RESEARCH INNOVATION COUNCIL

# AI in Motion: Alberta's Public Sector Embraces Intelligent Transformation

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## Executive Summary

Alberta's public sector is at a pivotal moment in AI adoption, moving from proof-of-concept to operational deployment while addressing data governance, regulatory frameworks, and organizational change.

AI is proving valuable in unexpected ways. One participant described how AI identified 70 pieces of regulatory red tape that had been miscounted for years. Another shared how AI reduced days of manual work to a single afternoon. AI excels at surfacing inconsistencies and enabling precision where in some cases, human interpretation has created drift.

Participants envision contact centers where "the customer shouldn't need to know what programs we have - they can come to us with who you are, and we tell you what programs can help you." This reflects using AI to break down policy silos without decades of traditional crosswalk-building. Yet alongside this enthusiasm sits healthy skepticism about privacy, the need for human-in-the-loop design, and recognition that "we've created craftsmen around our legacy technology" facing uncertain transition.

Transforming with confidence means acknowledging that both the cost reductions AI enables and the three-month learning curve before practitioners experiences their "second light bulb" moment. It means recognizing that "AI is not the tool for everything - it's an enablement tool" and building enabling governance frameworks that let Alberta innovate while protecting citizens.

By Mikaela Hogg, Community Director, Public Sector Network

## Key Themes and Insights

**Contact Center Evolution Beyond Automation**
AI is transforming contact centers from triage mechanisms into intelligent service hubs that provide standardized responses, cross-program navigation, and 24/7 accessibility. As one participant noted, "AI is going to have crosswalks between various programs," enabling citizens to access services without needing to understand complex program architectures or ministry boundaries.

**The Standardization Imperative**
Participants identified language and terminology standardization as more critical than legislative harmonization. "There's like 10 different definitions of grant in government," one leader observed. AI's effectiveness depends on consistent vocabulary across programs, even when policy frameworks remain distinct. This represents a fundamental shift from structural reform to semantic clarity.

**Human-in-the-Loop as Design Principle**
While AI can handle routine inquiries efficiently, participants emphasized the continued need for human interaction, particularly for culturally sensitive matters and complex situations. "There are going to be some citizens that want that human touch," a participant noted, highlighting how AI should **enhance rather than replace** human judgment in service delivery contexts that require empathy and nuance.

**Data Quality and Communication Clarity**
Projects like the interprovincial trucking hub revealed how AI surfaces communication gaps in existing systems. "When AI scraped it and put it all together, it turned into something that wasn't quite working," one participant explained, demonstrating how AI implementation forces organizations to confront imprecise language and inconsistent data structures that humans had previously overlooked or tolerated.

**Cost Transformation at Scale**
Leaders reported producing "equivalent technological products for 1% of the cost" compared to traditional development approaches. This dramatic efficiency gain creates both opportunity and obligation: under the Financial Administration Act, public servants have a responsibility to adopt cost-effective solutions, making AI adoption not just permissible but potentially mandatory where appropriate.

**Governance as Enablement Framework**
Rather than viewing governance as a constraint, participants discussed building enterprise Application Programming Interface (API) gateways that screen for Personally Identifiable Information (PII) before data touches external systems, updating AI policies annually, and establishing cross-ministry COO panels. As one senior leader stated, governance must address "how and when you must use AI," not just when you may use it.

## Challenges and Barriers

### Privacy Legislation Lagging Behind Analytics Capabilities

Traditional privacy frameworks require specifying exact data usage and analytical questions upfront - an approach fundamentally incompatible with advanced analytics where "you create the question by exploring the data patterns." Health information legislation and similar frameworks have struggled to adapt since the emergence of machine learning, and large language models have only deepened this gap. Participants noted that registries containing highly sensitive citizen data present specific challenges, where the potential for insight must be carefully balanced against privacy obligations, and the risk of re-identification or unauthorized inference.

### Legacy System Complexity and Technical Debt

Decades of incremental application development have created "giant monolith systems that aren't supported anymore" alongside proliferating smaller applications. One participant described collision data that couldn't be properly plotted because "legacy technology didn't actually have the right data." This technical debt isn't easily resolved by AI alone - it requires fundamental decisions about system architecture, data migration, and whether intricate processes need their complexity or have simply accumulated it over time through organizational apathy.

### Workforce Readiness and Change Resistance

Leaders described their teams splitting roughly into thirds: 30% energized and experimenting actively, 30% tentatively engaged with tools like Copilot, and 30% "really worried that they don't understand it or don't know how to use it." Long-tenured staff also face challenges. As one leader observed, "we've created craftsmen around our legacy technology," and these artisans now confront an uncertain future requiring not just new skills, but fundamentally different mental models of their work.

### Cross-Ministry Siloing and Territorial Mindsets

Ministerial mandates and operational pressures create barriers to holistic thinking. While AI offers new tools to bridge silos without years of policy harmonization work, territorial dynamics and competing priorities continue to fragment efforts. The challenge isn't inherently AI-related but represents a persistent organizational barrier that AI might help address if governance structures support cross-ministry coordination.

### Ambiguous Regulatory Environment Creating Risk

Without AI-specific regulation, organizations must apply existing frameworks like PIPA (Personal Information Protection Act) that weren't designed for AI contexts. "You risk a regulation change that shuts down the project," one participant cautioned. The need to provide data processing disclosures, the ambiguity around what constitutes acceptable use, and uncertainty about data flows all create compliance challenges. Additionally, constitutional separations - such as between courts and executive government layer additional complexity where "no one has an answer" about whether certain AI applications are permissible.

### Training Time Commitment and Operational Demands

While the Government of Alberta AI Academy training proved highly effective, it requires staff to dedicate two weeks to the program, creating operational strain. "Operationally it's been challenging to commit that much time," one leader noted. The challenge intensifies because AI literacy requires more than learning button locations; it demands "rewiring your expectations about technology" through sustained engagement over months. As one attendee explained, "it takes a minimum of three months of continual heavy use before even the second light bulb goes on," creating tension between immediate operational needs and long-term capability development.

## Future Focus Areas

**Enterprise AI Gateway and PII Screening**
Alberta is implementing a government-wide API gateway that screens for personally identifiable information before data reaches external AI systems. This technological guardrail enables broader experimentation while maintaining privacy protections, creating an accountability layer that tracks usage patterns and ensures transparency in AI applications across ministries.

**Single-Point-of-Entry Service Model**
Moving toward a unified government contact approach where citizens describe their situation rather than navigate program structures. This vision requires AI to understand cross-program eligibility and create dynamic pathways based on individual circumstances, fundamentally inverting the traditional service delivery model from program-centric to citizen-centric.

**Executive-Level AI Literacy Programs**
Leaders requested executive training to support staff returning from the AI Academy, enabling better use case development and internal dissemination. This recognizes that effective AI adoption requires leadership who understand both possibilities and limitations, can set appropriate expectations, and create organizational conditions for experimentation and learning.

**Cross-Ministry COO Coordination**
A dozen ministries have established Chief Operating Officer roles tasked with overseeing major initiatives like contact center modernization from a whole-of-government perspective. This structure aims to break down silos and ensure solutions address systemic challenges rather than creating fragmented, ministry-specific approaches that fail to serve citizens holistically.

**University-Government AI Partnerships**
Leveraging the University of Alberta's world-leading AI research capabilities, data center infrastructure, and student talent pool to address real-world government challenges. These partnerships offer consulting expertise, continuing education pathways, and access to researchers and students who are "AI literate as opposed to the rest of us who have to get there," providing fresh perspectives unencumbered by legacy assumptions.

**Provincial Data Center Strategy**
While cloud providers are establishing Alberta data centers, they haven't reached maturity for complex analytics workloads. The focus is on building or accessing infrastructure that keeps sensitive government data within provincial boundaries while providing the computational power necessary for advanced AI applications, balancing sovereignty concerns with technical capability requirements.

## Strategic Outcomes and Recommendations

### Immediate Action

- **Deploy enterprise AI gateway with PII screening:** Implement technological guardrails that enable experimentation while protecting privacy.
- **Establish terminology standardization working group:** Create common vocabulary for frequently used terms like "grant," "benefit," and "service".
- **Scale the AI Academy with dedicated backfill funding:** Expand training capacity while providing budget for staff coverage.

### Medium-Term Goals

- **Develop AI-specific privacy assessment framework:** Work with privacy commissioners to create evaluation criteria appropriate for AI systems.
- **Implement cross-ministry data governance council:** Establish forum for resolving data sharing, standardization, and access questions.
- **Create AI literacy requirements for leadership roles:** Make basic AI understanding a competency for executive positions.

### Long-Term Goals

- **Transform service delivery to citizen-centric model:** Complete transition from program-based to needs-based service architecture.
- **Establish Alberta as AI governance exemplar:** Develop mature governance framework that enables rapid innovation while maintaining rigorous privacy protection.
- **Build AI-native workforce capability:** Shift from teaching existing staff to use AI toward recruiting and developing talent for whom AI fluency is foundational.

PUBLIC SECTOR NETWORK

## About Public Sector Network

Public Sector Network is a research company that represents public sector professionals across Australia, Canada, New Zealand, and the USA. It develops roundtables, seminars, and conferences to suit current areas of interest to government agencies and their suppliers.

PSN's growing community spans across federal, state, and local government departments, healthcare, and education, allowing members to share information, access the latest in government innovation, and engage with other like-minded individuals on a secure and closed-door network.

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