

Integrating Infrastructure Costing with Land-Use Planning

LGMA

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Agenda

1. Where are we?
2. How did we get here?
3. Where do we want to be?
4. How do we get there (Use of CLIC Tool)?
5. Questions

Where are we?



Where are we? – Locked In



Image: Aerial View of a Residential Area



Source: Adapted from: Green, T. (2011). Reducing Transportation Airborne Emissions: Critical Transport Policy Options

Where are we?

- * \$200 bil infrastructure deficit (\$13,870/household).
- * 60% of Canada's core public infrastructure is owned and maintained by local governments.
- * Not able to address existing needs.

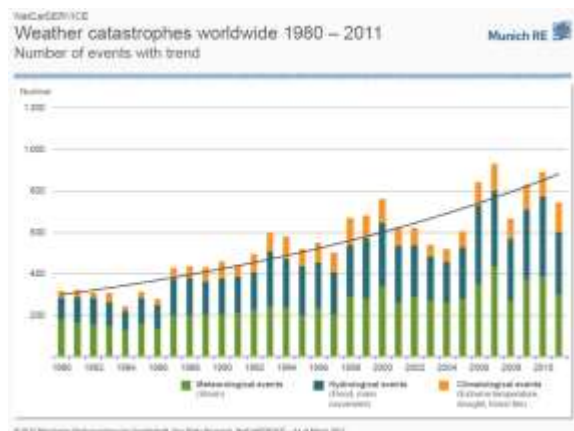


Where are we?

35% of assets in poor condition – Infrastructure Report Card



Where are we?



Status Quo

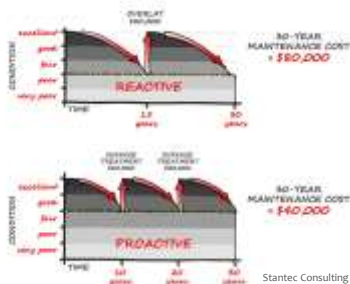
If we are staying on this path.....

- * Increasing infrastructure deficits leading to significant reductions in levels of service and increases in property taxes
- * Inefficient management of local government services
- * Disconnection of organizational priorities from its budget
- * Marginalization of land use planning
- * Increased severity of damage from climate change events

How did we get here?

How did we get there? - Reactive

Waiting until asset fails or requires major renewal



How did we get here? - Siloed

ECON. DEV	• Attracting businesses & people	Huh?
PLANNING	• Population Projections • Land Supply	Nothing to do with me
ENGINEERING	• Servicing Land • Conventional Standards • Operations (and maintenance?) in silos	Told you so
FINANCE	• \$ for new capital costs • \$ for operations (and maintenance?)	With what money??

How did we get here? –Short-term

- Supporting land-use decisions that don't consider comparative or lifecycle infrastructure costs
- Failing to fully recover costs and fees
- Not reporting on infrastructure deficits



Stantec Consulting

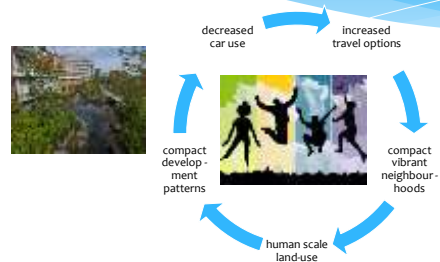
Where do we want to be?

Where do we want to be?

- * Meet sustainability targets, effectively work toward meeting GHG targets, and integrating natural and built environments
- * Efficient, effective, sustainable and resilient service delivery
- * Sustained and improved quality of life, reduced deficits & debt, and attract business and investment



Where Do We Want to Be?– Lock in



How do we get there?

How do we get there?

- * Proactive
- * Long-term
- * Integrated
- * Triple bottom line
- * Lifecycle costing
- * Connect land-use and finance

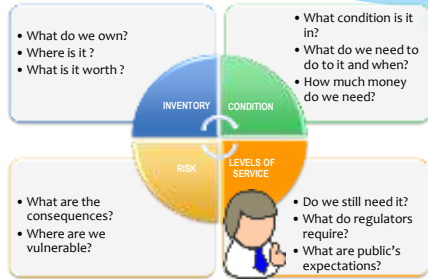


Integrated Process



Asset Management

How do we achieve sustainable service delivery?



Asset Management



Grow Where You Can Afford



"Each time a planning committee or council makes a land use decision without knowing if revenues will support infrastructure life cycle costs, it is gambling on its fiscal health." **InfraGuide**

CLIC - Overview

CLIC COMMUNITY LIFECYCLE INFRASTRUCTURE CENTER TOOL

1. Model Goals and Objectives
2. Identify Funding Sources
3. Identify Revenue Sources
4. Develop Development Scenario Candidates
5. Analyze Financial Viability
6. Conduct Cost-Benefit Assessment
7. User Defined Output Scenario
8. Final Results

Responsible Growth Management

Scenarios

STEP 1: SELECT/CREATE/DELETE SCENARIO

SELECT SCENARIO

Choose the scenario that best reflects the characteristics of the development scenario you wish to explore.

Name / Description Scenario #

Inner Core / Medium Density

If you want to modify the scenario under:

NEW Name / Description

Save NEW Name

If you want to delete the scenario select:

Delete Scenario

Scenario 1 Inner core : High density	Scenario 2 Inner core : Medium density	Scenario 3 Inner suburb : Medium density
Scenario 4 Inner suburb : Low density	Scenario 5 Outer suburb: Medium density	Scenario 6 Outer suburb: Low density



	Low Density	Medium Density
Prop taxes	\$97k/ha	\$113k/ha
User charges	\$33k/ha	\$61k/ha
Tot rev	\$135k/ha	\$182k/ha

Unit Costs & Revenues

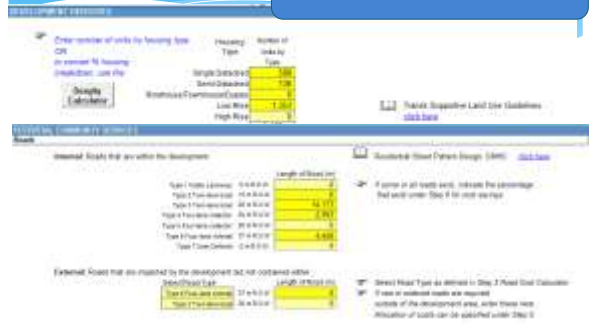


Who Has the Information?

Function	Capital Assets	O & M	Finance	Community Services
Planners	●			●
Engineers	●	●	●	●
Operations		●		●
Recreation	●	●		
Finance	●	●	●	●

Note: Planners often coordinate input from Fire, Police, Schools, etc.

Development Characteristics



Cost Allocation

Cost Savings and Replacement

User Defined Costs

RESULTS

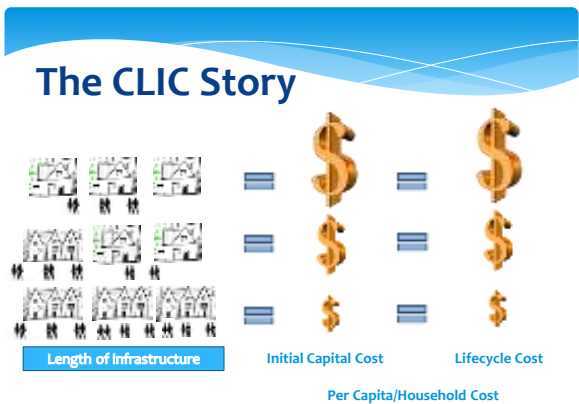
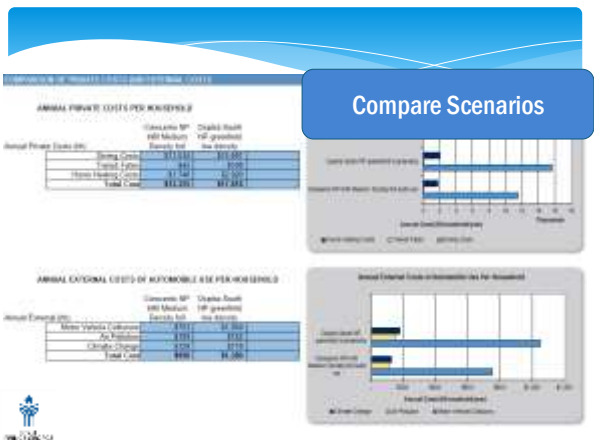
Category	Total	Residual	Percent
General Commitment Summary	\$1,048,750	\$1,242,317	119%
Internal Funds			
General Funds			
Public Water Collection and Treatment	\$1,048,750	\$1,242,317	119%
Public Water Collection	\$2,212,750	\$1,000,000	45%
Public Water Treatment	\$1,236,000	\$1,000,000	81%
Public Water Distribution	\$2,000,000	\$1,000,000	50%
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RESULTS

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Compare Scenarios

Scenario	Total	Residual	Percent
Scenario 1	\$1,048,750	\$1,242,317	119%
Scenario 2	\$1,048,750	\$1,242,317	119%



Nanaimo Priorities

- * Asset management
- * Land use
- * Growth and development

CLIC: An Opportunity for the City

- * Beta test – CLIC tool
- * Inform decision-making process
 - * Asset management
 - * Growth and development



Goals for CLIC - Nanaimo

- * Complete beta-testing to improve the CLIC tool
- * Collect CLIC data on projects in Nanaimo
- * Evaluate the data, incorporate CLIC into decision-making



Coordinated by Development Staff

- * Collected background and baseline data to populate CLIC tool
- * Involved staff from transportation, finance, public works, engineering, subdivision, fire rescue, and police



Voila! The Hawthorne Subdivision

	Year	Openings	Approved	Percent
	Applications	Close	Units	Open
2010-2011	10	10	10	100%
2011-2012	10	10	10	100%
2012-2013	10	10	10	100%
2013-2014	10	10	10	100%
2014-2015	10	10	10	100%
2015-2016	10	10	10	100%
2016-2017	10	10	10	100%
2017-2018	10	10	10	100%
2018-2019	10	10	10	100%
2019-2020	10	10	10	100%
2020-2021	10	10	10	100%
2021-2022	10	10	10	100%
2022-2023	10	10	10	100%
2023-2024	10	10	10	100%
2024-2025	10	10	10	100%
2025-2026	10	10	10	100%
2026-2027	10	10	10	100%
2027-2028	10	10	10	100%
2028-2029	10	10	10	100%
2029-2030	10	10	10	100%
2030-2031	10	10	10	100%
2031-2032	10	10	10	100%
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2092-2093	10	10	10	100%
2093-2094	10	10	10	100%
2094-2095	10	10	10	100%
2095-2096	10	10	10	100%
2096-2097	10	10	10	100%
2097-2098	10	10	10	100%
2098-2099	10	10	10	100%
2099-2100	10	10	10	100%



What We've Learned (So Far)

- * Inter-departmental team not in place to develop CLIC tool
- * Staffing – 4 / 10 involved in program kickoff moved on
- * Asset management – in house, parallel program



Going Forward – CLIC Nanaimo

- * Integrate - people from key departments across the City to participate in a more robust process
- * Share – information widely, regular reporting, in-house education, council
- * Transfer – knowledge to new staff members



Use Financial Tools and Incentives

Revealing:

- * CLIC
- * Asset Management
- * Eco-Asset Management

Next Stage:

- * DCCs
- * RTE
- * User Fees & charges
- * Self funding utilities
- * Local area service tax



Recommendations

- An Interdepartmental team
- Asset Management Plan
- Using CLIC Tool
- Review of policy tools
- Investigating funds and grant opportunities
- Dialogue with residents
- Evaluating natural assets
- Assessing vulnerability of infrastructure to climate change



Acknowledgements

Funding Partners:



Visuals:



OSM Illustration
susanmiley.com

Contacts

Narissa.Chadwick@gov.bc.ca

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References

CLIC and other Tools:

http://www.cscd.gov.bc.ca/lgd/greencommunities/sustainable_development.htm

Asset Management BC:

<http://www.assetmanagementbc.ca/>

Eco-Asset Management: <http://www.gibsons.ca/eco-assets>

PIBC conference materials:

www.SustainabilityMakesCents.com



Questions