



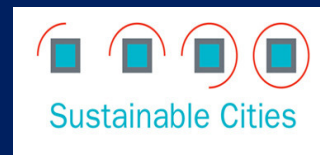
WELCOME to the WEBINAR

Local Government Infrastructure: Towards A Sustainable Future

1:30-3:00pm PDT, October 12th, 2011

Brought to you by:

Ministry of Community, Sport and
Cultural Development



City of
Calgary



Audio information:

-Dial-In Number: 1 877 353 9184

-Conference ID: 2858418

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Visual Information:

Click on "Voice and Video" in the menu bar

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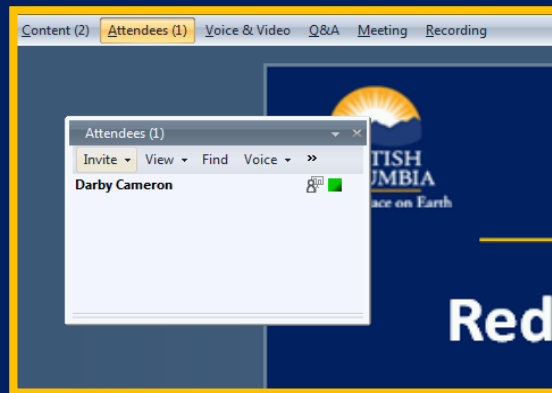
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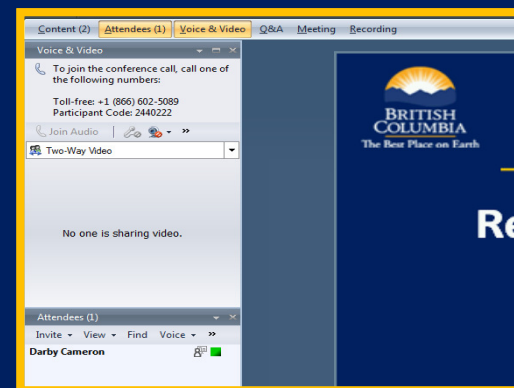
The LiveMeeting Environment

For best viewing, you want to dock the Attendee and Audio & Video panes.

1. Click on the desired Menu option on the top left...



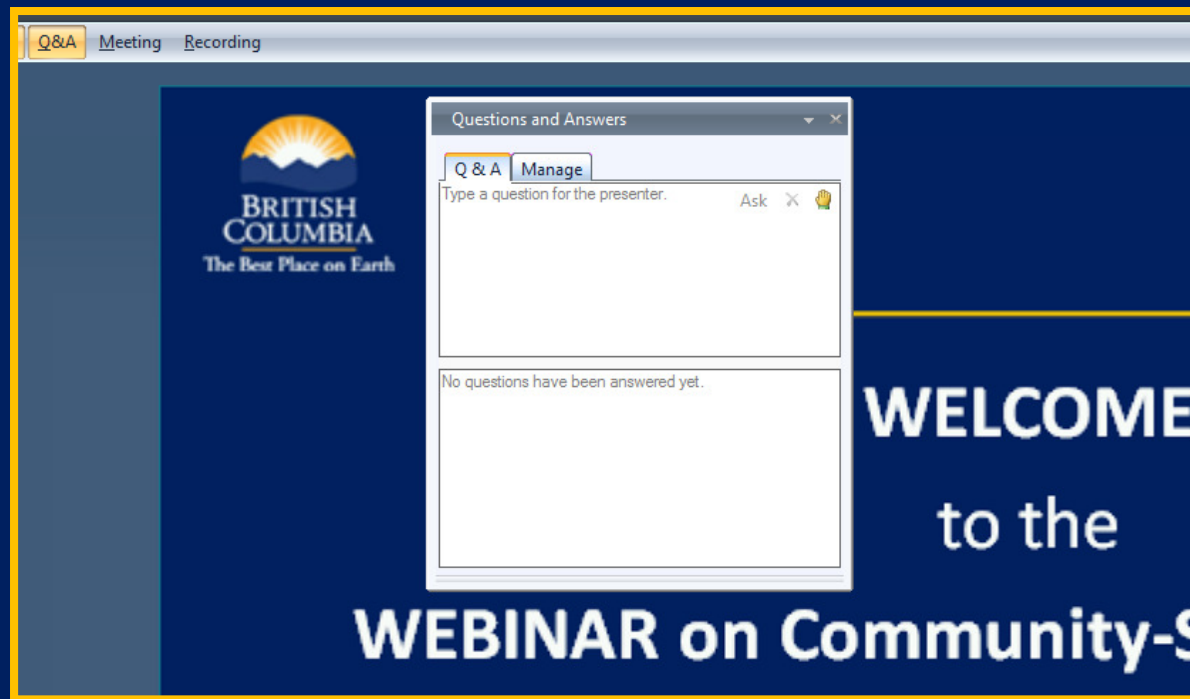
2. Release the pane in the shaded area. Repeat for the other desired menu items.





The LiveMeeting Environment: Q&A

You can post a question to be answered by the presenter at any time. Just click on the **Q&A** button in the toolbar at the top left of your screen, type in your question and hit return. We'll respond to your question as soon as possible.

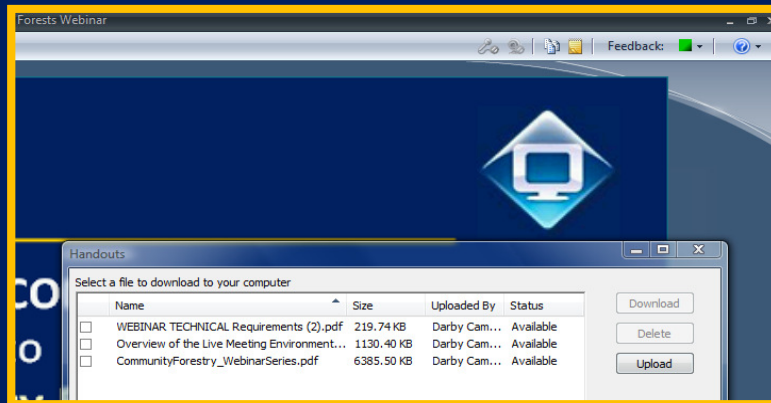
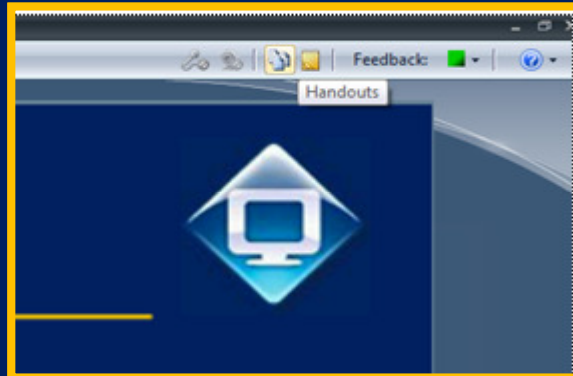




The LiveMeeting Environment: Handouts

You can access a .pdf of today's PowerPoint presentation and other useful documents by:

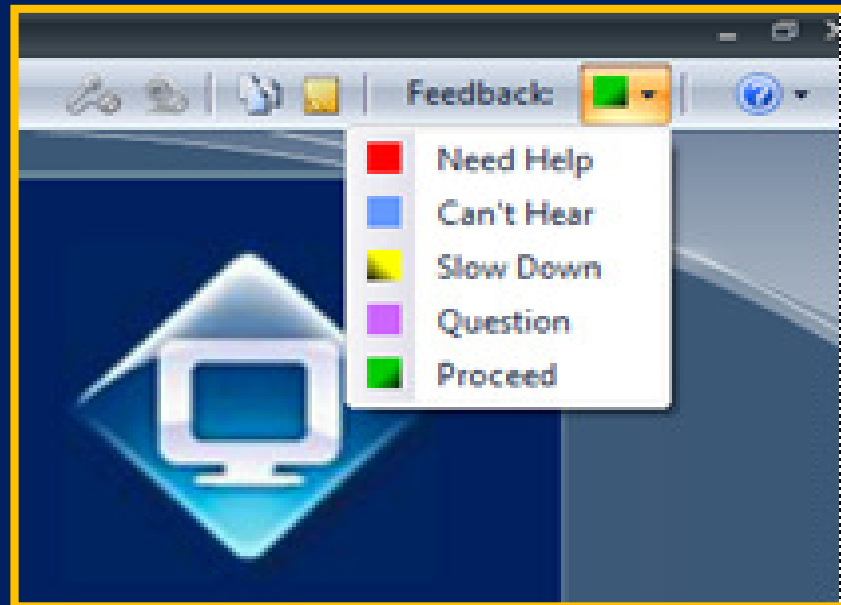
1. Clicking on the handouts icon on the right side of your toolbar.
2. In the pop-up handouts box, indicate the document you desire and click upload.





The LiveMeeting Environment: Feedback

You can provide feedback during the presentation. From the **Feedback** drop-down pane in the upper right corner of the toolbar, click the appropriate option from the "feedback to presenter" drop down list.





Presenters

Brian Bedford

Acting Director, Infrastructure and Engineering Branch,
Ministry of Community, Sport and Cultural Development

Pat Gordon

Sustainable Cities International Network Director

Eric MacNaughton

Acting Manager for Transportation Strategy,
The City of Calgary

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Webinar Agenda

1:30-1:40	Introduction	Darby Cameron & Amy Schneider, RuralBC Secretariat
1:40-2:00	Aging Infrastructure and Asset Management	Brian Bedford Acting Director, Infrastructure and Engineering Branch, MCSCD
2:00-2:10	Urban Form and Infrastructure Costs	Pat Gordon Sustainable Cities International Network Director
2:10-2:30	Cost of Growth: The Calgary Experience	Eric MacNaughton Acting Manager for Transportation Strategy at The City of Calgary
2:30-2:55	Questions	
2:55-3:00	Close	

Quick Poll

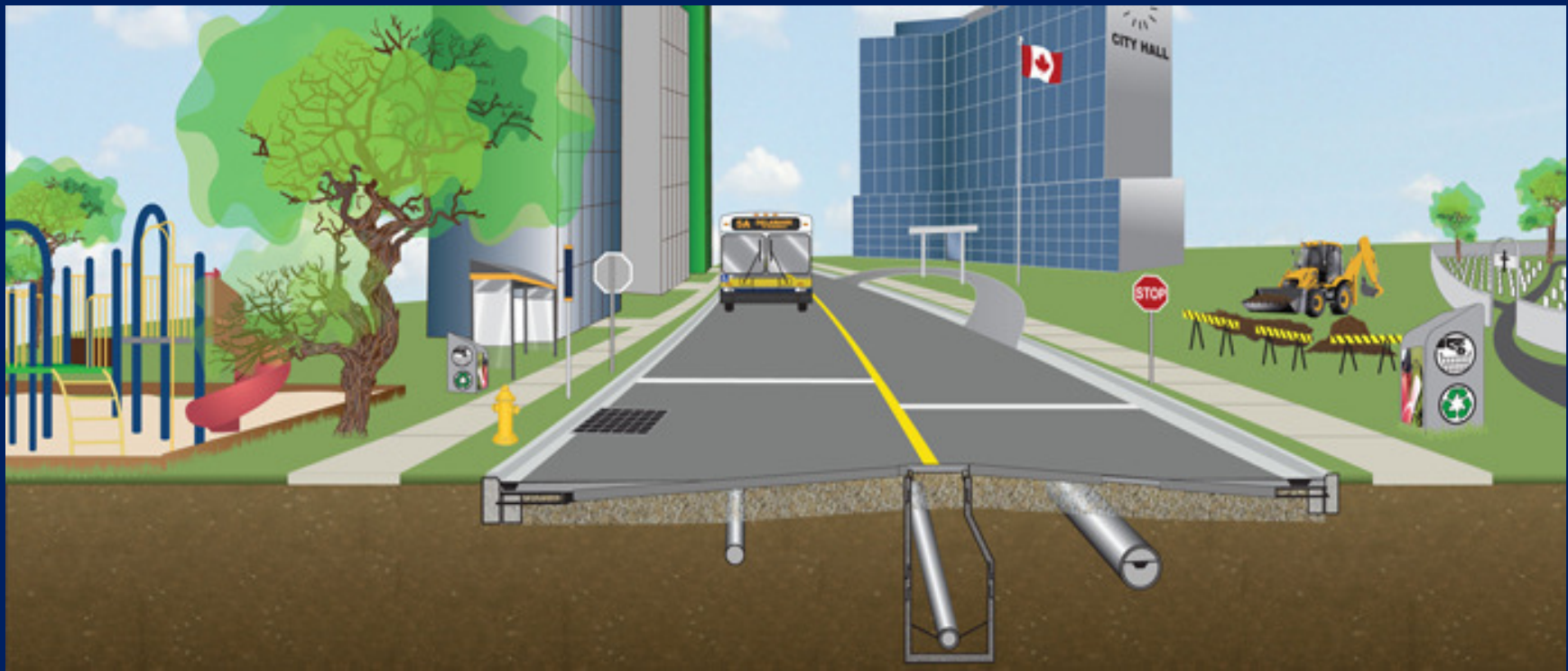




Aging Infrastructure & Asset Management

- FCM (2007) estimated national infrastructure deficit of \$123 billion
- Growing concern in British Columbia
- As infrastructure ages:
 - ↑ renewal/replacement costs
 - ↓ level of service

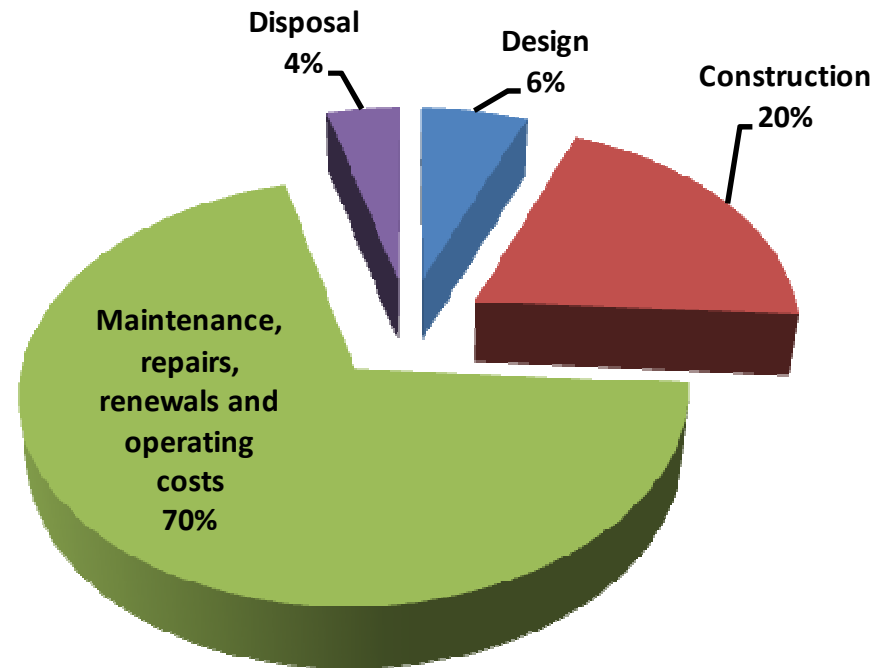
Local Government Infrastructure



Level of Service



Lifecycle Costs of Infrastructure



Distribution of life-cycle costs for a typical building (Source: British Columbia Homeowner Protection Office)

Quick Poll





PSAB 3150???

- Implemented January 2009
- Community Charter Section 167 (2)
- Established inventory & historical cost
- Provided 'value' of infrastructure
- Assists with asset management



What is Asset Management?

- Integrated approach involving planning, engineering and finance to effectively manage existing and new municipal infrastructure in a sustainable manner to maximize benefits, reduce risk and provide satisfactory levels of service to the community user in an environmentally and ecologically responsible manner.

(National Asset Management Working Group)

Quick Poll





Benefits of Asset Management

- Helps in avoiding problems and potential crises;
- Provides better and consistent levels of service to the public, at less cost;
- Reduces risk to the community.

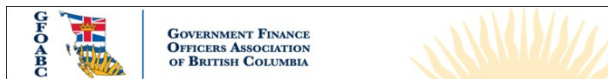


Benefits of Asset Management

- Leads to more effective communication with ratepayers, elected officials, and regulatory agencies:
 - allows for more accurate financial planning;
 - leads to more efficient data management;
 - results in positive institutional change; and
 - engages the community



Deep Roots Greater Heights



Indian and Northern Affairs Canada

Affaires indiennes et du Nord Canada

Quick Poll





State of Asset Management In BC

The State of
Asset Management
in British Columbia

SEPTEMBER, 2010

Asset Management Self-Assessment Tool

AssetSMART

A Tool to Take Stock of Your Community's Capacity to Manage its Assets

What is AssetSMART?

AssetSMART is a tool that local governments can use to assess their capacity to manage their assets. This tool has been designed to help local governments:

- Evaluate their asset management capacity in a wide range of areas
- Identify particular areas of strength and areas for improvement
- Establish priorities
- Build awareness of the many dimensions of asset management
- Generate productive discussion across departments
- Measure progress over time
- Benchmark against other communities
- Set short-, mid-, and long-term objectives in specific areas

Which communities should use this tool?

AssetSMART has been specifically designed to reflect the unique challenges that local governments face in managing their assets. This tool is intended to be used by any local government, of any size, and at any stage of implementing an asset management program. Whether your community is in the initial or advanced stages of asset management, AssetSMART can help your organization take stock of where it is today and plan for the future.

The Five Core Capacities for Asset Management

Managing a community's assets is a multi-dimensional challenge that requires the integration of people, resources, and information from across an organization's various units (e.g., engineering, planning, finance, and operations). Because the scope of asset management is broad, this tool assesses management capacity in five core areas.



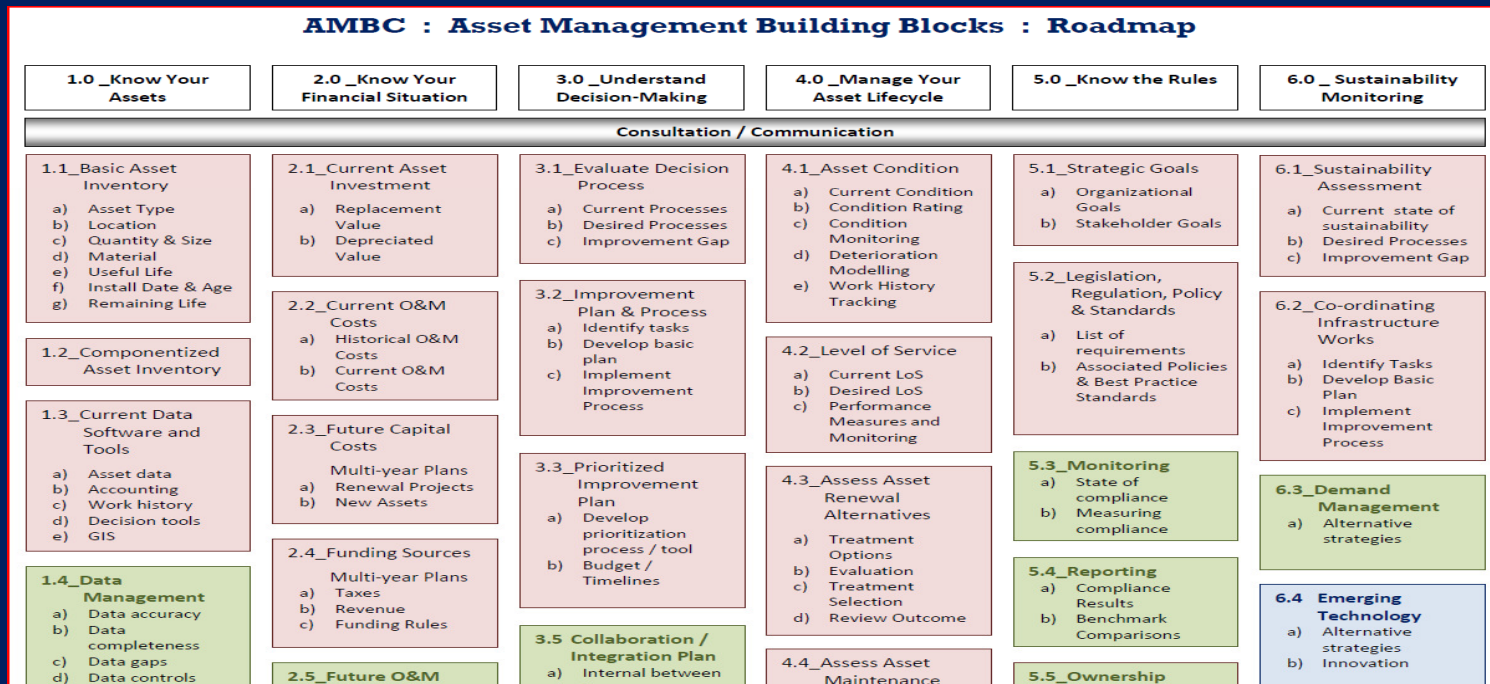
Date _____

Name _____

Organizational Unit _____

Tools & Resources

Asset Management Roadmap





Tools & Resources

- Model LG Asset Management Policy
- Pilot Projects, workshops, case studies, newsletter, etc...

www.assetmanagementbc.ca

 **Asset Management BC**

HOME DOCUMENTS NEWSLETTER LINKS DISCUSSION FORUM ABOUT US

:: HOME

Asset Management BC provides leadership and support for the management of community infrastructure. The group is comprised of associations and communities, brought together to recognize and integrate the political, administrative, technical, operational, financial and planning aspects of asset management. Our purpose:

- To consider all matters respecting the broadest interpretation of asset management strategies, tools and results for the betterment of our communities.
- Define specific projects and develop a strategy to seek funding and deliver the projects.
- Suggest specific programs, tools or consideration on other matters that will assist our communities respecting asset management
- Dissemination of information to the greater community
- To support the development of a local government asset management strategy for the province


Sparwood Reservoir
[Send us your photo](#)

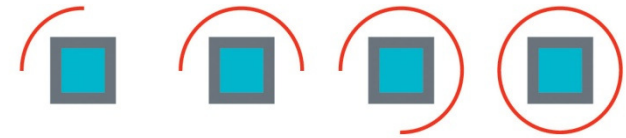


Ministry of Community, Sport, & Cultural Development Infrastructure & Engineering Branch

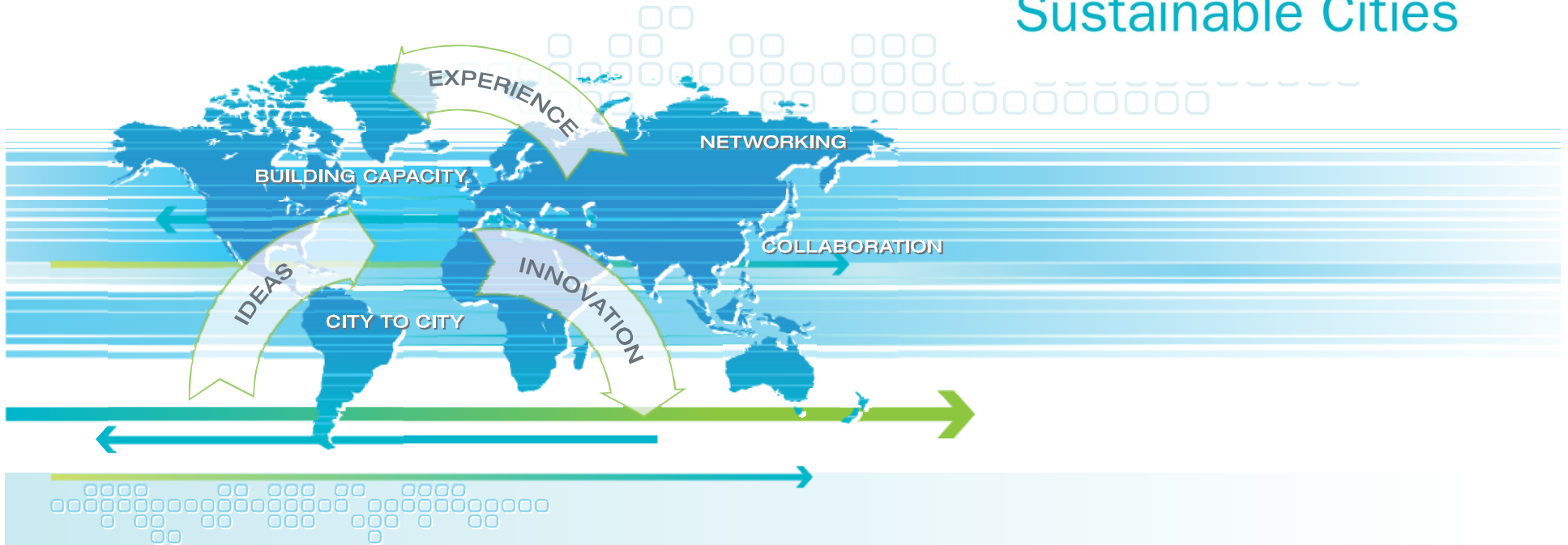
The Province is committed to helping local governments meet the needs of communities.

Branch Goal:

To promote, encourage and support the development of sustainable infrastructure.



Sustainable Cities



***RBCS Webinar Series
Infrastructure Costs***

***Patricia Gordon, Director
Sustainable Cities International Network***



who we are



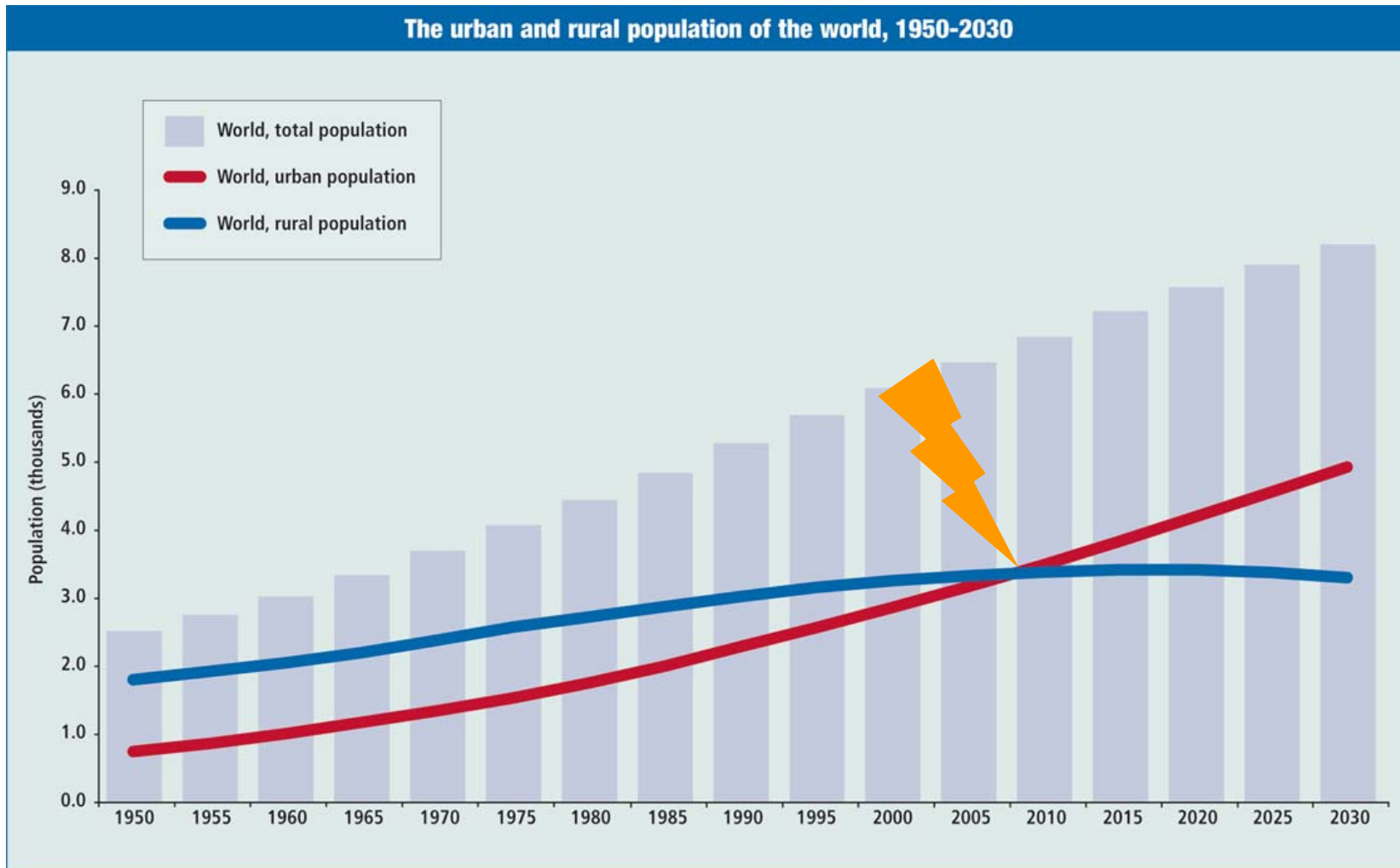
Our Mission:

To catalyze action on urban sustainability in cities around the world



Sustainable Cities

why cities?





Sustainable Cities

our city network

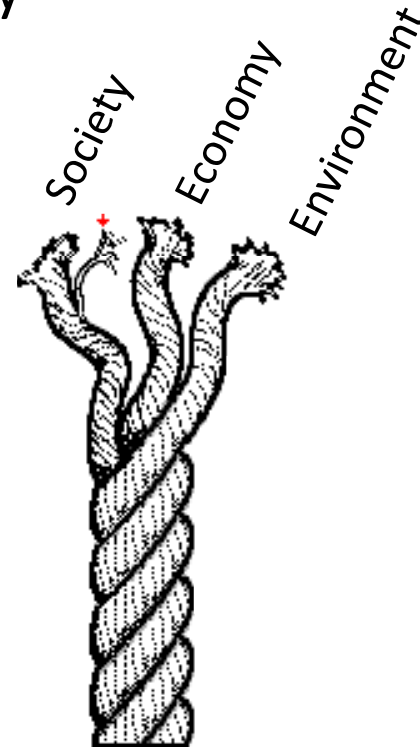




Sustainable Cities

urban sustainability

Our view of urban sustainability



*The whole is stronger
than the sum of its parts*



Sustainable Cities

the infrastructure problem

**Canada's municipal infrastructure deficit -
\$125 and \$300 billion (excluding the nearly
\$300 billion required to upgrade the
electricity system across the country)**

Municipal World 2011



Sustainable Cities

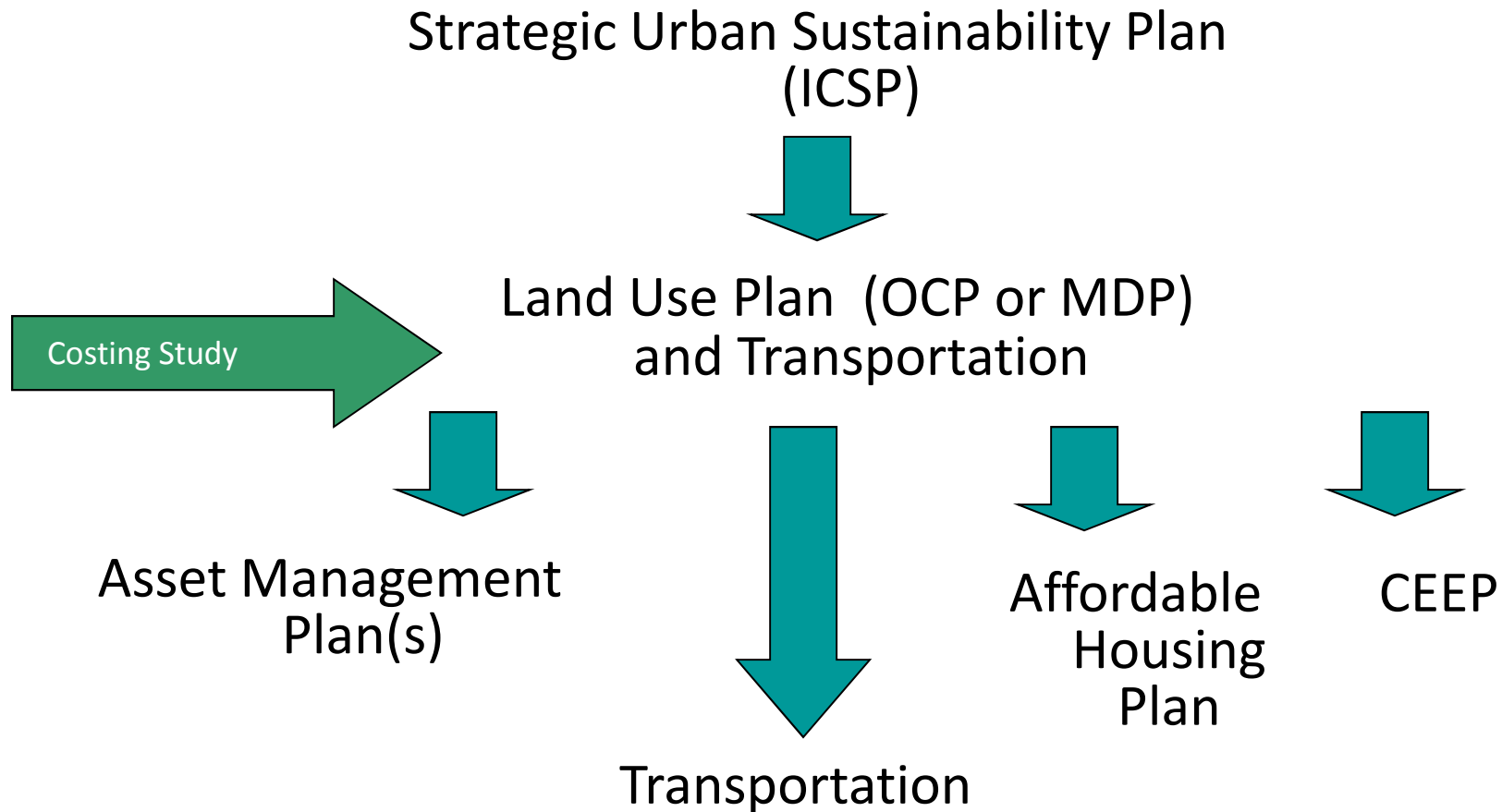
part of the solution

A City of Calgary study identified significant capital and operating savings on infrastructure through a more compact urban form

The City of Calgary



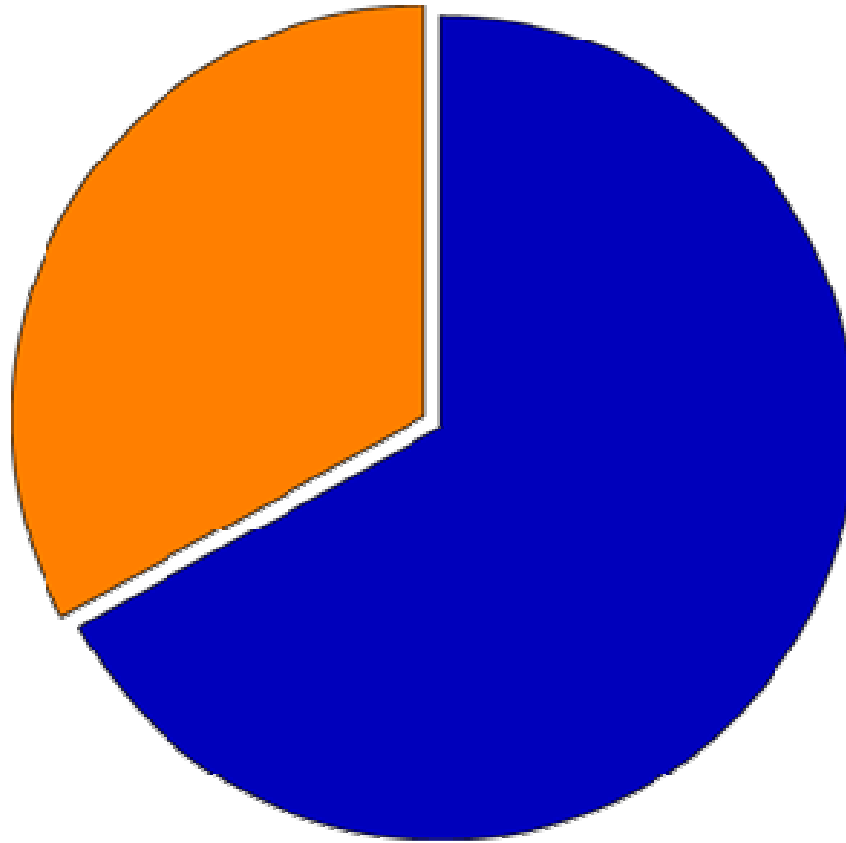
local government planning hierarchy





Sustainable Cities

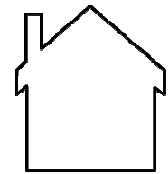
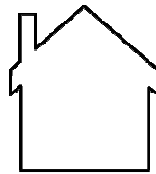
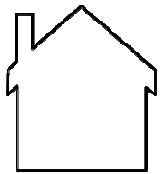
capital or operating?



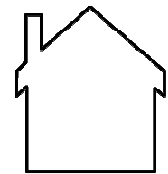
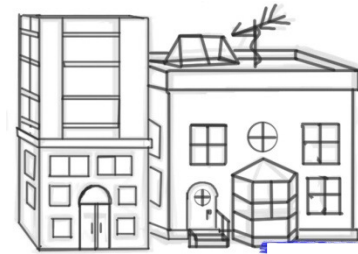
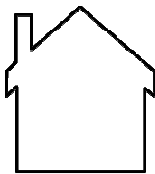
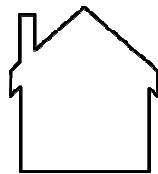
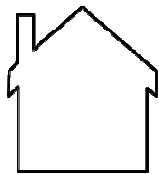
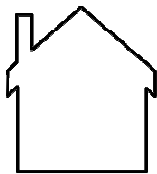
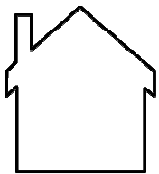


Sustainable Cities

capital or operating?



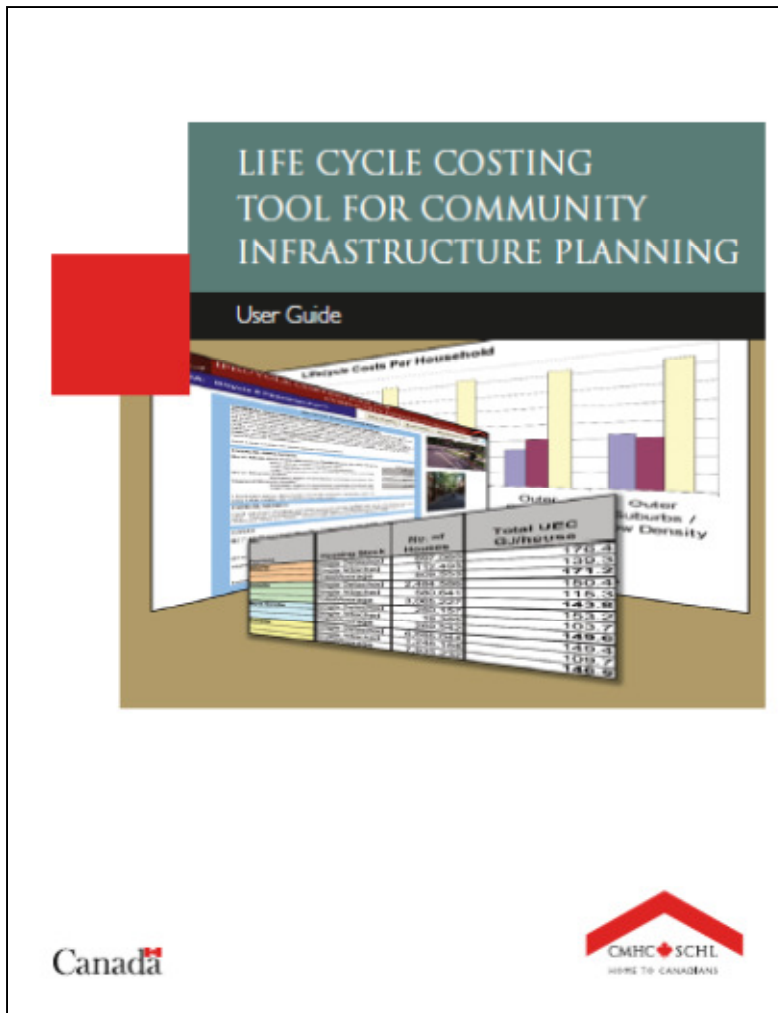
New road 1 km



Existing road 1 km

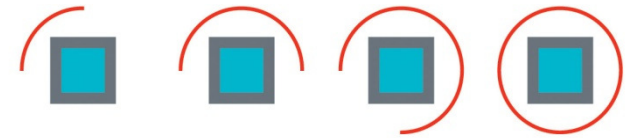


how to guide and tool



Applicable to suburbs only

SCI raising funds for a city wide guide and tool



Sustainable Cities



www.sustainablecities.net

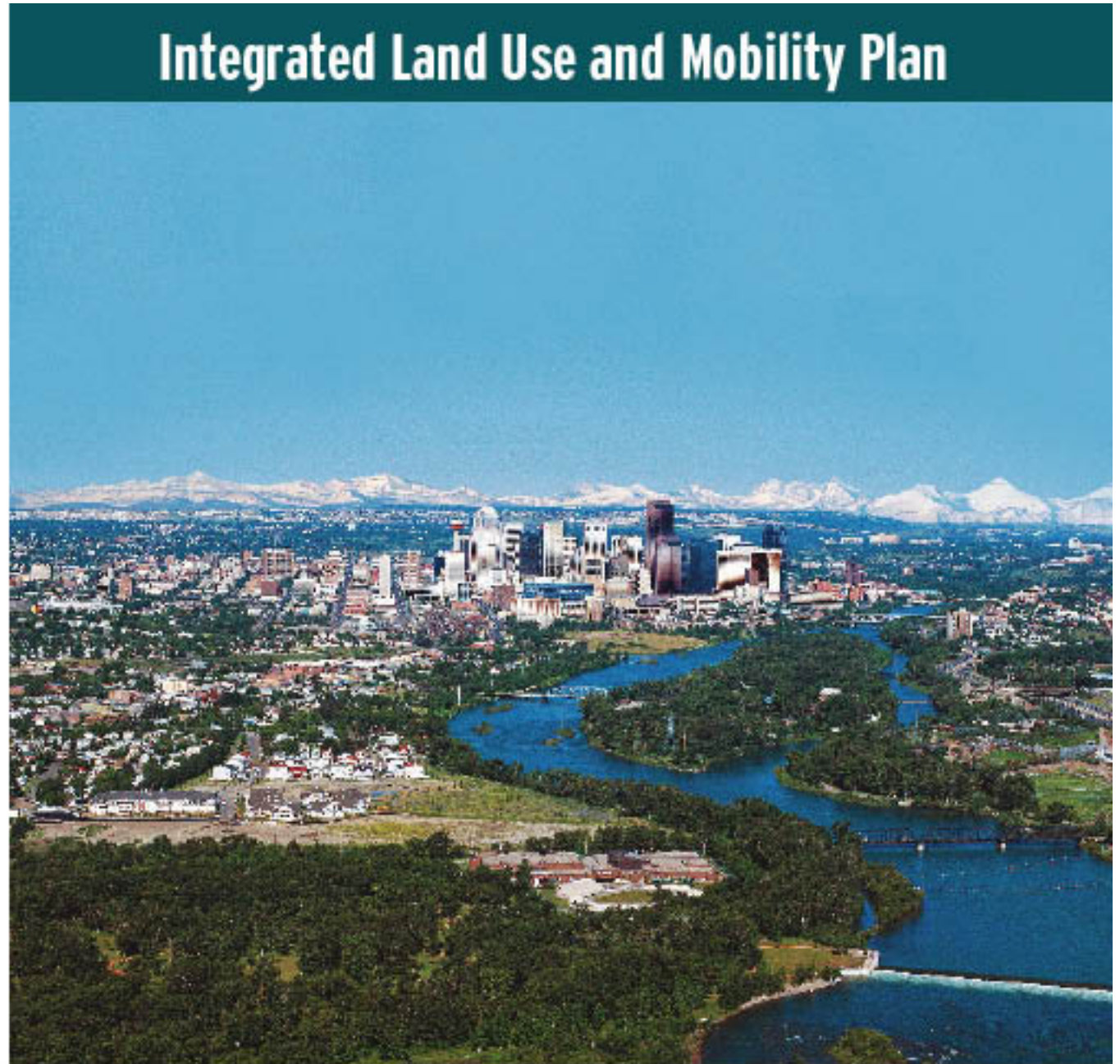
Quick Poll



Cost of Growth: The Calgary Experience

Eric MacNaughton
Acting Manager,
Transportation Strategy
The City of Calgary

RBCS Webinar Series



What is Plan It Calgary?

Calgary's new strategic, long range

Municipal Development Plan (MDP)

and

Calgary Transportation Plan (CTP)

Our vision...



imagineCALGARY
Imagination into action

Demographic Shifts

Calgary's population is changing:

- Ageing of baby boomers
- 1333% increase in people 85+ over next 60 years
- Growth reliant on international immigration in 20 years

Means changes in the way we live and travel

Emerging Growth Pressures

Calgary has the largest per capita footprint in Canada

- energy consumption makes up 56% of Calgary's footprint

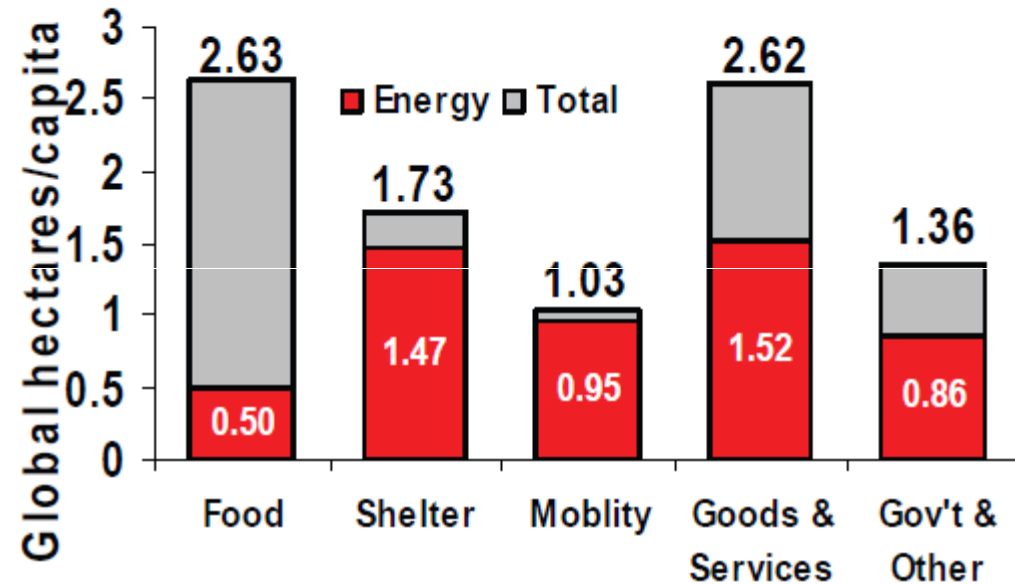


Figure 1.2 - Energy Use Components of Calgary's 2008 Ecological Footprint Consumption Categories

Emerging Growth Pressures

Unsustainable growth in municipal spending:

- less than 50% of greenfield capital costs recovered
- \$3.4 billion capital infrastructure gap
- \$3.2 billion maintenance gap
- little planning for life-cycle replacement

Our quest...

- Where will the next 1.3 million Calgarians live?
- Where will they work?
- How will they travel?
- What are the implications of these choices?

The Sustainability Principles

Principle 1:

Create a range of housing opportunities and choices.

Principle 2:

Create walkable environments.

Principle 3:

Foster distinctive, attractive communities with a strong sense of place.

Principle 4:

Provide a variety of transportation options.

Principle 5:

Preserve open space, agricultural land, natural beauty and critical environmental areas.

Principle 6:

Mix land uses.

Principle 7:

Strategically direct and manage redevelopment opportunities within existing areas.

Principle 8:

Support compact development.

Principle 9:

Connect people, goods and services locally, regionally and globally.

Principle 10:

Provide transportation services in a safe, effective, affordable and efficient manner that ensures reasonable accessibility to all areas of the city for all citizens.

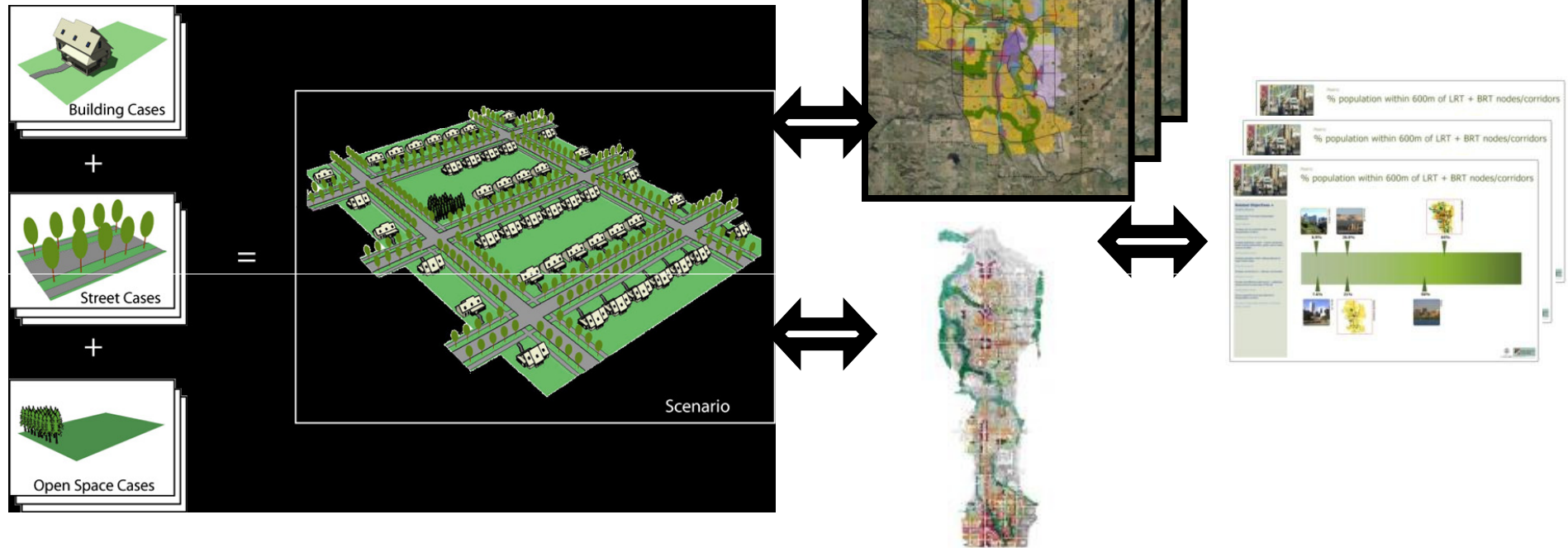
Principle 11:

Utilize green infrastructure and buildings.

Research -> Input

- Demographics
- Housing Affordability
- Health & Transportation
- Green Infrastructure & Mobility
- Energy Mapping
- Citizen & stakeholder engagement

Anatomy of Plan It Calgary: from the cell, to the organs to the body.. of the city



Building Blocks

Development Patterns

Scenarios and case studies

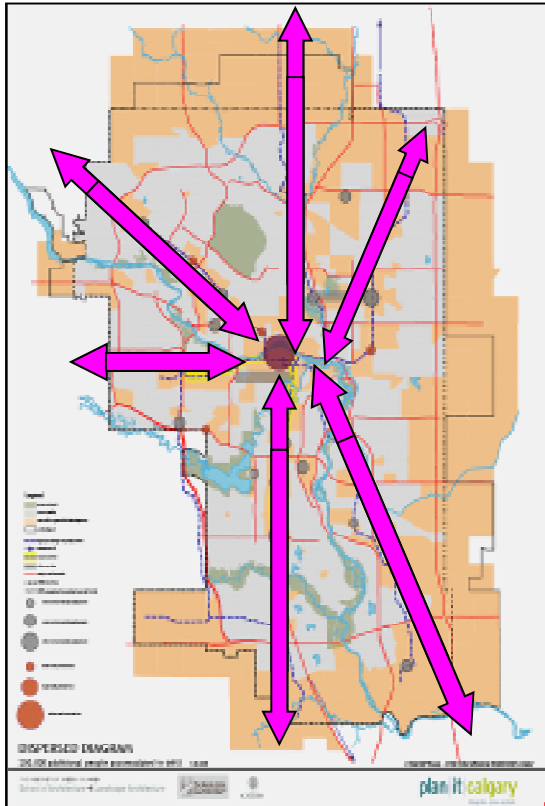
Indicators and targets



Linking Land Use, Transit and Complete Streets

e.g. 17th Ave SE Corridor

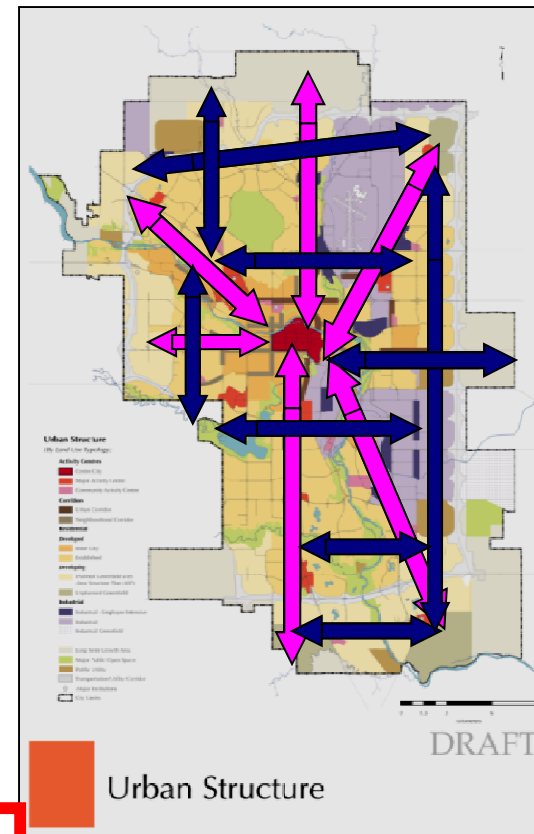
Dispersed Scenario (Business as Usual)



1,010
sq. km.

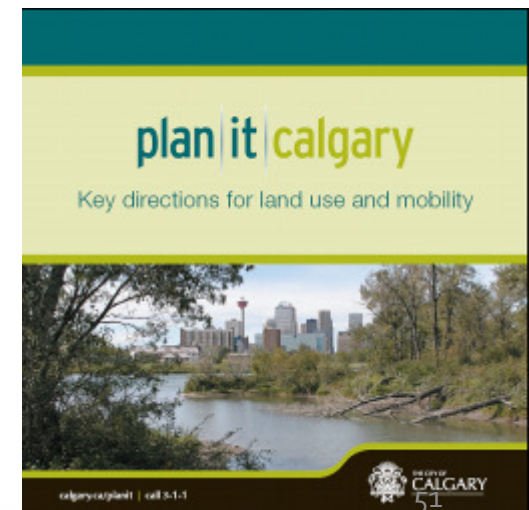
250 sq. km.
saved

Recommended Direction



760 sq.
km.

1. Achieve a balance of growth between established and greenfield (new) communities.
2. Provide more choice within complete communities.
3. Direct land use change within a framework of nodes and corridors.
4. Link land use and transit decisions.
5. Increase mobility choices.
6. Develop a Primary Transit Network.
7. Create complete streets.
8. Optimize infrastructure.



Optimize Infrastructure

- Municipal financial sustainability to be considered within a corporate growth management strategy
- Prioritize planning and investment for:
 1. Redevelopment
 2. Current greenfield
 3. New greenfield
- Focus transportation investment on Activity Centres and Corridors



Report on the impact of different growth patterns on the cost of Infrastructure

Benefits of the Cost of Growth Study

- Understand the fiscal implications of different growth choices
 - Meaningful topic for decision makers in Calgary
 - Citizens can relate to costs, which are paid through taxes, utility rates, or cost of a new home
- Demonstrates the relative cost differences
 - Not useful for budgeting
- Builds capacity within corporation
 - Third party adds legitimacy, but staff expertise is crucial

Capital Cost Comparison

Total Cost (\$billion)

	Dispersed Scenario	Recommended Direction	Difference	Percent Difference
Road Capital Cost	\$17.6	\$11.2	\$6.4	-36%
Transit Capital	\$6.8	\$6.2	\$0.6	-9%
Water and Wastewater	\$5.5	\$2.5	\$3.0	-54%
Fire Stations	\$0.5	\$0.3	\$0.2	-46%
Recreation Centres	\$1.1	\$0.9	\$0.2	-19%
Schools	\$3.0	\$2.2	\$0.8	-27%
Total	\$34.5	\$23.3	\$11.2	-33%

33% less

NOTE: All forms of growth still incur new costs

Annual Operating Cost Comparison

Total Cost (\$billion)

	Dispersed Scenario	Recommended Direction	Difference	Percent Difference
Road Operations	\$0.23	\$0.19	\$0.04	-18%
Transit Net Operating	\$0.30	\$0.30	\$0.00	0%
Water and Wastewater	\$0.06	\$0.03	\$0.03	-55%
Fire Stations	\$0.28	\$0.23	\$0.05	-18%
Parks	<u>\$0.13</u>	<u>\$0.12</u>	<u>\$0.01</u>	-9%
Total	\$0.99	\$0.86	\$0.13	-14%

14% less

Quick Poll



Road Network

- Measured linear difference in 'high capacity' and 'local' roads from 2 scenarios
 - Width of high capacity roads estimated from previous work
- Actual costs can vary, but relative comparison enables use of justifiable estimates
- Operating costs obtained from Roads Asset Management Program

R.D. savings = 36% capital / 18% operating

Transit Network

- Most complex part of the study
 - increased density = increased ridership = increased revenue
- Measured linear difference in LRT and dedicated bus infrastructure
- Took ridership changes from previous analysis
 - Also enabled Calgary Transit to estimate changes to operating hours

R.D. savings = 9% capital / 0% operating

Water & Wastewater Network

- Estimated difference in pipe infrastructure based on projected service area in each scenario
 - Number of treatment plants constant with constant population
- New communities require new pipes and upgrades to existing pipes
- Redevelopment can be accommodated by existing pipes, and upgraded during lifecycle replacement
 - No added cost long-term; best to align redevelopment with lifecycle in short term

R.D. savings = 54% capital / 55% operating

Fire & Police Services

- Number of fire stations based on response time
 - Heavily influenced by urban form
- Number of fire engines linked to population
- Police services linked to population, not urban form

R.D. savings = 46% capital / 18% operating

Recreation & Parks

- Number of new recreation facilities closely linked to urban density
 - Both scenarios need upgrades to existing recreation facilities
- Number of regional parks linked to urban density
 - 'Smaller' open space standards in compact city
- Operating costs for both linked to usage, so small differences given same population

R.D. savings = 19% capital (rec) / 9% operating (parks)

Schools

- Provincial, not City responsibility
- Number of new schools linked to urban density
 - Upgrades required to existing schools to accommodate redevelopment however
- Operating costs based on number of students
- No difference in post secondary requirements

R.D. savings = 27% capital / 0% operating

For more information, visit:

www.calgary.ca/planit



Discussion/Questions

- What have been your challenges with asset management?
- What have been your successes with asset management?



THANK YOU

for your participation in this webinar



Resources

Ministry of Community, Sport and Cultural Development.

<http://www.gov.bc.ca/cscd/>

Sustainable Cities International

<http://sustainablecities.net/>

Plan It Calgary

www.calgary.ca/planit



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403 268-1491