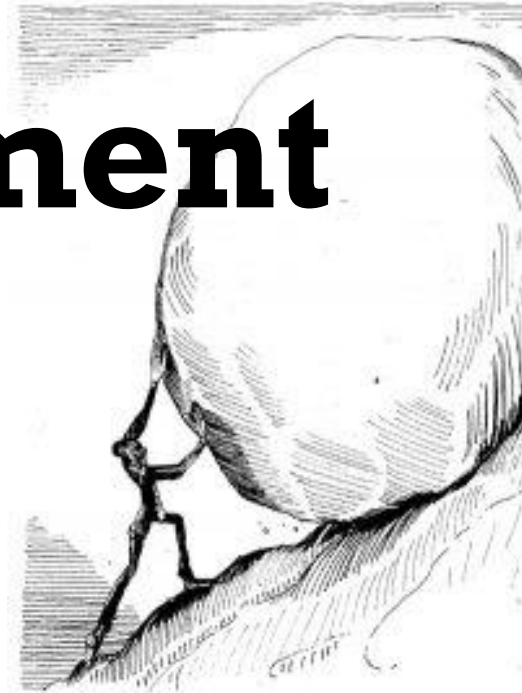


Advancing the Asset Management Plan



MATTHEW DAWE & MATTHEW VAN DOMMELEN OCT 08, 2014

About PSD

Research and Technology

Two Divisions



About PSD

Research and Technology

Research

Monthly publication, *Public Sector Digest*

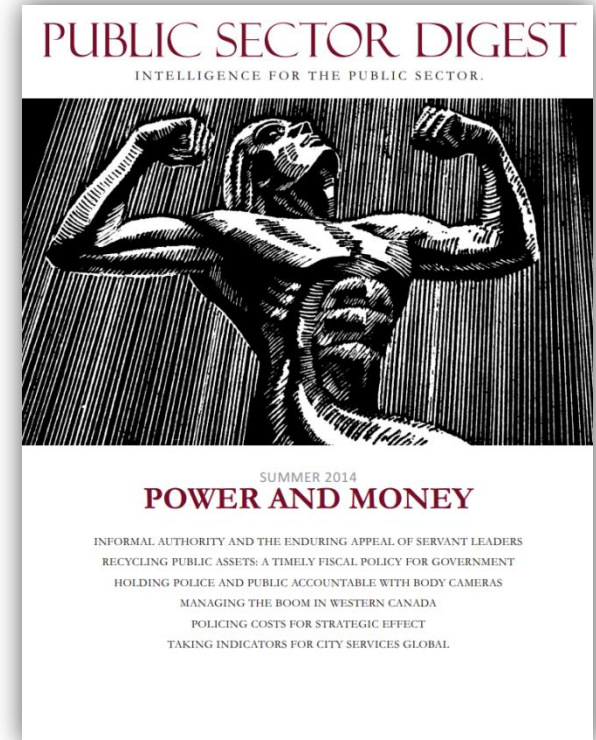
Case studies, white papers

Education & policy analysis

Workshops

Webinars

User groups



About PSD

Research and Technology

Technology

CityWide® Software Solutions

Enterprise-wide AM software

Asset Management Self-Assessment Tool

Basic, Intermediate, Advanced

Asset Management Plans

Consultancy



Agenda

What to expect in this presentation

1. **AMPs in Ontario**
2. **Building your asset management team**
3. **Maximizing the benefits of provincial/federal funding**
4. **Critical Activities Path**
5. **Advancing the Asset Management Plan**
6. **CityWide AMS**

AMPs in Ontario

Our perspective on the process

After 100+ AMPs:

Data integrity

Communication with clients

Education and training



AMPs in Ontario

Data integrity

What worked

1. Greater confidence with Condition versus Financial Age
2. Current Replacement Cost (Tender/per unit) vs CPI
3. Detailed Inventory – With Attributes

Room for Improvement

1. Centralized Repository – Finance/Engineering Data
2. Lifecycle Events/Rehabilitation Strategy
3. Disaggregate data – Pooled for PSAB



AMPs in Ontario

Communication with clients

What worked

1. Departmental Participation
2. Asset Management Position/Role
3. Council or Senior Staff Buy-In

Room for Improvement

1. Understanding an AMP
2. Lack of Time & Resources
3. Levels of Service



AMPs in Ontario

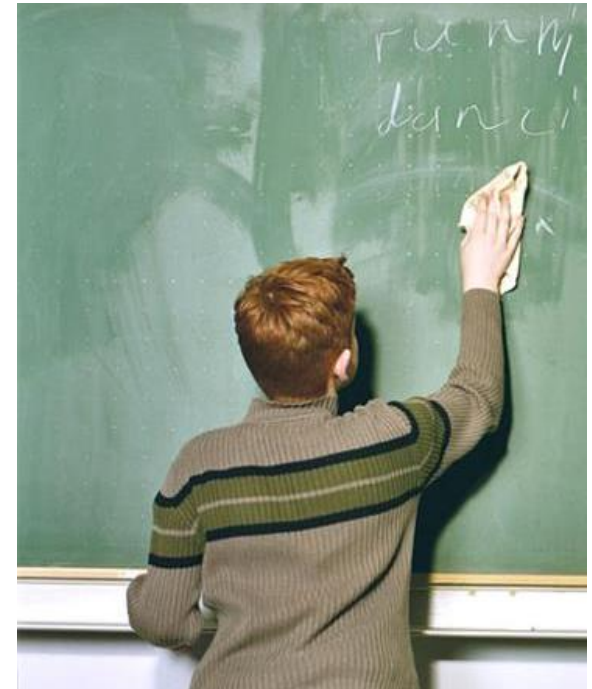
Education and training

What worked

1. Webinars/Training Sessions/Case Studies
2. Departmental Participation
3. CNAM, MFOA, AMO

Room for Improvement

1. Commitment to Asset Management
2. Educating existing and new councils (AMO)
3. Critical Activities Path



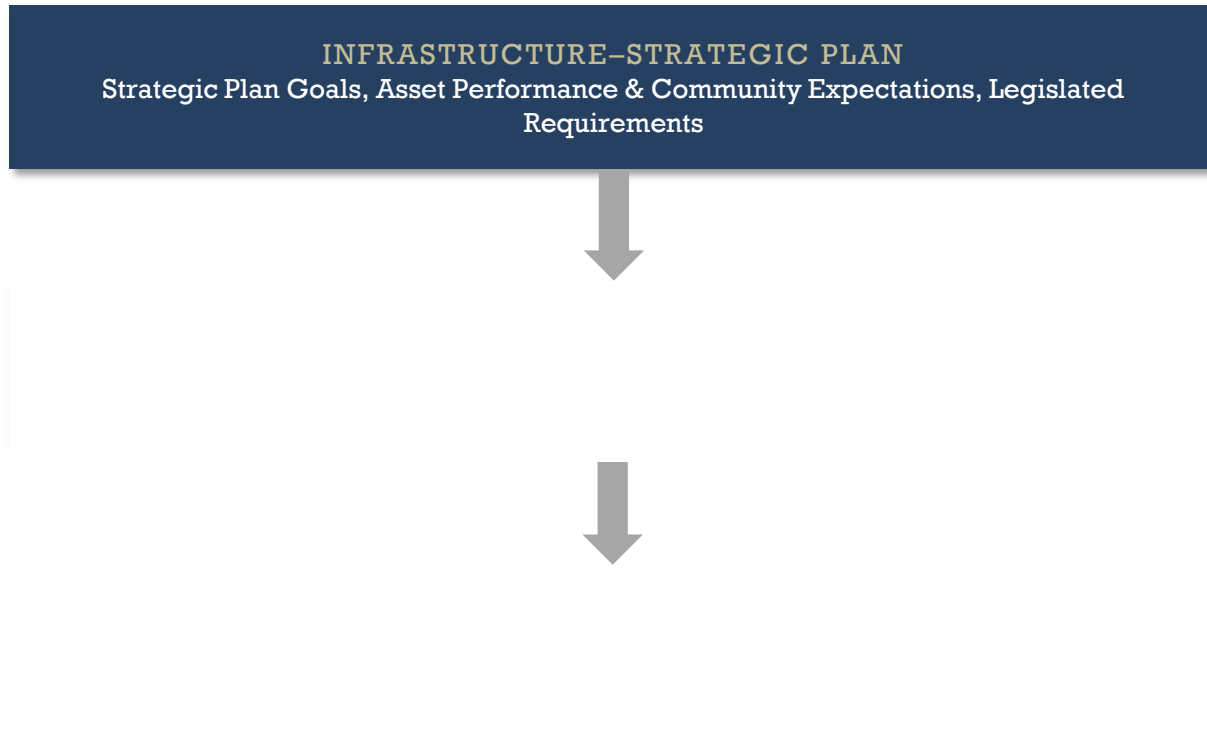
Building the AM Team

Why you need it, and who should be on it



Building the AM Team

Why you need it, and who should be on it



Building the AM Team

Why you need it, and who should be on it



Building the AM Team

Why you need it, and who should be on it

Knowledge and technical expertise

Operational expertise

Skills development

Technology

▶ Video: City of Ryde Council, Australia



Provincial/Federal Funding

A process, not a project; developing the next step...the Critical Activities Path

OCIF/SCF

Comprehensive and current AMP
Permanent and predictable funding

Priorities – Budgeting Annually for...

AM team
AM technologies
Accurate condition of data
Accurate valuations
Additional categories
What to expect

Provincial/Federal Funding

Ontario Community Infrastructure Fund

\$100 million per year

OCIF Formula-based funding (\$50 million)

- Allocation notices arrive by end of Sept 2014 for eligible communities (small, rural, northern)
- Grants flow by March 31, 2015
- Minimum \$25,000 per municipality- formula based on infrastructure index
- Conditions- By December 31, 2014 submit to OMAFRA:
 - Signed contribution agreements
 - A comprehensive up-to-date asset management plan
 - All outstanding reporting obligations from MIII & SRNMIF

Provincial/Federal Funding

A process, not a project; linkage between developing the Critical Activities Path

Assumptions made during PSAB

1. Assumptions during PSAB – Assessed replacement costs vs deflated costs using CPI
2. In-Service Dates - Estimated
3. Pooling of Assets – Versus components



Critical Activities Path

Developing a practical road map

	Asset Management Self-Assessment Tool		
	Basic	Intermediate	Advanced
State of the Infrastructure	✓		
Levels of Service		✓	
Asset Management Strategy	✓		
Financial Strategy		✓	
Organizational Cognizance	✓		

Critical Activities Path

Level of Service						
Strategic Plan (Infrastructure Goals)	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Current Level of Service Analysis	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Legislative and regulatory requirements	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Level of Service framework development	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Overall	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Asset Management Strategy						
Current and future asset performance	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Growth and demand planning	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Risk management	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Prioritization and program optimization	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced
Overall	Basic	Intermediate	Advanced	Basic	Intermediate	Advanced

Critical Activities Path

Levels of Service

Intermediate activity indicators

Performance metrics are defined based on organizational
knowledge and available data
Work order/work flow system

Performance indicators

Strategic
Financial
Tactical
Operational

Performance Indicators (reported annually)

Strategic Indicators

- percentage of total reinvestment compared to asset replacement value
- completion of strategic plan objectives (related to transportation)

Financial Indicators

- annual revenues compared to annual expenditures
- annual replacement value depreciation compared to annual expenditures
- total cost of borrowing compared to total cost of service

Tactical Indicators

- percentage of road network rehabilitated / reconstructed
- overall road condition index as a percentage of desired condition index
- overall bridge condition index as a percentage of desired condition index

Operational Indicators

- percentage of road network inspected within last 5 years
- percentage of bridge / large culvert structures inspected within last two years
- operating costs for paved roads per lane km

Critical Activities Path

Asset Management Strategy

Advanced activity indicators

Growth and Demand

Construction of new infrastructure and/or expansion of existing infrastructure

Project Prioritization

Ranking of each project based on risk, location, coordination with other asset types



Critical Activities Path

Asset Management Strategy

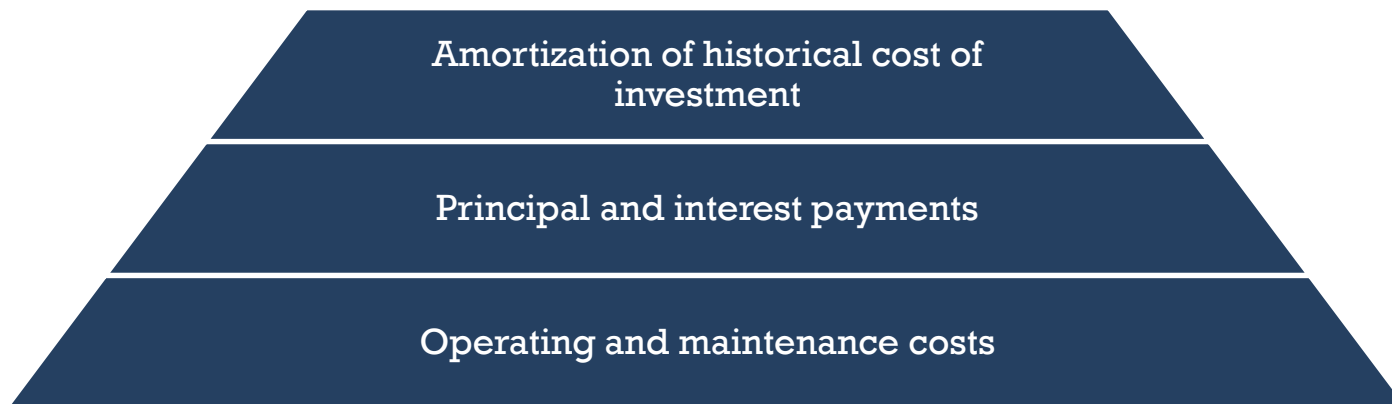
Risk Matrix and Scoring Methodology

Risk = Probability of failure x Consequence of Failure

23 Assets 1,408.570889 units, m \$9,099,325.35	53 Assets 8,169.549072 m \$5,733,890.58	32 Assets 4,859.409632 m \$2,581,023.56	9 Assets 2,208.169858 m \$1,607,440.04	6 Assets 1,064.902005 m \$653,531.31
62 Assets 18,823.675177 m \$15,202,990.21	33 Assets 6,663.539556 units, m \$5,621,615.38	44 Assets 3,078.879551 m \$1,399,601.25	3 Assets 602.460808 m \$474,044.01	9 Assets 1,776.315151 m \$1,018,402.03
285 Assets 77,519.918445 units, m \$24,156,800.90	157 Assets 86,893.000053 units, m \$13,006,618.39	88 Assets 11,229.617174 m \$4,638,619.11	18 Assets 2,460.359528 m \$1,591,378.38	47 Assets 54,267.625658 m \$18,098,022.71
473 Assets 18,835.1383 units, m \$13,819,068.29	317 Assets 13,706.101724 units, m \$8,406,741.25	516 Assets 46,550.167049 m \$23,805,982.41	58 Assets 8,874.352638 m \$5,599,982.65	103 Assets 85,144.028212 m \$29,854,791.96
52 Assets 2,437.665982 units, m \$1,778,524.67	94 Assets 2,599.298009 units, m \$1,491,152.53	110 Assets 5,346.086104 units, m \$3,183,123.30	109 Assets 20,473.230977 units, m \$8,358,806.74	125 Assets 74,200.299339 m \$22,188,182.28

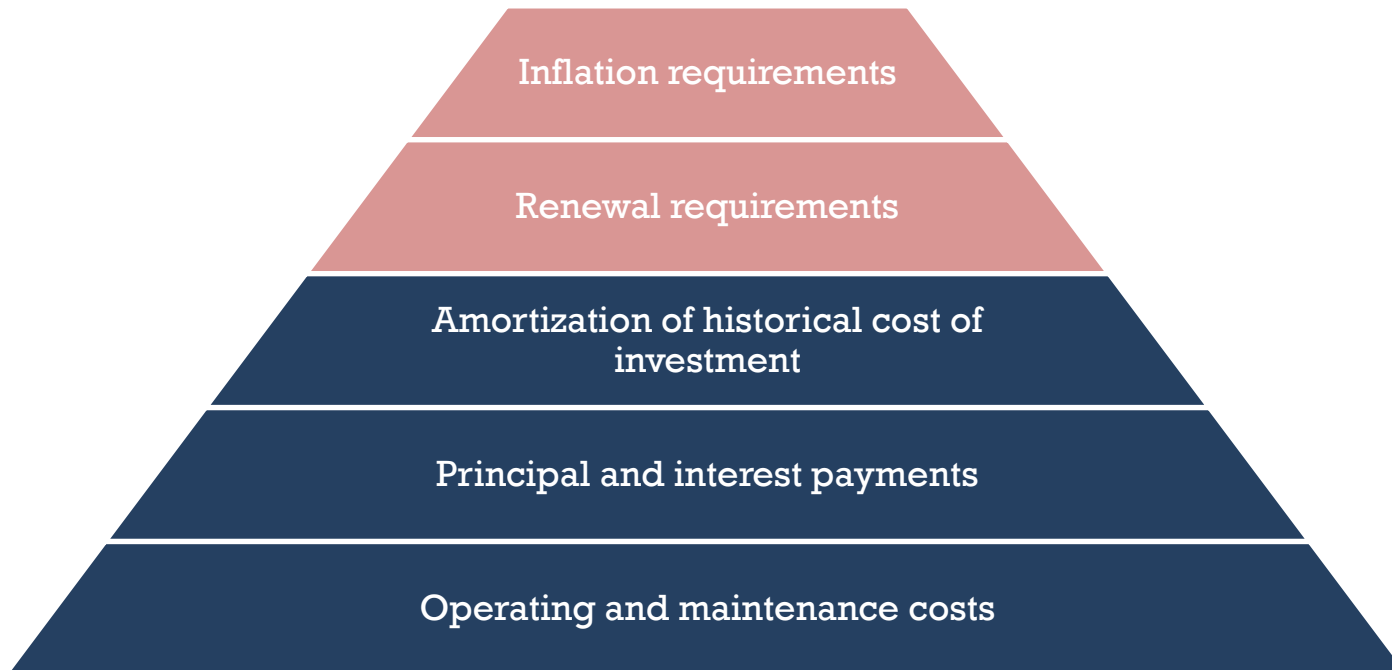
Critical Activities Path

Financial Strategy



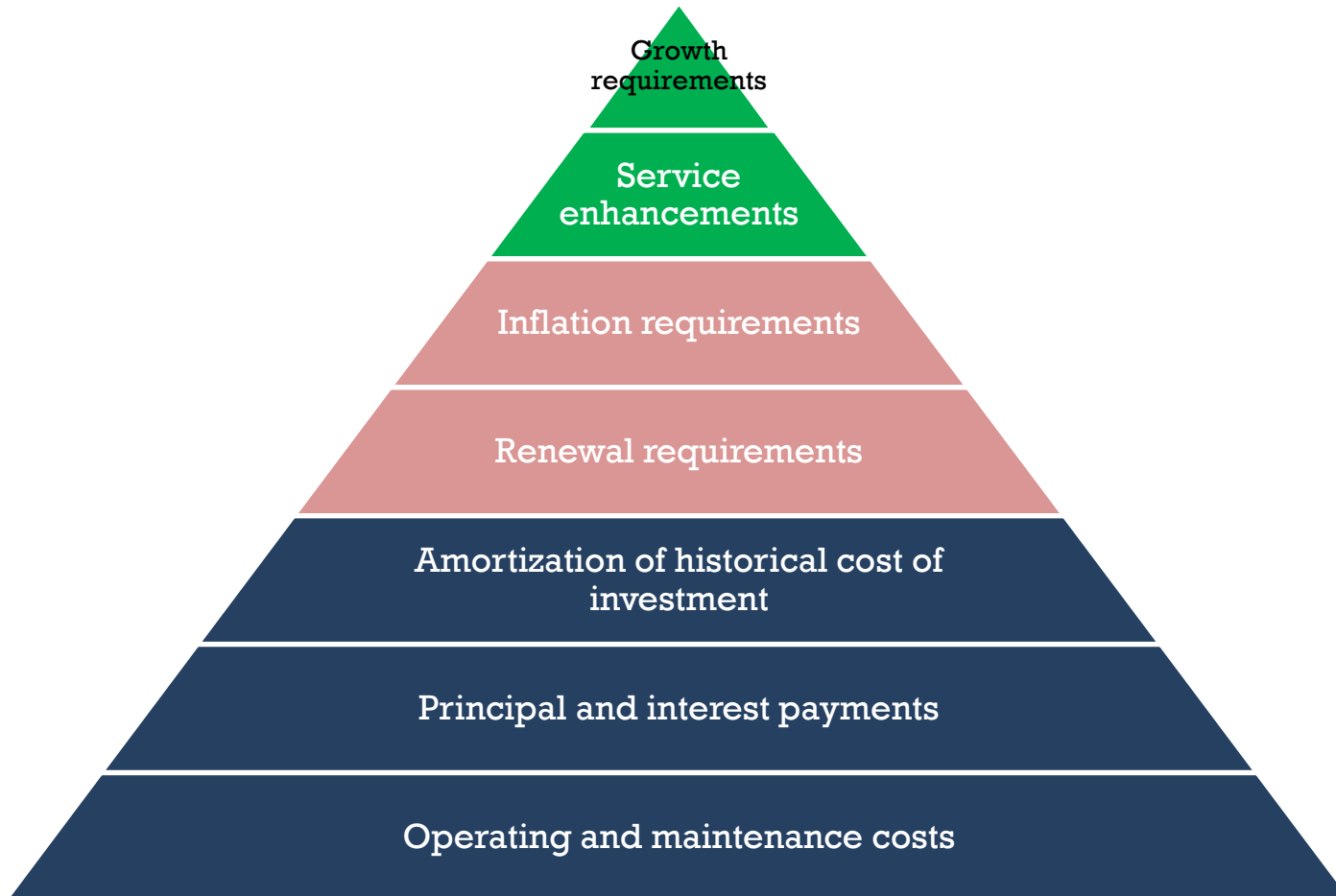
Critical Activities Path

Financial Strategy



Critical Activities Path

Financial Strategy



Critical Activities Path

Summary

Multi-year approach with defined activities

Annual review and multi-year budget

Addition of tools and technologies when appropriate

Using the AMP to maximize available funding opportunities

Performance Measurement and Management

▶ Video: Township of Dorion, Ontario

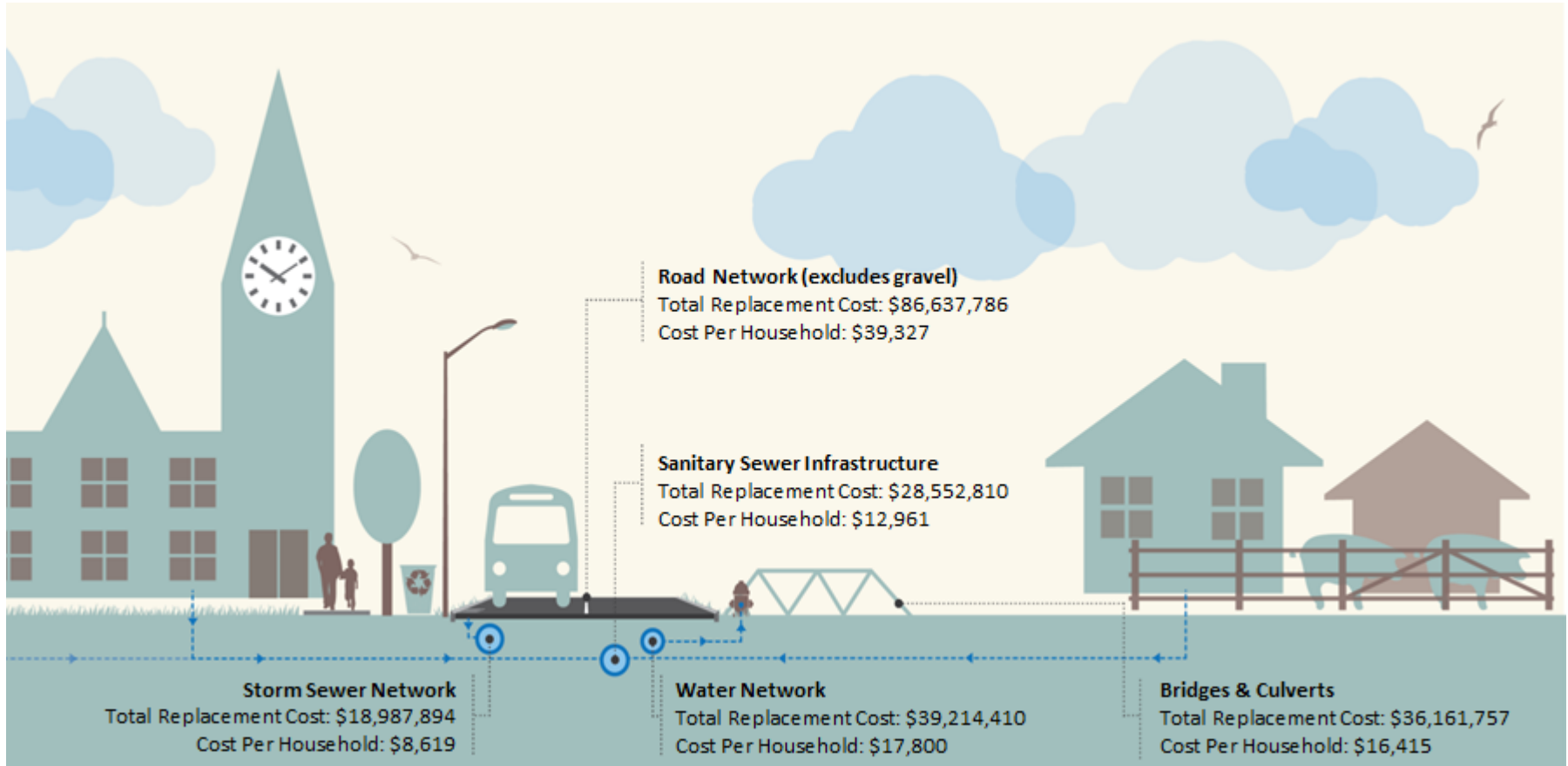
Advancing the AMP

Communication tools

CUMULATIVE GPA		Infrastructure Report Card		
F		The Town		
<ol style="list-style-type: none"> Each asset category was rated on two key, equally weighted (50/50) dimensions: Condition vs. Performance, and Funding vs. Need. See the “<i>What condition is it in?</i>” section for each asset category for its star rating on the Condition vs. Performance dimension. See the “<i>How do we reach sustainability?</i>” section for each asset category for its star rating on the Funding vs. Need dimension. The ‘Overall Rating’ below is the average of the two star ratings converted to a letter grade. 				
Asset category	Condition vs. Performance	Need vs. Funding	Overall grade	Comments
Road Network	D (2.3 Stars)	A (5 Stars)	C+	The majority, 56%, of the municipality’s road section (asphalt), and 76% of its sidewalks, are in poor to critical condition, with the remaining in fair to excellent condition. The average annual revenue required to sustain The Town’s paved road network is approximately \$2,562,000 . Based on The Town’s current annual funding of \$2,562,000 , the municipality is fully funded .
Bridges & Culverts	F (1.1 Stars)	D (1.9 Stars)	F	Six of the seven structures in the municipality’s bridges & culverts portfolio are in poor to critical condition. The average annual revenue required to sustain The Town’s bridges & culverts is \$427,000 . Based on The Town’s current annual funding of \$207,000 , there is an annual deficit of \$220,000 .
Water Network	F (1.9 Stars)	F (0 Stars)	F	Nearly 70% of the municipality’s waterlines are in poor to critical condition. Further, based on replacement value, 100% of the municipality’s only facility assets are in critical condition. The average annual revenue required to sustain The Town’s water network is approximately \$945,000 . Based on The Town’s current annual funding of \$228,000 , there is a deficit of \$717,000 .

Advancing the AMP

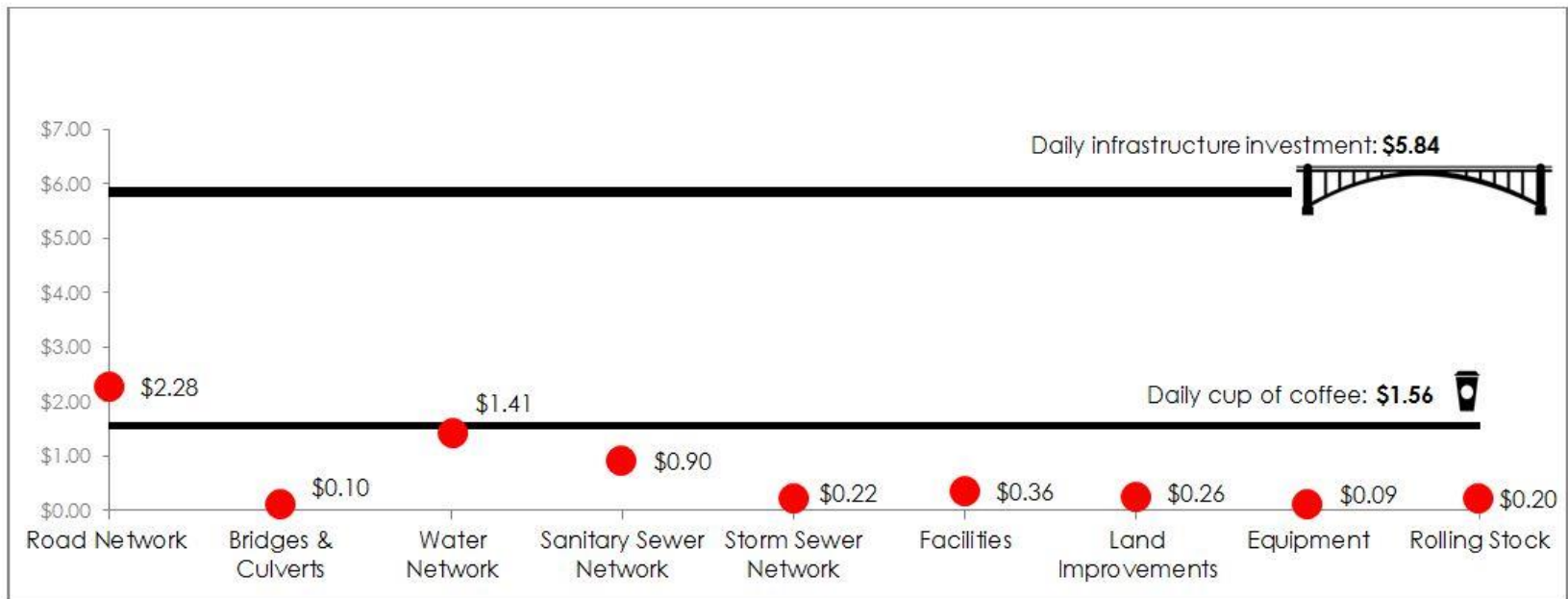
Communication tools



Advancing the AMP

Communication tools

Daily Investment Required Per Household for Infrastructure Sustainability



Q and A

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