



AI 101 for Municipal Leaders

A Practical Introduction for City Council

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Why AI? Why Now?

AI is moving from experimentation to core operations within all organizations

At a Municipal level –



Residents expect faster, more accessible digital services



Cities face growing complexity with limited resources



AI – Explained in Plain Language



Artificial Intelligence (AI) enables machines to perform tasks that typically require human intelligence



Understanding
language



Recognizing
patterns



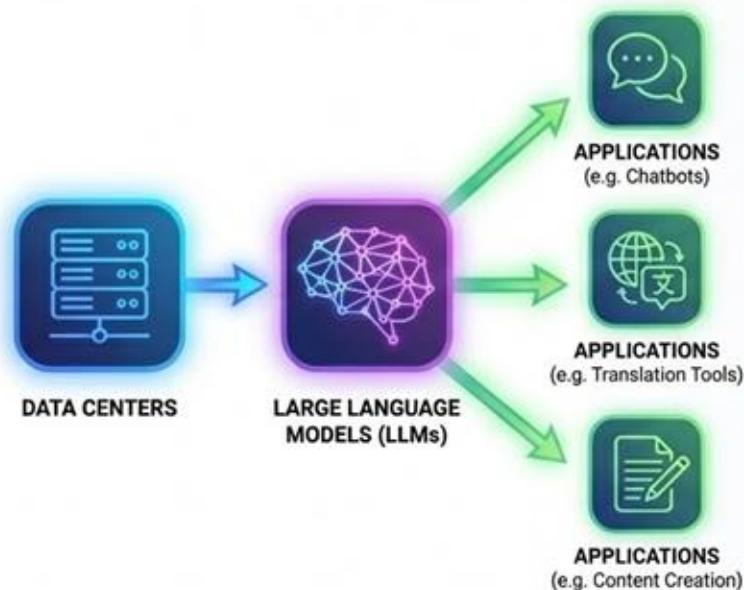
Making
predictions



Learning
from data

AI supports decisions (or decision-making), yet it does not replace human judgement – the human remains accountable

How AI Works



Data centers: The Bedrock

- Massive infrastructure, the "library" of information, training ground



Large Language Models: The Brain

- A mathematical representation of patterns, the "engine" to use data from the "library"



Applications: The Interface

- Tools where AI meets the user, takes the "Brain" and plugs into specific software

Understanding AI's Limits



Not always accurate

Requires human review and validation



Limited by its data

Bias, gaps, and outdated information affects results



Lacks judgement and values

Cannot interpret policy intent or community context



Cannot replace accountability

Responsibility remains with staff and Council



Requires governance and oversight

Clear rules, monitoring, and escalation paths are essential

Common AI Tools for Municipal Use



Generative AI (text & summaries)

Drafts and summarizes reports, briefing notes, and public communications



Knowledge & Search Assistants

Helps staff and councillors quickly find information across policies and bylaws



Predictive & Forecasting Tools

Anticipates services demands, staffing needs, and operational pressures



Pattern Detection & Risk Analysis

Identifies emerging risks in safety, infrastructure, and compliance



Process Automation Tools

Automates routine administrative tasks with human review

AI tools support human decision-making. Accountability remains with Staff and Council

Why AI Matters for Municipalities



Supports smarter, safer, and more efficient city operations

Improves service delivery:
Faster response times and better access for residents



Improves service delivery

Faster response times and better access for residents



Optimizes infrastructure

Better planning, maintenance, and cost management



Enhances public safety

Earlier risk detection and improved situational awareness



Strengthens economic development

Data-informed planning and a more responsive city environment

Where Municipalities Use AI

...and the Value It Delivers

Common Municipal Use Areas



311/Call Centres

Chatbots, request triage, intelligent routing



Planning & Permits

Application intake assistance, document summarization



Transportation

Traffic flow optimization, collision analysis



Emergency Management

Early risk detection and situational awareness



Infrastructure

Inspection prioritization, maintenance forecasting








Administrative Execution

Automates routine administrative tasks with human review

Risks and Realities

Using AI in Municipal Contexts

-  **Accuracy and reliability**
 - AI can generate confidence responses that are incorrect or incomplete and must be reviewed before use
-  **Bias and equity considerations**
 - AI reflects the data it is trained on, which can unintentionally disadvantage certain communities if not carefully managed
-  **Privacy and data protection**
 - Municipal data often includes sensitive or personal information that must be handled in compliance with privacy legislation
-  **Transparency and explainability**
 - Residents and councillors need to understand how AI-supported decisions are made and who is accountable
-  **Operational and vendor risk**
 - Poor implementation, unclear ownership, or vendor lock-in can create long-term operational challenges

Responsible & Ethical Use of AI



Human oversight and accountability

AI supports decisions; people mainly responsible



Privacy and data protection by design

Personal and sensitive data is protected and used appropriately



Fairness, equity, and accessibility

AI systems are evaluated to avoid bias and ensure inclusive access



Transparency and explainability

Use of AI is documented, understandable, and open to scrutiny



Proportionate, risk-based use

Low-risk use cases first, higher-risk applications require stronger controls

What Success Looks Like



Service metrics

Response times,
containment, satisfaction



Productivity metrics

hours saved, cycle time
reduction



Quality metrics

Error and escalation rates



Equity metrics




Accessibility and uptake
across communities

Canadian Municipal Example: Winnipeg




Use Case:

- AI Chatbot pilot on the City of Winnipeg website

What it does:

-  Helps residents find information and service request forms
-  Guides users to the correct department or online resource
-  Supports residents outside normal business hours

Why it matters:

-  Faster access to information
-  Reduced friction in navigating city services
-  Early proof-of-value through a limited pilot approach

Key Takeaway




- Start small, test, and expand based on results

Canadian Municipal Example: Halifax




Use Case:

- AI-enabled wildfire detection pilot

What it does:

-  Uses AI to analyze visual data and detect early signs of wildfire
-  Alerts emergency management teams earlier than traditional methods
-  Support faster situation awareness

Why it matters:

-  Earlier detection reduces risk to residents and infrastructure
-  Supports proactive emergency response
-  Demonstrates AI's role in public safety and resilience

Key Takeaway




- AI support early warning and risk detection, not automated response decisions

Canadian Municipal Example: Toronto

Use Case:

- Responsible use framework for Generative AI

What it does:

-  Provides guidance for staff on appropriate AI use
-  Sets expectations around privacy, transparency, and accountability
-  Clarifies where AI should and should not be used

Why it matters:

-  Enables innovation while managing risk
-  Builds public trust through transparency
-  Establishes clear guardrails before scaling use

Key Takeaway

- Governance enables safe and responsible adoption

AI for Cities: What Matters



1. AI is already in use in Canadian municipalities.

- Cities across Canada are already using it to improve services, safety, and operations



2. AI supports people, it doesn't replace decision-making.

- AI helps staff work more efficiently, but humans remain accountable



3. The highest value uses are practical and low-risk.

- Most municipal AI use today focuses on service delivery, planning, infrastructure, and administrative efficiency - not automated decisions



4. Responsible use depends on governance and oversight.

- With clear policies, risks around accuracy, bias, and transparency are mitigated



5. Start small, measure impact, and scale what works

- Pilots with clear success measures will allow the City to learn, adapt, and stay in control

AI is not about replacing people or judgment — it's about **giving cities better tools to serve residents well, responsibly, and transparently.**



Questions:

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