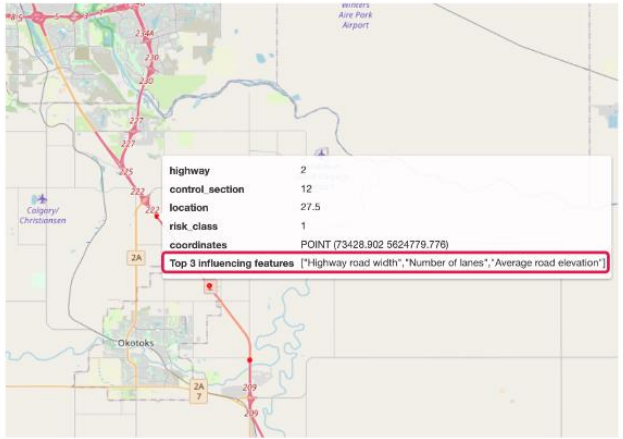
Filters

Solutions - Alberta Wildlife Watch

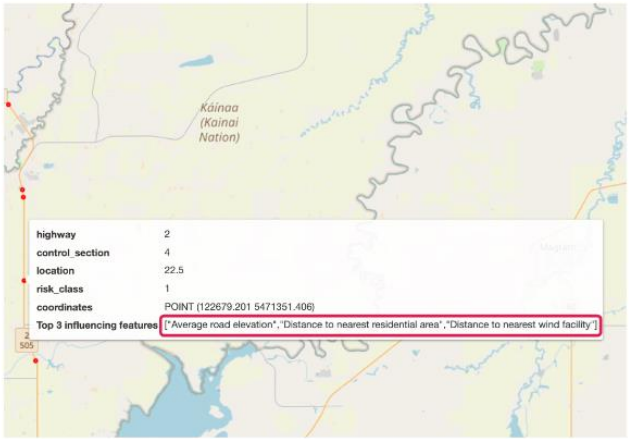
Reduce animal vehicle collisions (AVCs)

Case Study Overview | Southern Alberta - Highway 2 - South of Stoney Trail SE

Our model shows different core correlated features to highway segments with high risk.



Location near City of Calgary



Location near Kainai Nation

AI LAB FOR GOVERNMENT

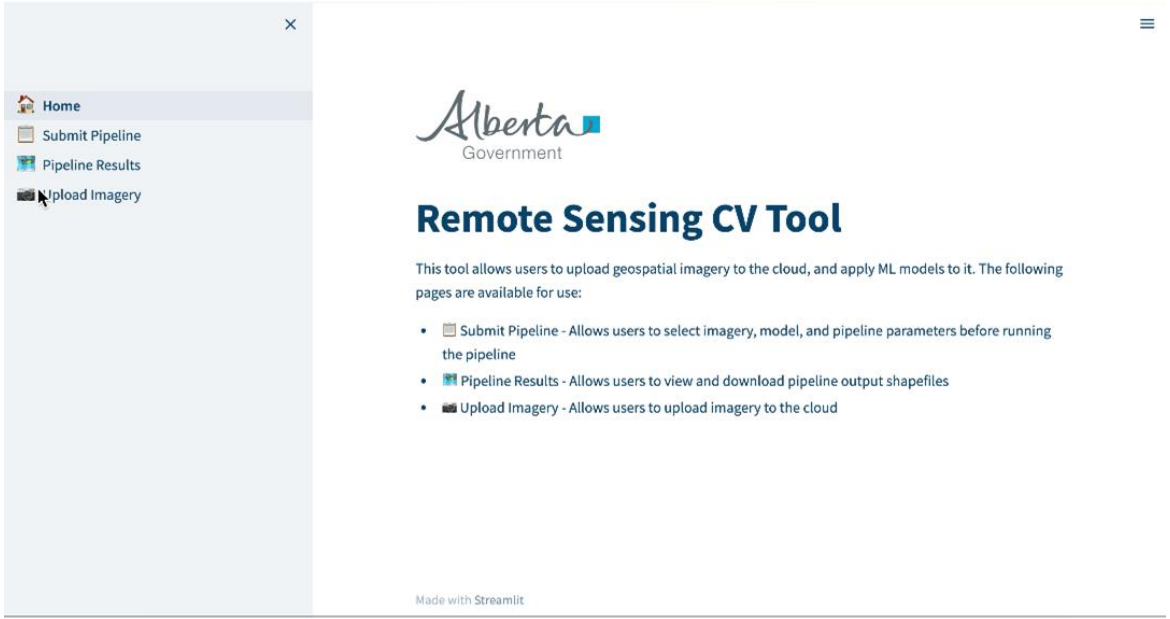
Mountain Pine Beetle Detection

Identifying single infected trees - Improving safety and optimizing resource utilization

Data

The team experimented with various remote sensing data sources and recommended SPOT (1.5m) data for the model due to our strong model results and the GoA's existing licensing agreement.

Model



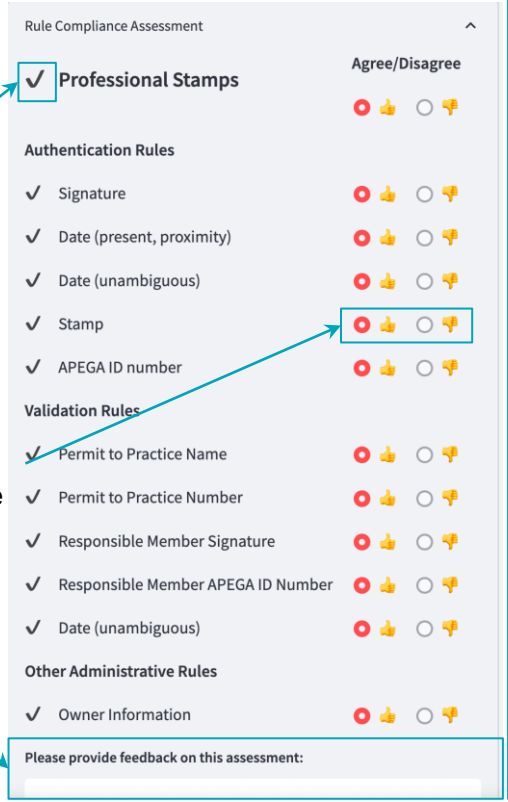
Solutions - Automating Permits

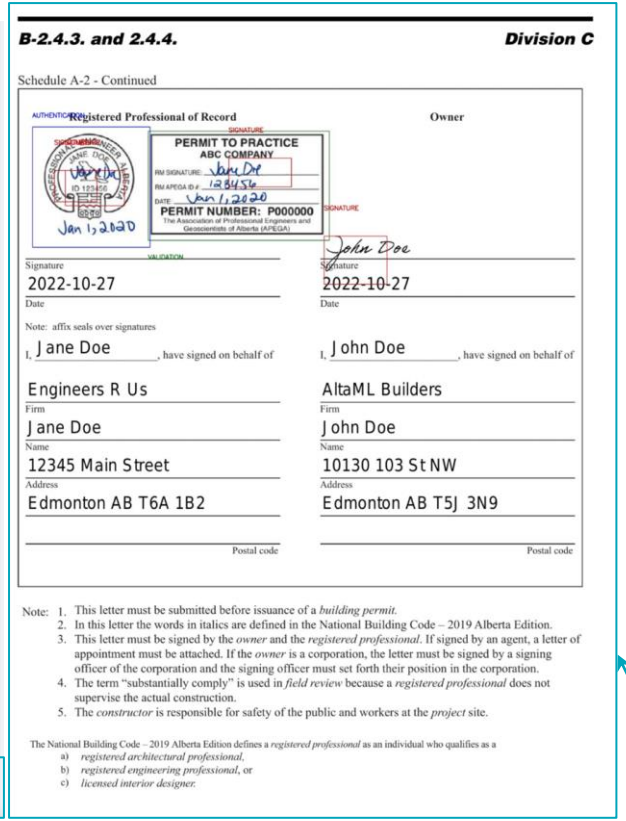
Pre-screening of building permit applications using object detection

Icons to indicate compliance of rules

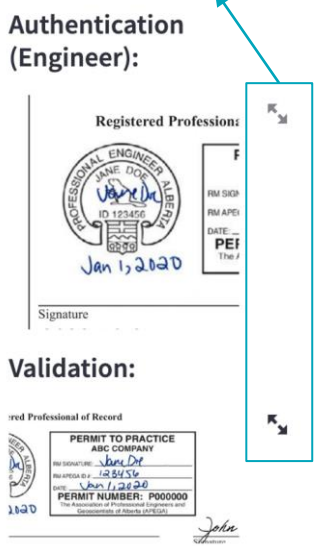
User agree and disagree buttons for rule compliance

Free-typed user feedback area





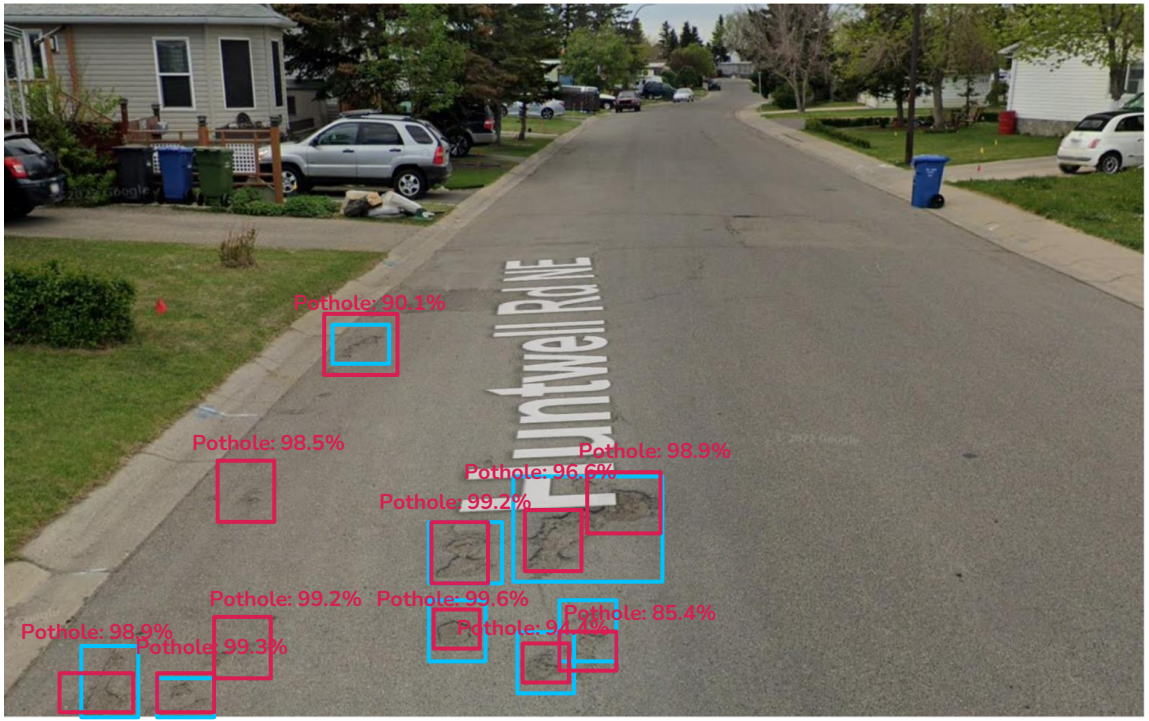
Can be used to magnify detected stamps and permits for a better view



Preview of application with annotated bounding boxes of detected stamps and signatures

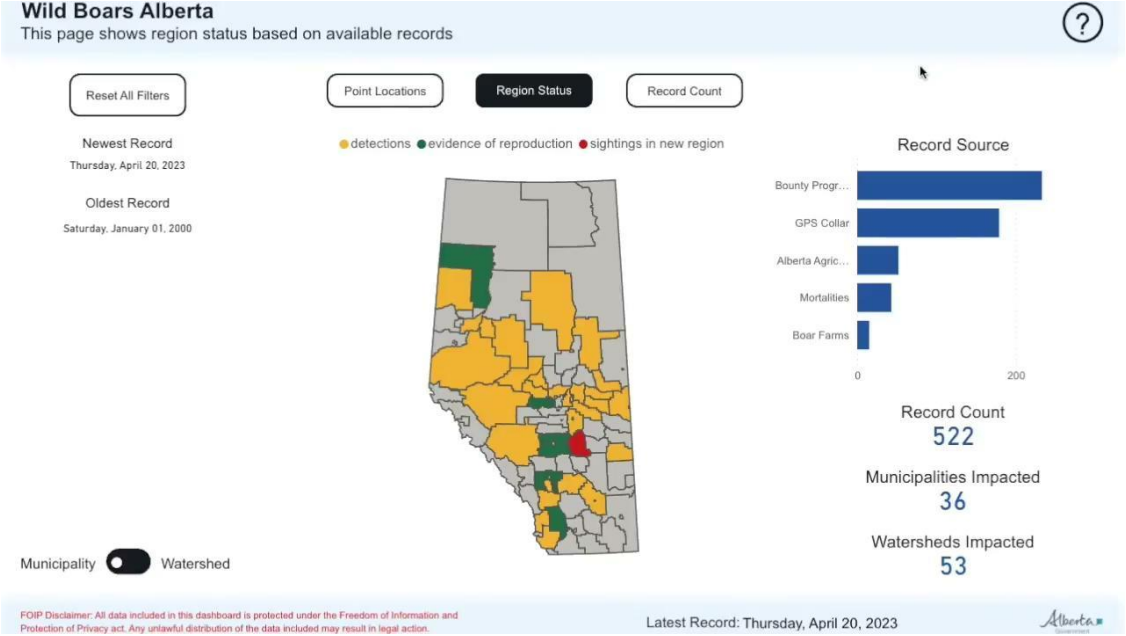
Solutions - Road Condition Detection

Analyzing road conditions from vehicle mounted cameras



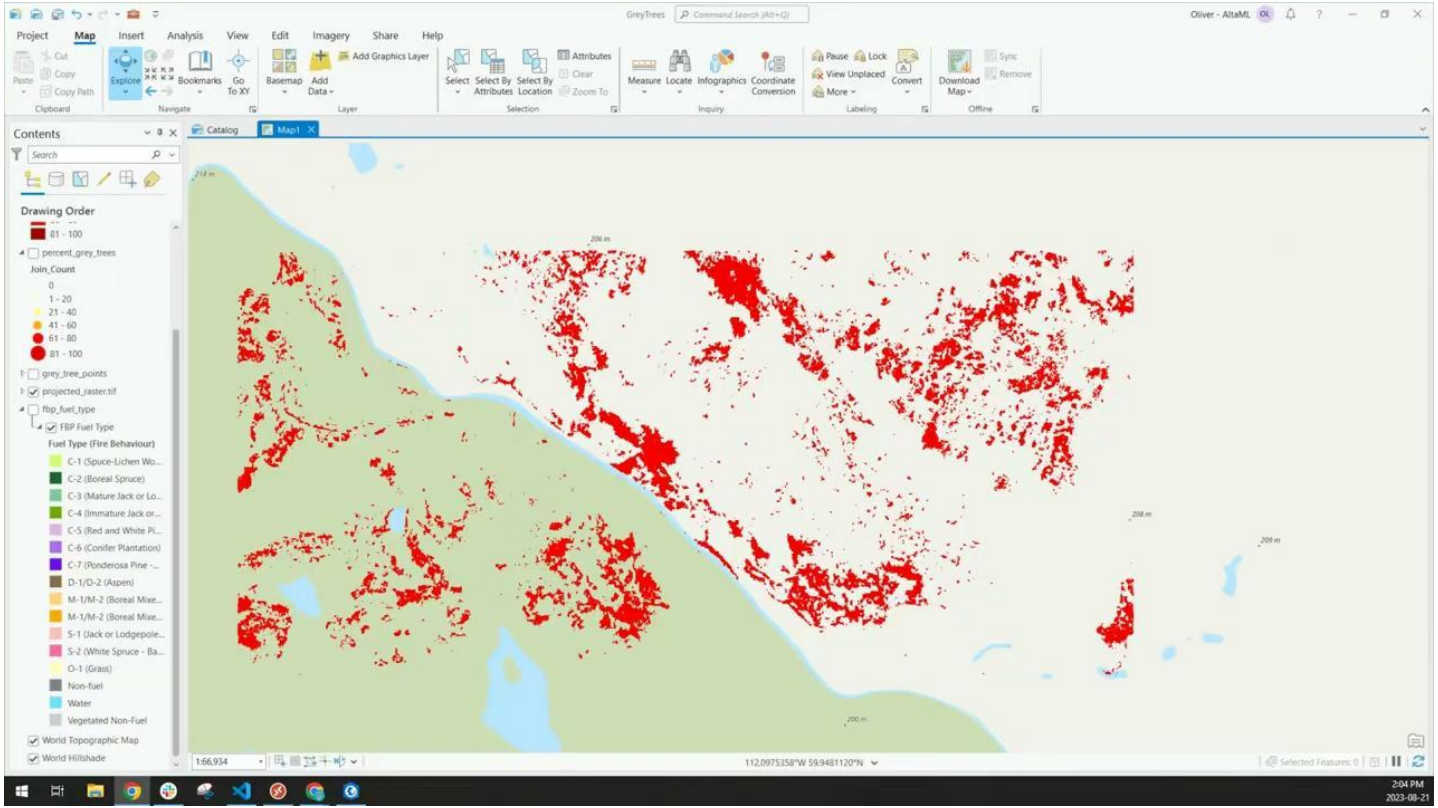
Solutions - Wild Boar Detection

Visualizing Wild Boar Reports throughout the Province of Alberta



Solutions - Grey Tree Detection

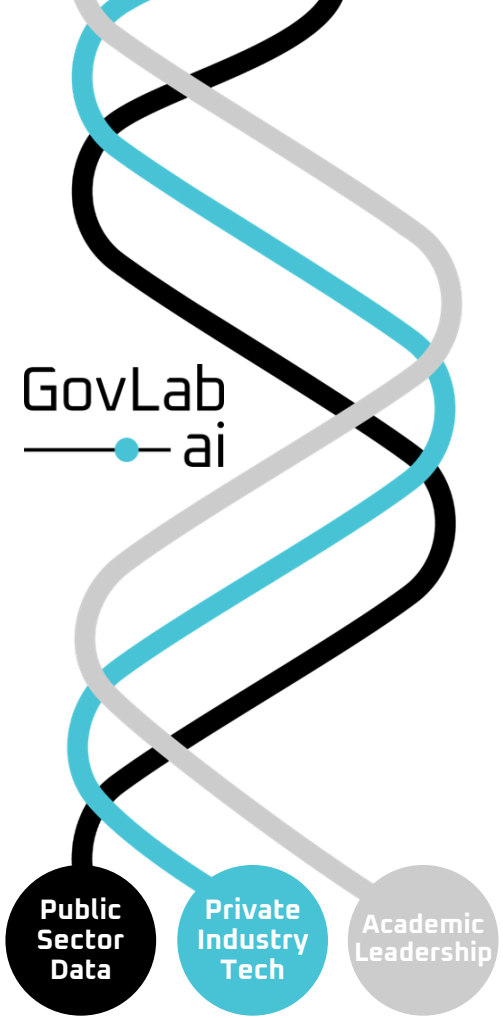
Identifying where dead tree are located



Unlocking Innovation Through Technology and Data

"GovLab.ai has opened my eyes to the many possibilities of using Wildfire data and AI to help solve long standing complex problems."

- Ed Trenchard, Wildfire Management Specialist, Alberta Wildfire Management Branch



Questions & Discussion

Contact:

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chantal.ritcey@altaml.com
GovLab.ai

Compliance: The Oversight of Content Management, Access and Privacy

Compliance
Privacy, Policy and Governance Branch
Data, Privacy and Innovation Division
Technology and Innovation

IM Aware on September 12, 2023

Alberta

Government of Alberta policy sets out requirements for managing content, access and privacy.

By monitoring adherence to these requirements, government transparency and accountability and compliance with legislation can improve and potential risks can be identified and addressed.

What is Compliance?

A METHOD FOR ASSESSING RISK

OVERSIGHT OF STAFF UNDERSTANDING OF LEGISLATION AND POLICY

MEASUREMENT OF MATURITY IN COMPLYING WITH LEGISLATION AND POLICY

FOCUS ON MONITORING AND AWARENESS

EACH STAFF MEMBER RESPONSIBLE FOR COMPLIANCE

Context for the Compliance Program

- GoA digital transformation and integration
- Government accountability
- Strengthened federal and international privacy legislation
- Increased data sharing and Artificial Intelligence use of data
- Changing public expectations from government
- Recommendations of the Office of the Information and Privacy Commissioner (OIPC) (2016, 2019)
- Other jurisdictions use maturity assessment models and continuous improvement cycles

Authorities Used by Compliance

Content Management	Privacy	Access to Information
• *Freedom of Information and Protection of Privacy (FOIP) Act* • Records Management Regulation • ISO Standards/ Canadian General Standards Board 72.34 Electronic Records as Documentary Evidence	• FOIP Act	• FOIP Act

DATA, INFORMATION MANAGEMENT, ACCESS TO INFORMATION AND PRIVACY COMPLIANCE PROGRAM

VISION

Responsible management of all records, data and information, in the custody and control of Government of Alberta departments, through the identification and mitigation of risks that could interfere with enterprise content management requirements and policy instruments.

AUTHORITIES

- *Freedom of Information and Protection of Privacy Act*
- Information Management and Technology Policy Instruments
- Records Management Regulation
- ISO Standards

OUTCOMES

- Improved compliance
- Excellence in Divisional program delivery
- Improved collaboration between program areas
- Identification of policy instrument gaps
- Identification and mitigation of risks to the GoA

KEY PERFORMANCE INDICATORS

- Reduction in number of breaches of personal information
- Increased awareness of legislative/policy obligations
- Improved management of content
- Improved maturity of programs

SUPPORT STRUCTURES

- Integrated Risk Management
- Technology & Communications
- Communities of Practice, Training and Awareness Programs
- Partnerships and support within Government

Compliance Unit

- Consists of a Manager and two Senior Compliance Analysts
- Developed tools for assessing compliance in the management of content (data and information), privacy and access to information

The Pilot Survey

Pilot Survey

- Questions were developed to test staff understanding of related policies and practices.
- The responses to the questions were tabulated and set against other data sets to develop a maturity level assessment for each group of questions.
- An anonymizing online survey tool was used.

Calculating Maturity Levels

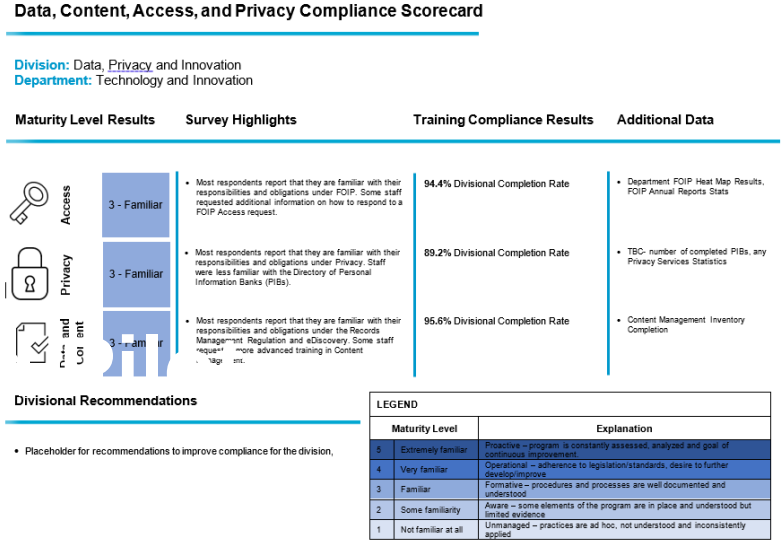
Data & Information Management	Privacy	Access to Information
• Survey Answers • Content Inventories • Training Statistics • Updated Records Schedules	• Survey Answers • Privacy Services Statistics • FOIP Annual Report Statistics • Training Statistics	• Survey Answers • Current PIBs • FOIP Heat Map • FOIP Annual Report Statistics • OIPC Reports • Training Statistics

Maturity Levels

Level	Explanation	Maturity Level
5	Extremely familiar	Level 5: Proactive. Program is constantly assessed, analyzed and goal of continuous improvement.
4	Very familiar	Level 4: Operational. Adherence to legislation/standards, desire to further develop/improve the program.
3	Familiar	Level 3: Formative. Procedures and processes are well documented.
2	Some familiarity	Level 2: Aware. Some elements of the program are in place, but limited evidence.
1	Not familiar at all	Level 1: Unmanaged. Practices are ad hoc and inconsistently applied

Reporting

- Survey Results Summary
- Scorecard
- Key insights & Recommendations for improvement



Data, Content, Access, and Privacy Compliance Scorecard

Division: Data, Privacy and Innovation
Department: Technology and Innovation

Maturity Level Results	Survey Highlights	Training Compliance Results	Additional Data
Access — 3 - Familiar	• Most respondents report that they are familiar with their responsibilities and obligations under FOIP. Some staff requested additional information on how to respond to a FOIP Access request.	**94.4%** Divisional Completion Rate	• Department FOIP Heat Map Results, FOIP Annual Reports Stats
Privacy — 3 - Familiar	• Most respondents report that they are familiar with their responsibilities and obligations under Privacy. Staff were less familiar with the Directory of Personal Information Banks (PIBs).	**89.2%** Divisional Completion Rate	• TBC- number of completed PIBs, any Privacy Services Statistics
Data and Content — 3 - Familiar	• Most respondents report that they are familiar with their responsibilities and obligations under the Records Management, Regulation and eDiscovery. Some staff requested more advanced training in Content Management.	**95.6%** Divisional Completion Rate	• Content Management Inventory Completion

Divisional Recommendations

- Placeholder for recommendations to improve compliance for the division,

LEGEND

Maturity Level		Explanation
5	Extremely familiar	Proactive – program is constantly assessed, analyzed and goal of continuous improvement.
4	Very familiar	Operational – adherence to legislation/standards, desire to further develop/improve
3	Familiar	Formative – procedures and processes are well documented and understood
2	Some familiarity	Aware – some elements of the program are in place and understood but limited evidence
1	Not familiar at all	Unmanaged – practices are ad hoc, not understood and inconsistently applied

Key Insights

- A high degree of understanding of the requirements for FOIP access, privacy, and the management of content
- Requests for more training
- Better policies and procedures would be appreciated

Next Steps

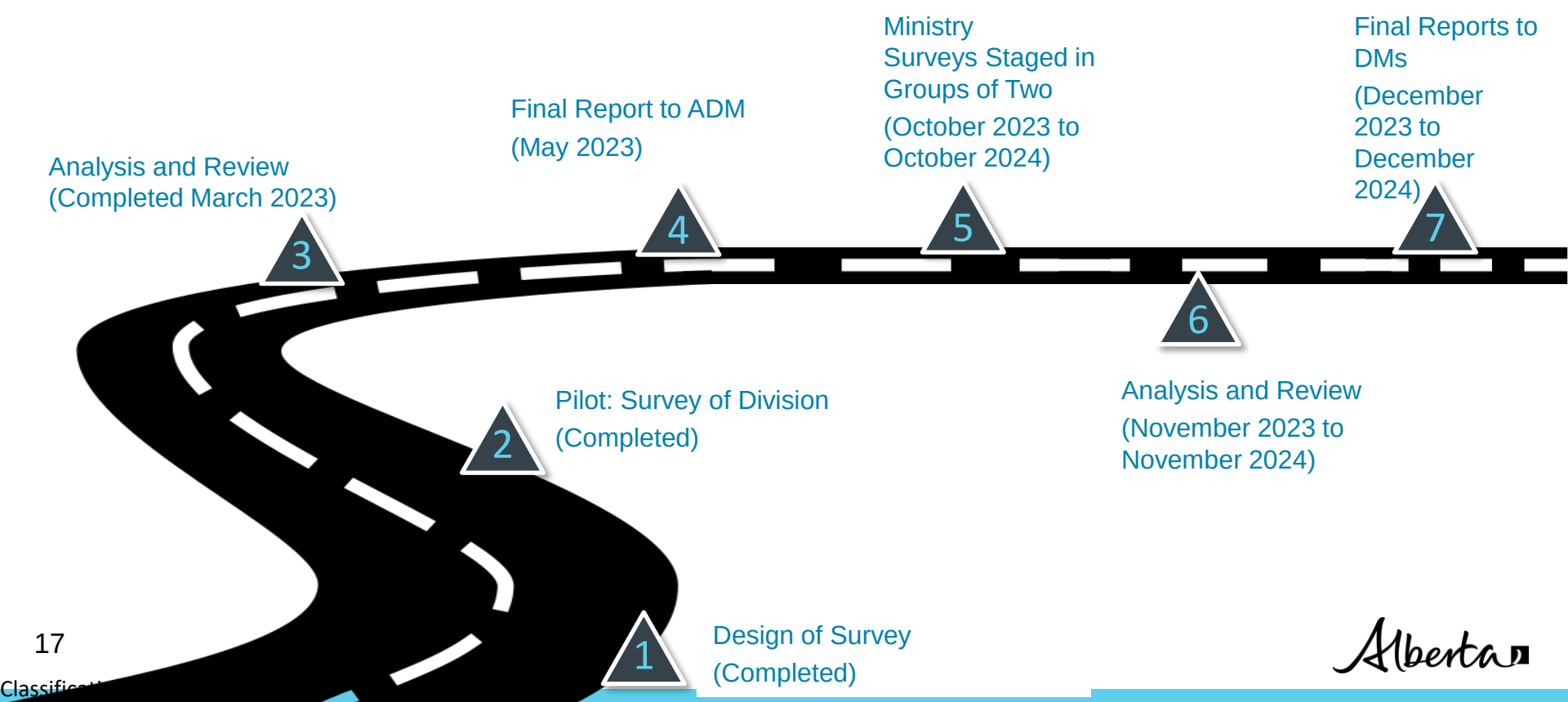
Next Steps

- Conduct a General Survey of employees in each ministry
  - Report on findings to the ARMC, ADM IMT Committee and DM Council
- Conduct a compliance program review
- Work with other compliance teams in the GoA

General Survey Considerations

- Any survey of employee knowledge of policy requirements must be unobtrusive and clearly written.
- The survey should take no more than 20 minutes to complete.
- The survey responders must be confident of anonymity.
- The survey should provide a baseline measurements that can be refined by later compliance monitoring.
- The survey results aid in assessing the level of maturity of compliance of each department with policy requirements.
- Stakeholders are identified (DM Council, PSC, CPE, etc.)

2023-2024 Compliance Survey Roadmap



Future Program Reviews

- Over the next three years (2023 to 2025) Compliance will conduct reviews of corporate content management, privacy and access programs
- Each review will assess
  - Current policy in light of interviews and best practices
  - Training materials
- Make recommendations to mitigate risks

Contacts

- Compliance goa.compliance@gov.ab.ca
- Privacy privacy@gov.ab.ca
- Cybersecurity goa.cybersecurity@gov.ab.ca
- IM Programs **Advice and Consultation Service Request Form**

Questions?

IM Aware

RPA, GovLab.ai, and Compliance

Thanks for tuning in.

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