

2015 Western University Local Government Alumni Conference

***Back to the Future:
Exploring What's Ahead for Local Government***

Panel on “Smart Infrastructure”

**“Building Our Tomorrow:
The Future of Ontario’s Infrastructure”**

Presentation by Michael Fenn

Four Points Sheraton, London ON
November 6, 2015: 1:30PM to 2:30PM

Build the 'right' infrastructure for the future

- *“A good hockey player plays where the puck is. A great hockey player plays where the puck is going to be”. Walter Gretsky, to his son, Wayne.*
- Anticipate “megatrends”
 - Pace and scale of technological change
 - Urbanization, globalization, convergence & connectivity
 - Social and demographic trends – domestic & global
 - Economic and workforce trends
 - Environmental and energy trends
 - Political and fiscal trends

Building our Tomorrow: Future of Ontario's Infrastructure

An Independent Study
Commissioned by



RCCAO
RESIDENTIAL AND
CIVIL
CONSTRUCTION
ALLIANCE OF
ONTARIO
Constructing Ontario's Future

**CELEBRATING 10 YEARS OF
INFRASTRUCTURE ADVOCACY
2005-2015**



**Building Our Tomorrow:
The Future of
Ontario's Infrastructure**
How the impact of megatrends
and rise of new infrastructure
will change the province (and Canada)

Build the 'right' infrastructure for the future

The impacts of 'megatrends'...

- ✓ Distances, elapsed times and scale will all shrink
- ✓ Functions will converge
- ✓ Margins will be squeezed
- ✓ Individual customization will be possible and expected
- ✓ Global impacts will become local impacts
- ✓ Climate change will be accepted, if not always its consequences
- ✓ Demographics will alter society's priorities
- ✓ Consumer-driven urban designs
- ◆ 'Short-term' thinking; impact of NIMBY and BANANA

Build the 'right' infrastructure for the future

- Impacts by sector
 - Transportation –
 - Automation, energy efficiency, high-speed, land-use
 - Light infrastructure
 - Shorter life-cycle, adaptable, innovation in materials and techniques, repurposing, proof-of-concept applications
 - Healthcare and post-secondary
 - In-home applications to chronic disease and distance education
 - Fewer hospitals and college campuses?
 - New infrastructure and past infrastructure
 - The future isn't what it used to be: climate change
- Develop key assumptions
- Linking economic strategy and infrastructure

Funding and financing

- Asset management
 - Targeting investments vs. formulae / deferred maintenance
 - Full-cycle costing / water, wastewater, stormwater
 - User-pay and tolling; metering water
- Public Pension Fund Investments
 - Infrastructure and Government Business Enterprises
 - Teranet and Bruce Power
 - Wellington Co. bridges; Missouri and Pennsylvania bridges
 - OMERS: High-speed rail, British Ports, European utilities
 - Teachers, CPP, OMERS, HOOP, Caisse de Depot
 - Mandate to invest in infrastructure in Canada?

Asset management frameworks



Council Member's Toolkit
 A practical guide to evaluating municipal asset management

Tips for evaluating asset management plans

ONTARIO MUNICIPAL Knowledge Network
 Building Infrastructure to Improve Services
 15 February, 2015

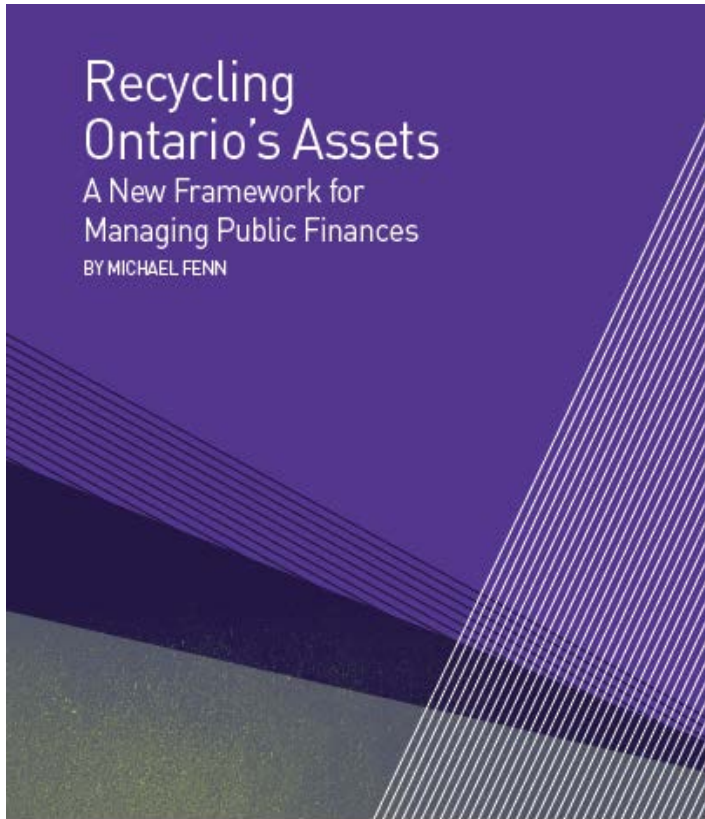
Comprehensive Asset Management Framework



Updated: 10 Feb. 2012

Funding and financing

- Making infrastructure “investment ready”
 - Scale and Bundling
 - Reasonable, risk-adjusted returns
 - ‘Greenfields’ vs. ongoing
 - ‘Pipelines’ of projects & assets / SOP vs. one-offs
- Leveraging ‘legacy’ and current public assets
 - Using your assets: infrastructure banks and trusts
 - Asset recycling policies / programs and P3s
 - Green Bonds, ESR investing, Social Impact Bonds, Community Benefit Agreements



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Constructing Ontario's Future

Unlocking Ontario's Advantages:

Building new infrastructure on the foundation of existing public assets

Thank you!

Smart Infrastructure Panel

Smart Infrastructure Panel

- Moderator: Dan Mathieson, Mayor, City of Stratford

Presenters:

- Ashleigh Weeden – *Communications & Community Engagement*, County of Grey, SWIFT;
- Ron Gordon – Smart + Connected Communities Business Development Manager, Cisco;
- Michael Fenn – President, Fenn Advisory Services & Senior Advisor, StrategyCorp

“Building Our Tomorrow: The Future of Ontario’s Infrastructure – How the impact of megatrends and rise of new infrastructure will change the province (and Canada)”:

http://www.rccao.com/news/files/09_10_futureofinfrastructure.pdf (Media release for Future of Infrastructure report)

http://www.rccao.com/news/files/RCCAO_Future-of-Infrastructure_Sept2015.pdf (Full Report)

<http://www.rccao.com/news/files/sept-appendix-D.pdf> (Appendix ‘D’ – other futurists)

Public Asset Recycling:

http://www.rccao.com/news/files/RCCAO_Infrastructure-Investment-Study_Dec2014.pdf (RCCAO Asset Recycling Study)

<http://mowatcentre.ca/wp-content/uploads/publications/85-recycling-ontarios-assets.pdf> (Mowat Study)

Municipalities at an Inflection Point:

http://munkschool.utoronto.ca/imfg/uploads/275/1560imfg_no.17onlinefullcolourr3final.pdf (Munk Municipal Study)

http://munkschool.utoronto.ca/imfg/uploads/274/imfg_perspectives_6_cote_fenn.pdf (Munk Municipal Study Perspectives Article)

Asset Management in Ontario Municipalities:

<http://www.amo.on.ca/AMO-PDFs/Asset-Management/OMKN-Toolkit-Questions-Municipal-Asset-Management.aspx>

<http://www.amo.on.ca/AMO-PDFs/Asset-Management/OMKN-Toolkit-Tips-Municipal-Asset-Management-2015.aspx>