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MUNICIPALITÉS



SUSTAINABLE
COMMUNITIES
CONFERENCE

OTTAWA 2018

Retrofitting Neighbourhoods to Achieve Your Sustainability Goals

Module 2 – TRCA's SNAP Model

February 2018



Speakers

@TRCA_SNAP

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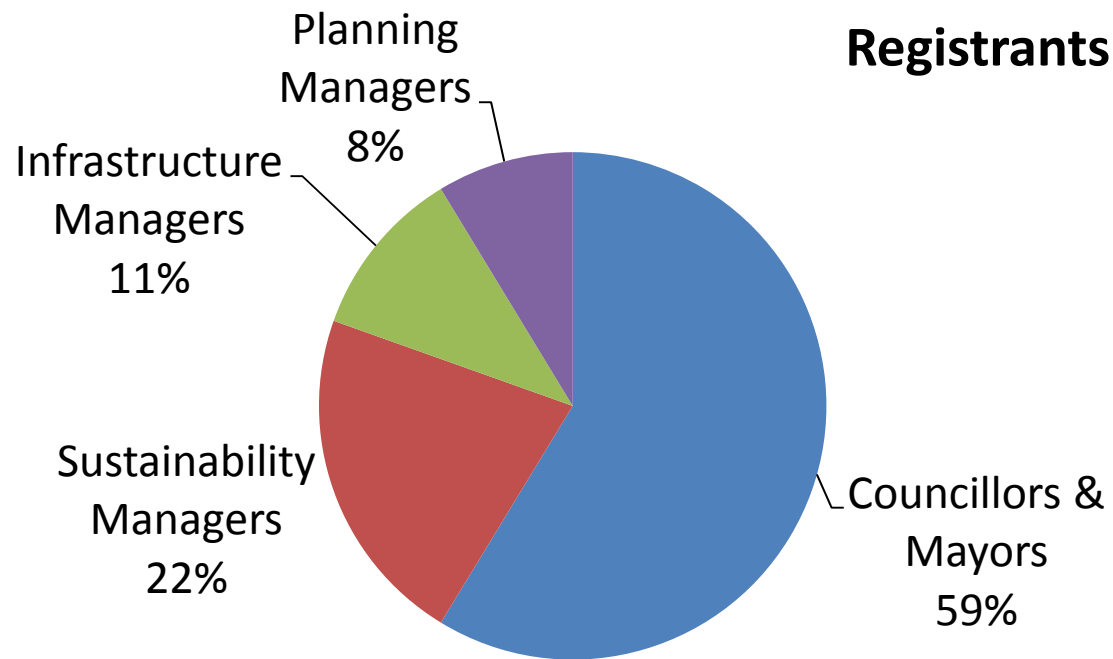
Sustainability and Asset Management, City of Markham



Where innovation
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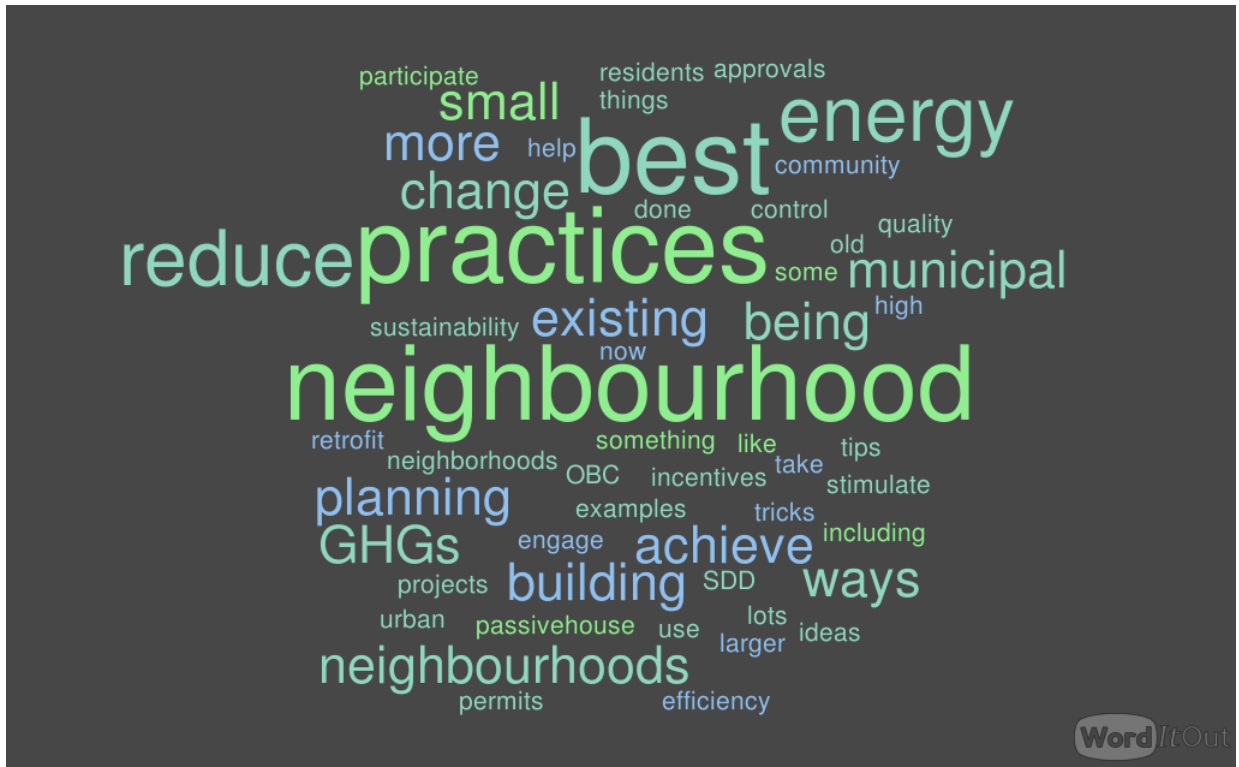
Who is here?



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Your interests



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Agenda

- Introduction
- SNAP Overview
- Neighbourhood Selection and Planning Process
- SNAP Implementation Project Strategies and Case Studies

BREAK

- Panel – The Practical Realities
- Interactive Activity – Inspiration “to go”
- Wrap Up

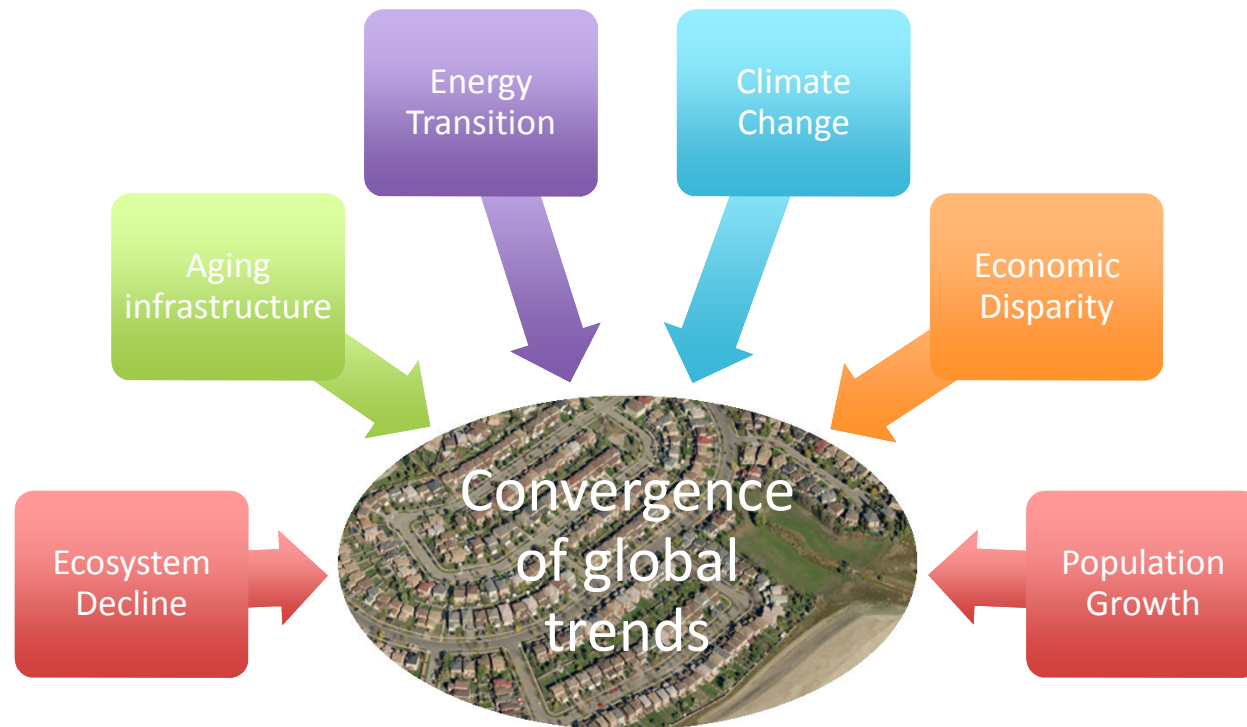


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SNAP Overview

Why SNAP?



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Where do we want to be?



Markham's
greenprint
Sustainability
Plan



Complex problems require collaboration and imagination to overcome barriers to exciting new possibilities



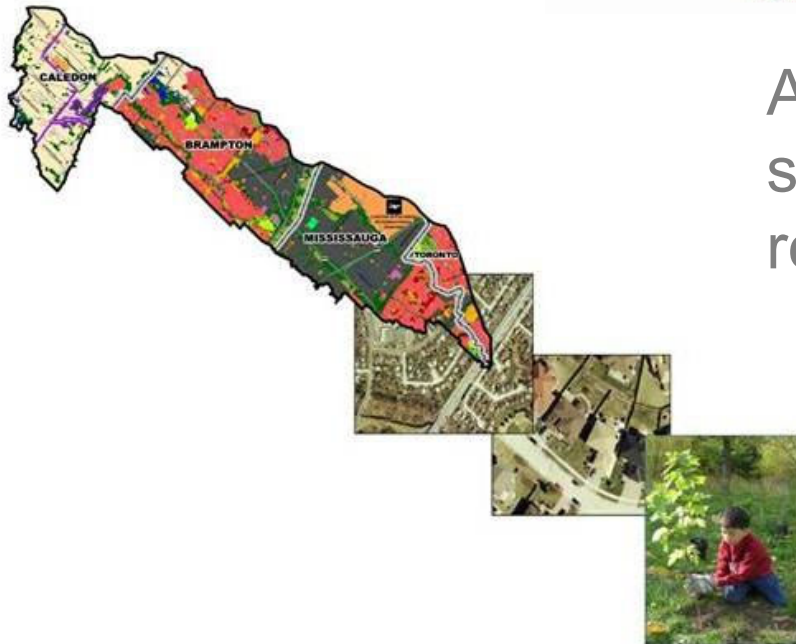
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SNAP

Sustainable Neighbourhood
Retrofit Action Plan



A neighbourhood-based solution for sustainable urban renewal and climate action.

- ✓ Brings efficiencies
- ✓ Draws strong community support
- ✓ Builds innovative partnerships for implementation



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SNAP Program Partners



And hundreds more partners...

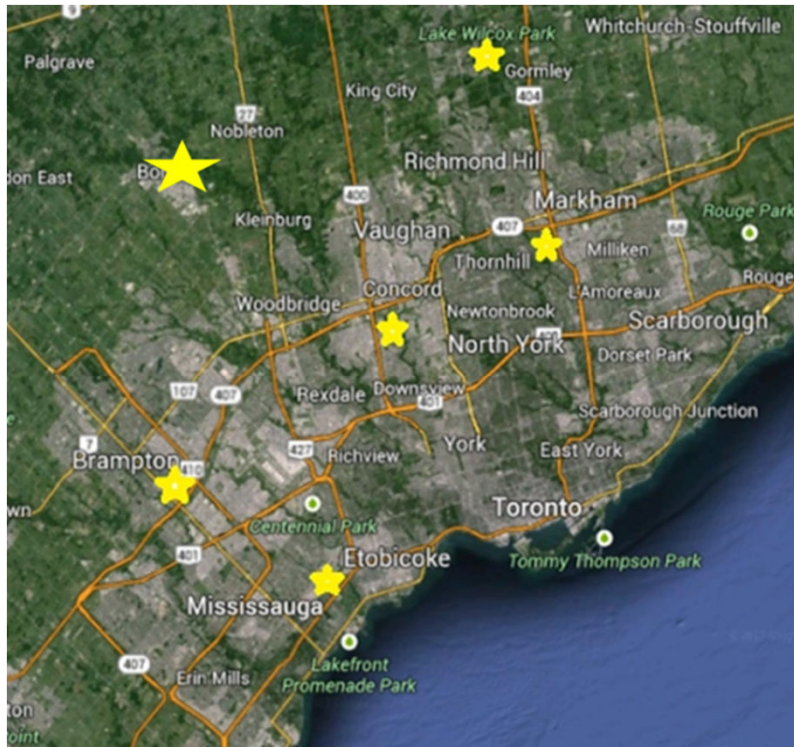
...community groups, businesses, utilities etc.



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Six SNAPs in the GTA - and growing



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Typical SNAP Action Areas



Extending the reach of home renovation programs



Leveraging public infrastructure renewal for multiple outcomes



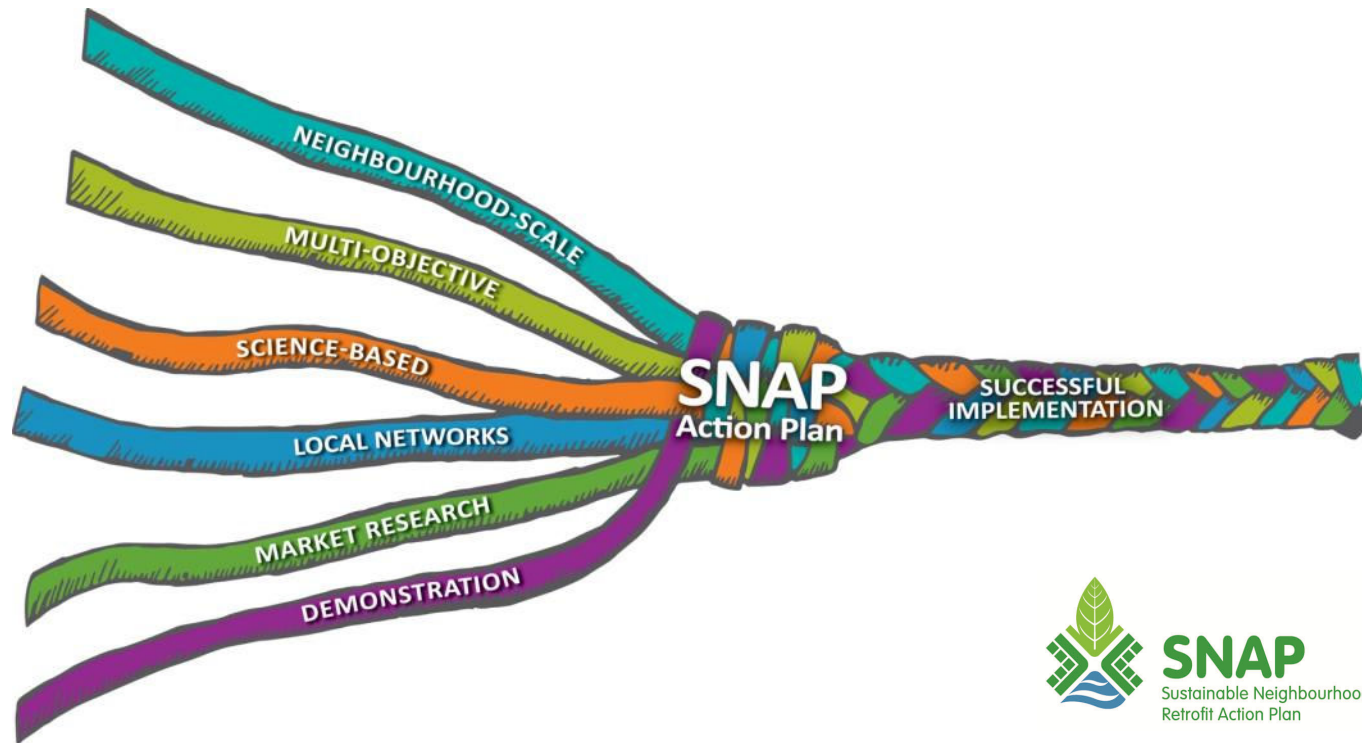
Forging new partnerships for MUR & ICI renewal



Strengthening community resilience



Critical elements of the SNAP Approach



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Why is SNAP effective?

- Delivers on multiple objectives
- Coordinates public and private realm actions
- Gets more value out of planned capital projects
- Shares costs and accesses innovative funding
- Engages hard-to-engage communities
- Demonstrates and tests on the ground
- Achieves measureable outcomes
- Fosters delivery partnerships and innovation



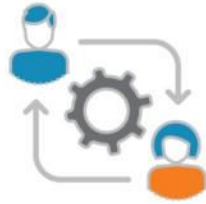
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Planning & Advisory Services

Enabling the development of new neighbourhood SNAP projects.



Neighbourhood Implementation & Facilitation

Working with partners in each neighbourhood SNAP, to identify and execute implementation projects and responsibilities.



Knowledge Sharing

Coordinating Intra-SNAP dialogue, knowledge sharing and connections with extended partner networks in the urban sustainability practice.



Scaling Up

Identifying and acting on opportunities for expanding and exporting successful solutions from pilot neighbourhoods for greater impact.



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SNAP video



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Neighbourhood Selection and Planning Process

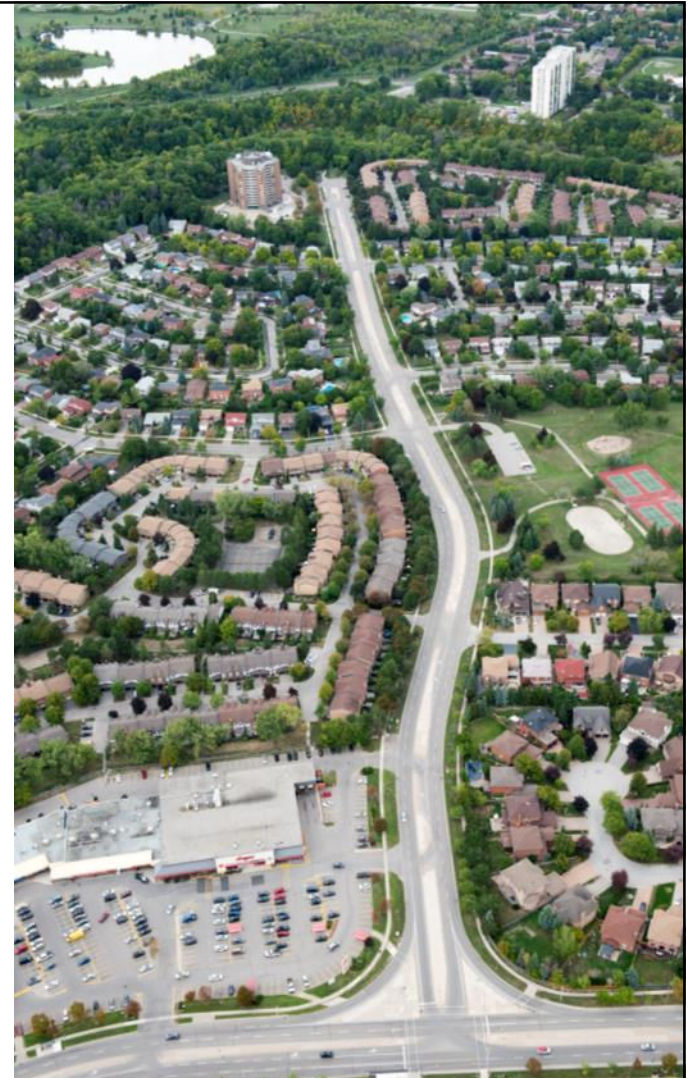
Where is SNAP a good fit?

An identified need:

- Multiple urban renewal priorities
- Multiple landowners, groups
- Competing interests, limited resources
- Implementation challenges

Factors for success:

- At least 1-2 projects ready to advance
- Core willing and interested partners
- Confirmed resources (scoping, workplan)



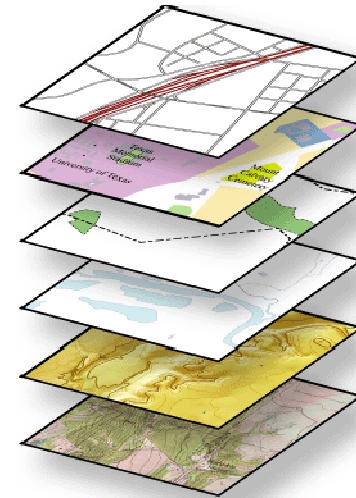
Neighbourhood Selection Criteria

Primary Drivers:

1. Alignment with municipal plans, capital project priorities
2. Alignment with priorities of other partners
3. Local community interest, champions

Secondary Considerations:

4. Intersection of inter-related issues
5. Alignment with current or potential funding
6. Opportunity to monitor and track change
7. Presence of local school



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Personal Reflection

Worksheet Questions:

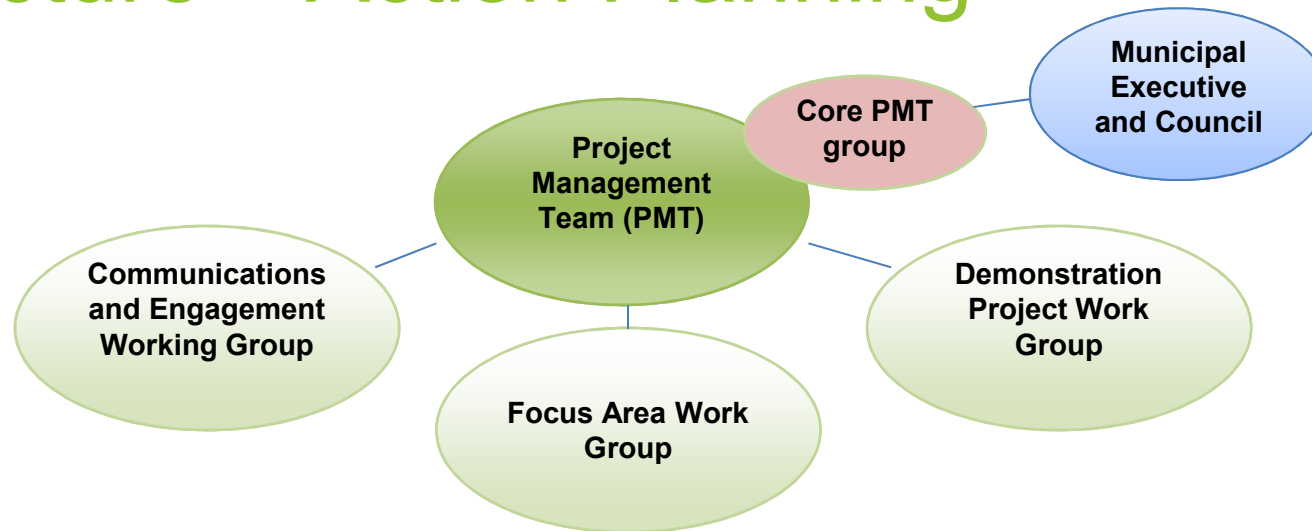
- Where do you have multiple retrofit challenges/priorities in your municipality?
- Who are the key stakeholders? What are their interests?



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Example SNAP Governance Structure – Action Planning



Factors to Consider:

- Meaningful engagement of key implementers
- Decision making, commitments and sign-offs
- Integrate with other community initiatives
- Transition to Implementation – vision, players

What does the action planning process have to do?

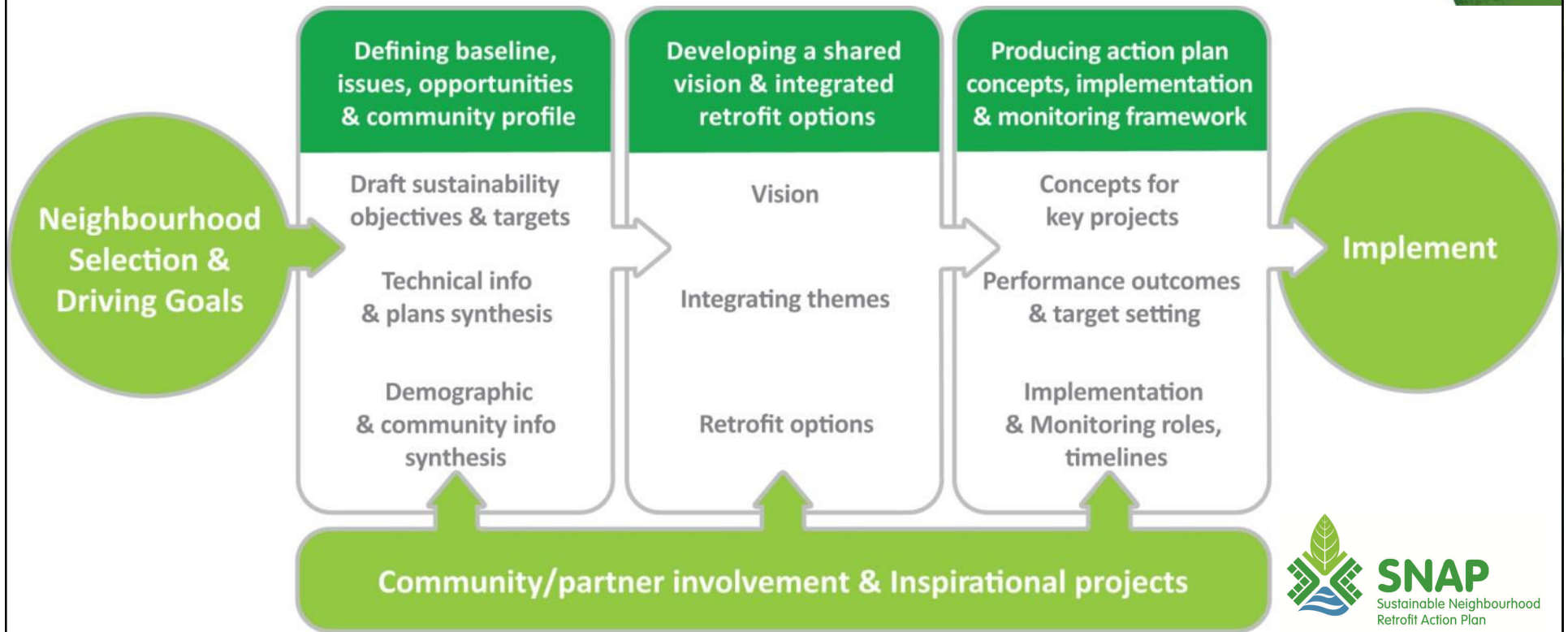
- Engage and foster buy-in
- Build community leadership
- Inspire and listen
- Identify strategic retrofits for measureable change
- Achieve early wins



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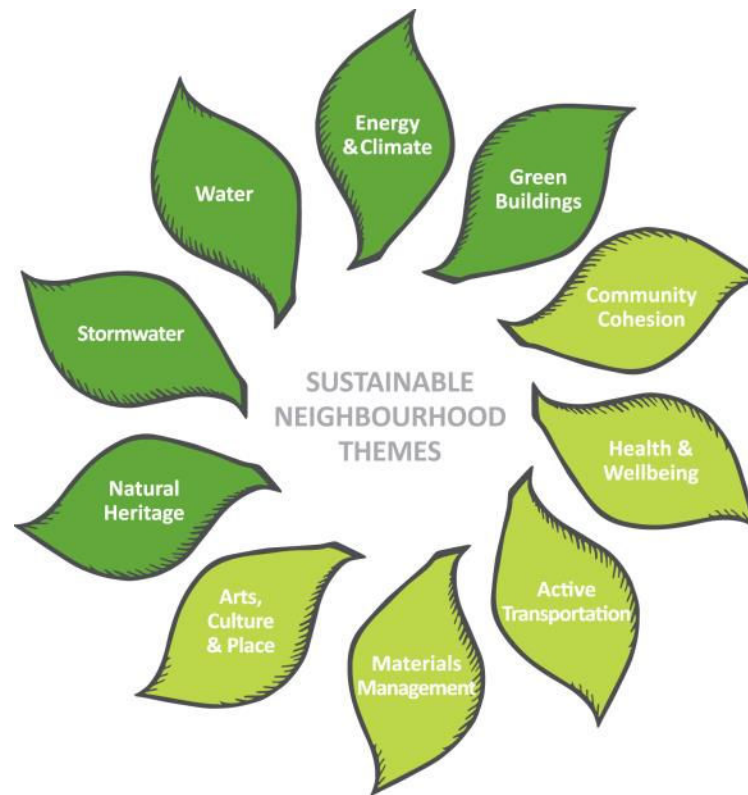
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SNAP's Action Planning Process



Sustainability Framework

- Goals, objectives, working targets
- Links with existing municipal and partner plans

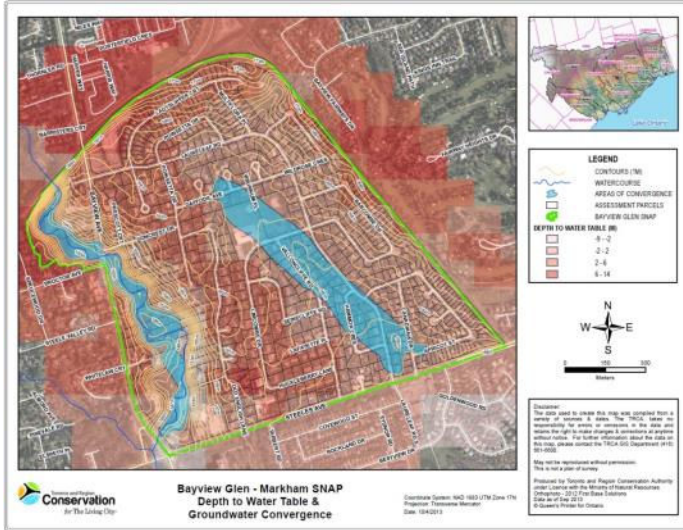


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Baseline and Community Profile

- Review technical baseline conditions, needs to direct strategic action, provide a basis to measure change
- Understand community profile to identify motivators, barriers and local networks for engagement



Identify motivating retrofit themes

- To inform integrated project designs and inspire action



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Creative Engagement and Demonstration

- To foster buy-in, animate leaders and build trust; local demonstrations to engage, showcase and test



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Example: County Court SNAP, Brampton



Initial focus:

- Retrofit of SWM pond and its catchment
- Clay soils, trees need attention



Region of Peel
Working for you



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Toronto and Region
Conservation
for The Living City

County Court SNAP Action Plan

~ creating a sense of community ~



Green renovation & landscapes



County Court Park renewal



Bioretention



Upper Nine SW pond transformation



Habitat Restoration



Rainwater harvesting for irrigation



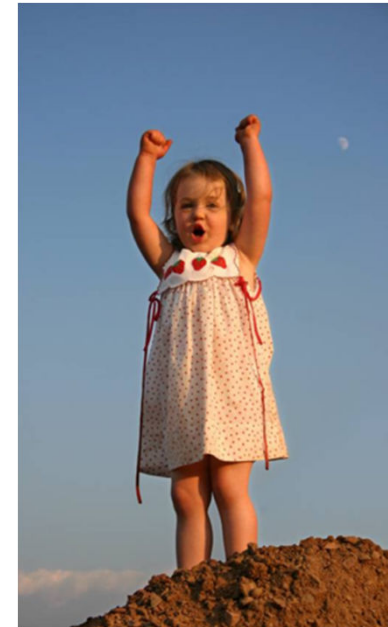
Green parking lots



Urban forest

County Court Action Plan Targets

- Expand **urban forest** cover to 18.4% community, 40.4% overall
- Improve **stormwater** quantity & quality, erosion control, water balance
- Reduce **water** use to 144 Lcd (31%) residential, 46% commercial
- Reduce **energy** use by 39% residential, 53% commercial
- Reduce **GHG** by 18% (6300t CO₂e) compared to 2009 baseline (energy and water)
- **Ecoservices** (snapshot at 2061)
 - UF – annual 570t carbon storage (\$13K), 214t carbon sequestration (\$5K), pollution removal 11t (\$100K)
 - TNHS – increase from \$450K to \$1.5M value



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Personal Reflection

Worksheet Question:

- Are there planned projects in your neighbourhood which could be leveraged to achieve more? What other stakeholders might help add value?

Table Discussions

- Share your retrofit challenge and your idea for leveraging a project.



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Questions?

Extending the reach of home retrofit programs

Home retrofits – challenges to uptake

- **Homeowner barriers**
 - Lack of awareness
 - Misperceptions
 - Competing priorities, lack of time
 - Hassle of navigating the process
- **Old promotional approaches are failing**
 - “mass marketing campaigns average a 2 percent response rate” (Gartner, 2011)
 - Environmental education based campaigns may only be reaching the early adopters

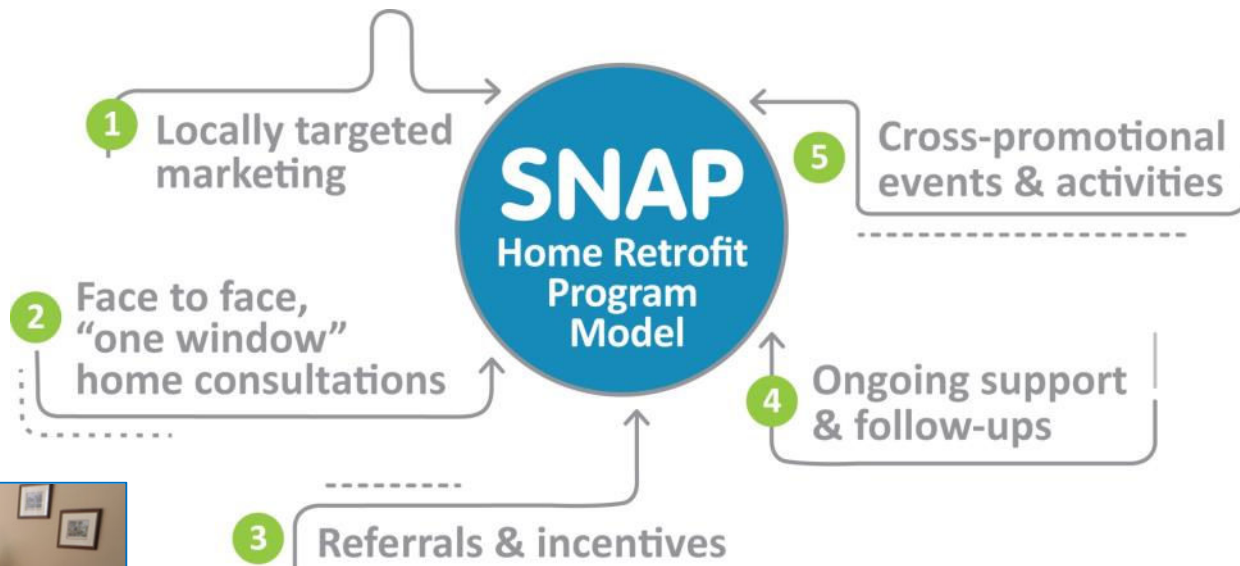


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SNAP Home Retrofit Program Model

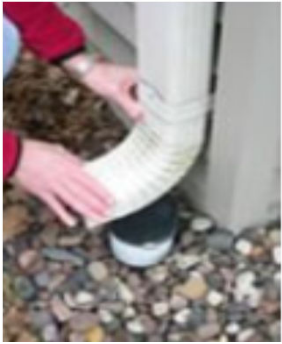
Neighbourhood-based, Citizen-centred and Multi-objective



Home retrofit action areas



++



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Three SNAP neighbourhood examples



Black Creek, Toronto
“Harvest the Rain”



County Court, Brampton
“neighbour to neighbour DIY”



Bayview Glen, Markham
“top of technology”



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Black Creek – engaging on interests and values

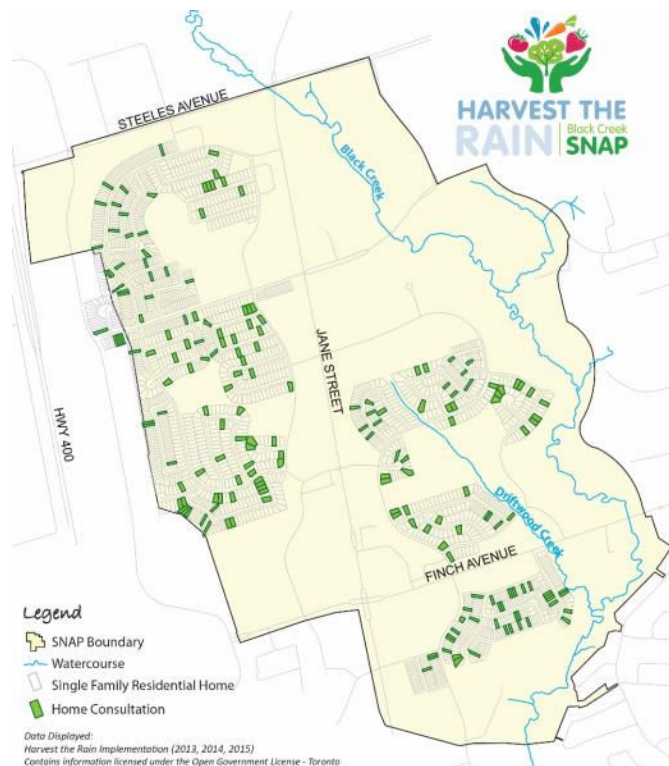


A true passion for growing food...

Conservation is a way of life

Black Creek SNAP – Results

Home meetings 2013-2016 (seasonally May-Dec)



Over 235 home consultations
(14% of homes)



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Harvest the Rain Home Retrofit Program Results 2013-2016

235 home visits completed (14% of neighbourhood homes)
Out of 178 homes reached through follow up calls:

Energy:

- **30%** Implemented **114** significant energy retrofits

Waste Diversion:

- **1027 lb** of Surplus Harvest were diverted from the landfill and donated to meal programs.

Trees:

- **51%** planted **130** trees

Water/ SWM:

- **79%** installed 395 Rain barrels
- **41%** of homes implemented basement flooding prevention measures



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Surplus Harvest Donation Program



Gardeners from the neighbourhood homes share their surplus harvest with meal programs in the community.

Bayview Glen – engaging on interests and values



- On “Top of technology”
- Willing to spend for good ROI

Helping Bayview Glen Become A NATIONAL LEADER IN SUSTAINABILITY

Who we are:
The Toronto and Region Conservation (TRCA), in partnership with the City of Markham are leading the implementation of an Innovative Sustainable Neighbourhood Benefit Action Plan (SNAP) in the Bayview Glen neighbourhood. SNAP works with communities to lower their environmental impact, adapt to climate change and undertake urban renewal.

It's your turn to help make a difference.
We are looking to homeowners to make changes in their own homes that will transform Bayview Glen to be a sustainable leader in technology. SNAP advisors are offering to bring valuable information right to your door and help you be part of the change.

Call today to book your FREE home consultation to make your home more efficient:

- Flood proofing
- Solar heating for swimming pools
- Energy & water efficiencies
- Assessment of Aged Ash trees
- Electric vehicles
- Aging in place

There only **one** way to make your home more efficient.

Bayview Glen **SNAP** Sustainable Neighbourhood Benefit Action Plan | **MARKHAM**

County Court SNAP, Brampton

Tapping into DIY culture and desire for a stronger sense of community



DIY home energy retrofit parties



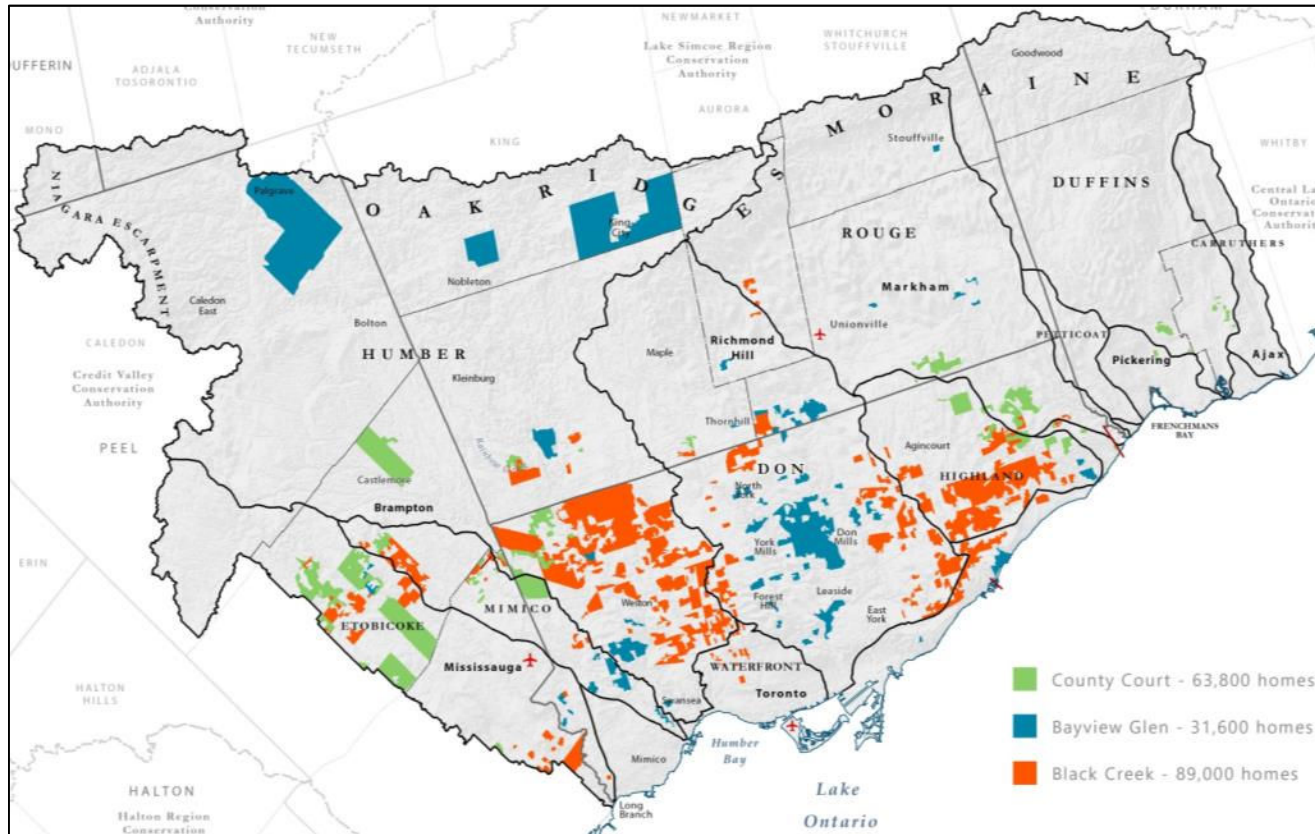
Inspired by Green Home Makeover



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Scaling – potential markets in Toronto Region



* Based on homes built prior to 2000 and located in areas having the same demographic profile as the pilot SNAP neighbourhood (Ref. Environics Analytics Prizm 5 and DemoStats databases (2015))

Testing SNAP's Scalability



Black Creek SNAP's "Harvest the Rain Home Retrofit Program" Expansion Pilots

- Two Similar Neighbourhoods (Rexdale & University Heights)
- Initial observations: Great replicability



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Conclusions

- Multi-objective program can engage homeowners on multiple interests
- Successful engagement via local trusted networks, locally hired staff
- Local backbone organization – maintain vision, track, coordinate with other delivery organizations and groups
- Long term commitment – homeowner action takes time, progressive steps
- Adaptive

What's next?

- SNAP Home Retrofit Program Evaluation and Neighbourhood Typologies (York University, OCC, MOECC)



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Thank you!



Forging innovative partnerships
for Multi-Unit Residential (MUR),
Industrial, Commercial and
Institutional (ICI) Renewal

The issues

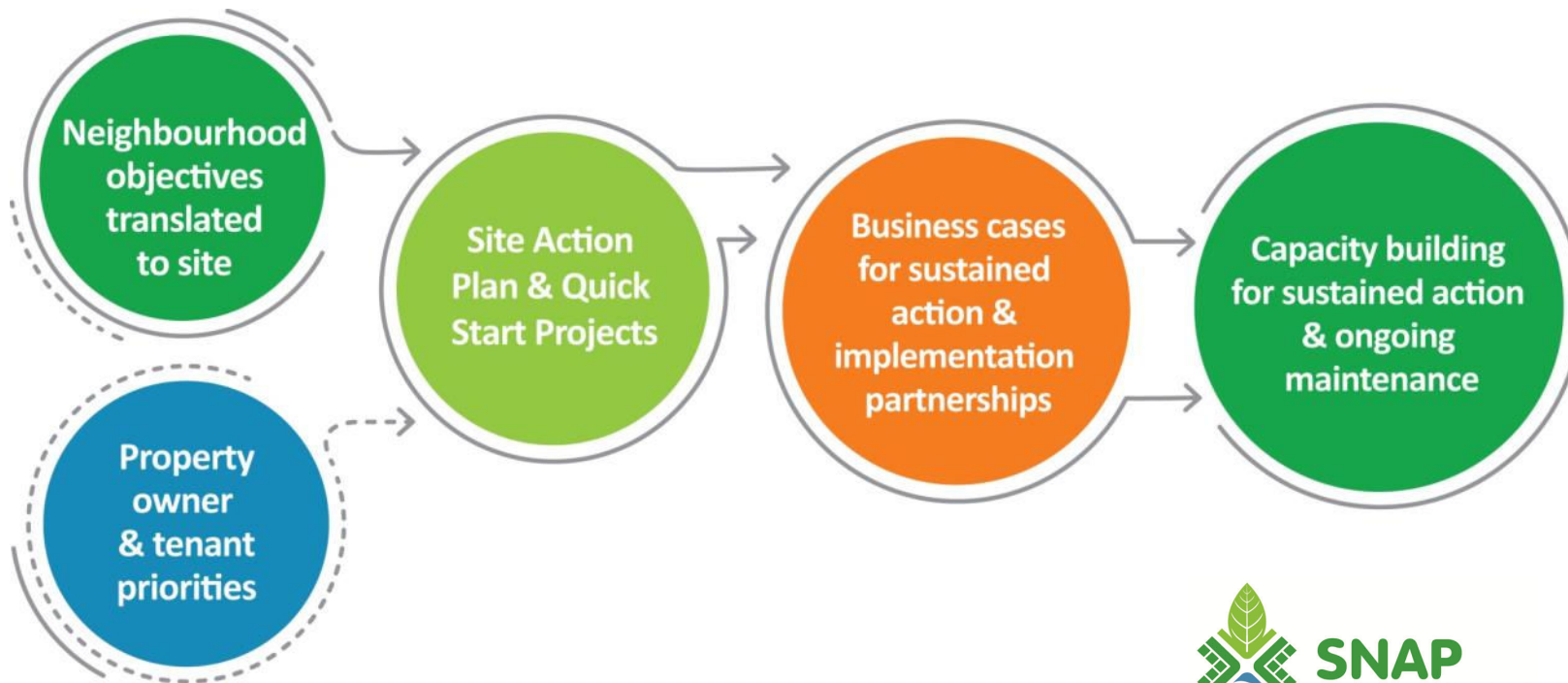
- Aging apartment towers & commercial buildings
- Underutilized, underperforming spaces
- Private ownership – engagement, public investment limitations
- Apportionment of cost/benefits among tenants/owners



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SNAP's Approach to MUR & ICI Revitalization



Examples of SNAP Projects in MUR & ICI



Depave Paradise in Co-op housing



Innovative energy technology pilot



Energy benchmarking in retail



Green Parking Lot Design

San Romanoway Tower Revival Project



Black Creek SNAP

Growing Food and Green Opportunities

1. Stormwater Management & Basement Flooding Prevention

2. Urban Forest Enhancement

3. Energy Conservation

4. Food Production Supported by Rain Water Harvesting

**Green
Jobs**



Black Creek | SNAP

San Romanoway Private Towers



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San Romanoway Resident Dreams shared at Pop-Up Park Event



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Edible balconies



148 Edible Balconies
Implemented in 6 towers

8 Residents hired & 200+
trained



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Outdoor Revitalization – Crowdsourced design competition



Master Plan



Outdoor Furniture



Skills Training:

- Carpentering Training for At-Risk Youth



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Allotment Garden Supported with Rain-harvesting



- 63 Plots- Sold out the first day!

Skills Training:

- Garden Management + Urban Ag. Training for Residents



Fruit Orchard, Naturalization & Pollinator Gardens Supported with Rain-harvesting



- 24 Fruit trees
- Over 1500 pollinator plants and 426 native trees

Skills Training:

- Certification for Residents on Orchard Management, Fruit Tree Care & Horticulture
- Internship Opportunities



Environmental Awareness and Community Pride through Arts & Culture



San Romanoway Revival Phase 2 Indoor Retrofits (Energy/Water)

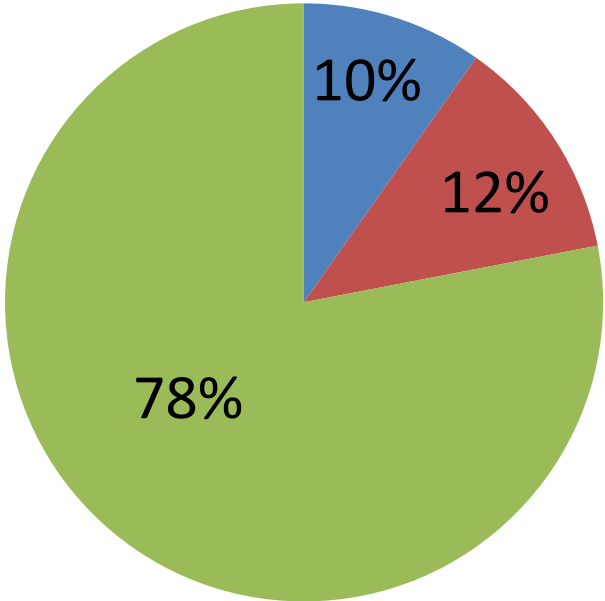


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San Romanoway Revival Funding Model

Total Project Cost: \$400K



- TRCA
- Property Owners
- Corporations and Foundations

Connecting with the Neighbourhood



Social Enterprise
Fruit tree care services



Intergenerational Skills
Sharing



Backyard Sharing



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Conclusions

- There is a great opportunity to achieve key sustainability objectives through revitalization of underutilized private spaces.
- Understand the needs and motivators of your target audience.
- Capacity building among tenants, local organizations and property managers for sustained programming and maintenance is especially important for revitalization projects on private property.

What's next?

- Growing recognition of the role for revitalized private spaces; new SNAP partnerships underway



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Questions?

Leveraging public infrastructure
renewal for multiple outcomes

Aging infrastructure and climate risks



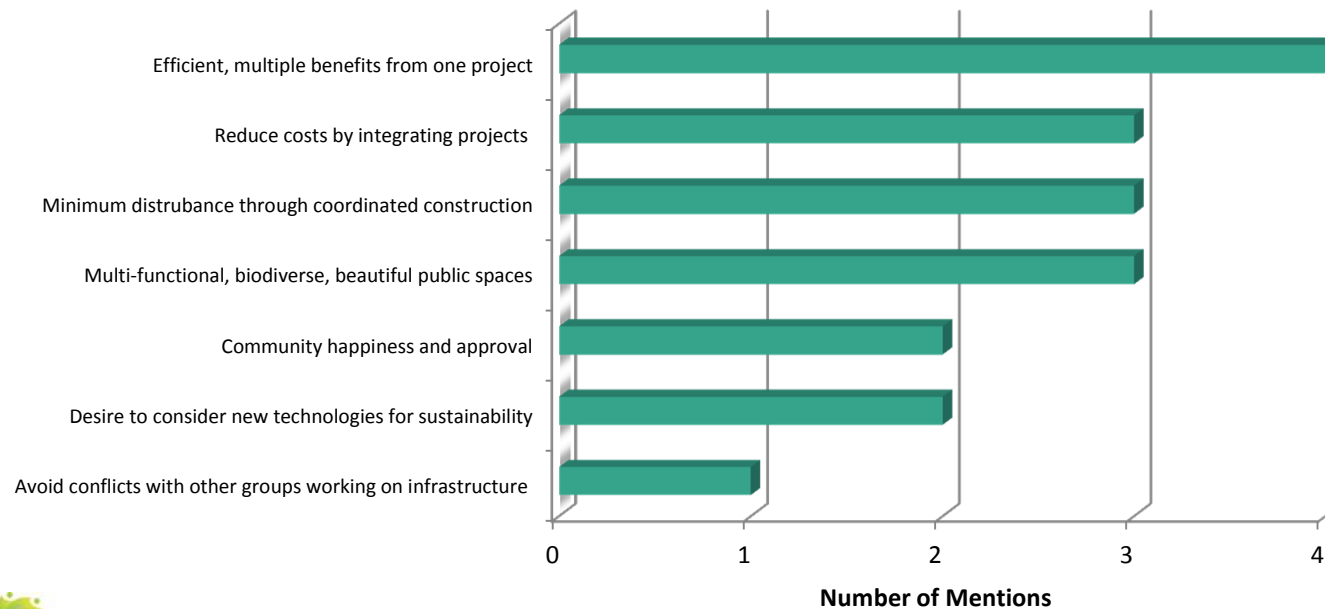
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Integrated Infrastructure Projects

“Integrated design means better projects with multiple benefits”

Why is an integrated approach to infrastructure renewal needed?



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Case Study #1: Glencrest Park Renewal Bayview Glen SNAP, Markham



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Glencrest Park – “Before”



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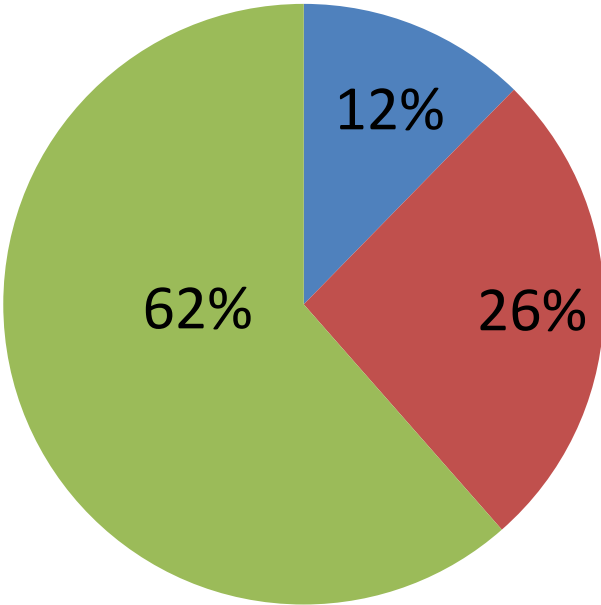
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Glencrest Park Renewal



A traditional storm sewer replacement project was re-imagined to add recreation, beautification and ecological function.

Glencrest Park Renewal – Funding Model

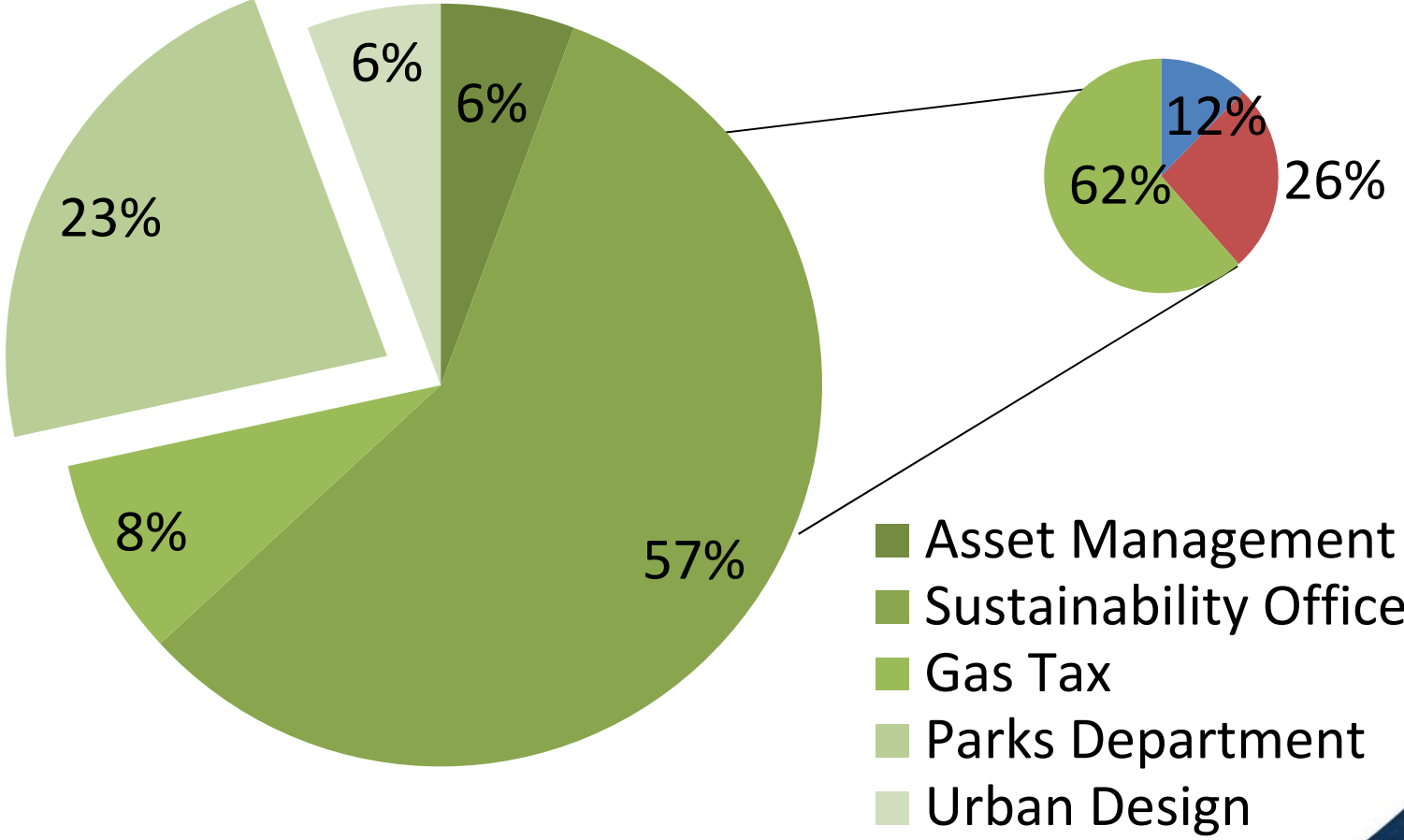


■ Private Sector

■ TRCA  RBC Foundation

■ City of Markham

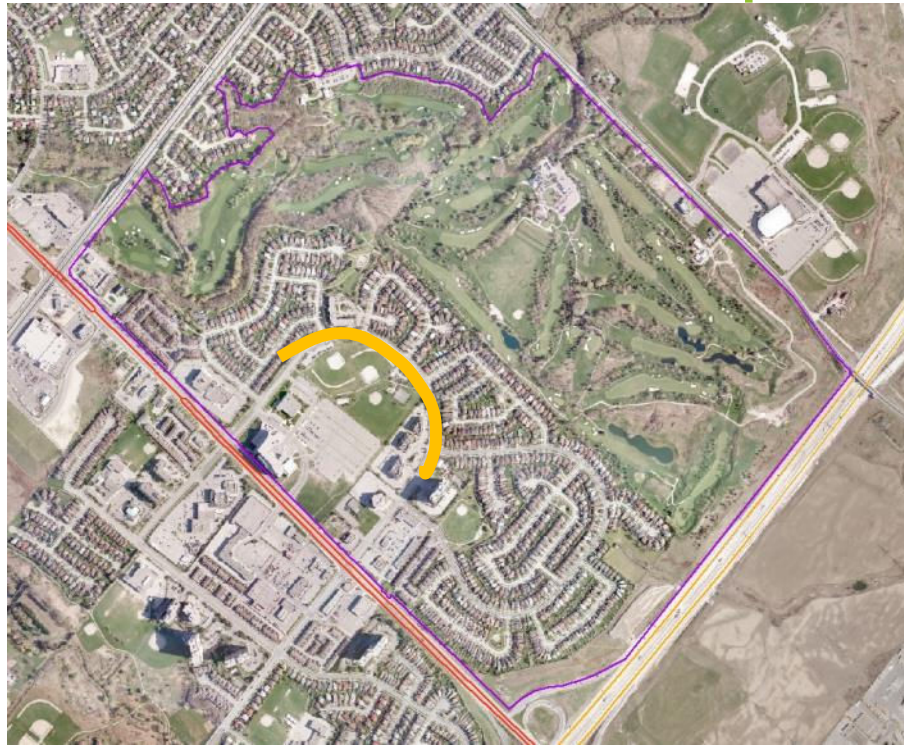
Glencrest Park Renewal – City of Markham’s Budget



Glencrest Park Renewal



Case Study #2: County Court Bioswale County Court SNAP, Brampton



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County Court Boulevard – “Before”



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County Court Bioswale



Demonstrating a strategic financing model and interdepartmental cooperation. Basis for engaging community and measuring outcomes



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Case 2(B): Upper Nine SWM Pond



Upper Nine SWM Pond Retrofit and Re-Use



Integrates stormwater treatment, community amenities and irrigation supply for golf course.

Example Lessons Learned

Barriers	Enablers
1. Scope and design limitations when projects are too far along planning and approvals process	<ul style="list-style-type: none">• Early identification of opportunities• Integration facilitator/coordinator
2. Silos, inflexible mandates, budgets, processes and workplans	<ul style="list-style-type: none">• Clear mandate for integrated projects• Flexibility to take advantage of opportunities
3. Buy-in, teambuilding, and ownership of project objectives	<ul style="list-style-type: none">• Select people with an innovation mindset; infuse “regular teams”• Set shared vision, responsibilities as a group
4. Unforeseen issues (a.k.a. you don’t know what you don’t know)	<ul style="list-style-type: none">• Build a buffer into project timeline• Keep focused on key goals

Conclusions

- Planned infrastructure renewal projects can be leveraged to achieve greater impact by taking an integrated, multi-objective approach
- SNAP's neighbourhood strategy can facilitate collaboration, inform project designs and build support for implementation
- Enabling factors can be established to help realize the full potential of integrated infrastructure projects.

What's Next?

- Neighbourhood Screening Process



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Thank you!



Strengthening community resilience
and measuring socio-economic
impacts

Why Resilience?

*“As the 21st century unfolds, an increasing majority of the world’s population will live in cities. **Human wellbeing** in cities relies on a complex web of **interconnected** institutions, infrastructure and information ...**stresses** [that] accumulate or **sudden shocks** ...may result in social **breakdown**, physical **collapse** or economic **deprivation**. That is, unless a city is resilient.”*

The Rockefeller Foundation and ARUP. 2017. City Resilience Index.



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What is Resilience?

*“Urban resilience is the **capacity** of individuals, communities, institutions, businesses and systems within a city **to survive, adapt and grow** no matter what kinds of chronic stresses and acute shocks they experience”*

The Rockefeller Foundation and ARUP. 2017. City Resilience Index.

Relevant Indicator Frameworks:

- Resilient communities
- Sustainable neighbourhoods
- Healthy communities
- Age Friendly communities
- Active neighbourhoods
- Etc.



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Alignment of Indicator Frameworks

CATEGORIES	Ecodistricts	Better Life Index (OECD)	Canadian Index of Wellbeing (CIW)	Genuine Wealth Model	Toronto Vital Signs	Wellbeing Toronto	Toronto Strong Neighbourhoods - Urban Heart @ Toronto	Peel Healthy Development Index	SNAP Socio-economic indicators
HEALTH AND WELLBEING	Access to Opportunity	Education	Education	Education	Learning	Education			Knowledge, education and skills training
	Active Living								Active Living
	Health	Health status	Healthy population	Health and wellness	Health and welfare	Health	Population Health		Mental Health Benefits
	Food Systems			Sustainable food production					Healthy and local food availability
		Jobs		Work	Work				Local employment and entrepreneurship
		Life Satisfaction		Happiness					
		Community wellbeing							Community cohesion and inclusion
			Time use	Time use					
CONNECTIVITY	Mobility				Getting around	Transportation			
		Accessibility of services							
	Digital Network								
	Culture and Identity		Leisure and culture		Arts and culture	Culture			
	Engagement and Inclusion	Civic engagement	Democratic engagement		Leadership, civic engagement and belonging	Civics and equity	Governance and Civic Engagement		Civic engagement
	Safety	Safety		Safety and crime	Safety	Crime			
			Community wellbeing	Community					Sense of Belonging

Key Action Areas:
 Natural Environment
 Built Environment
 People

SNAP's Strategic Approaches to Resilience

Natural and Built Environment:

- Home retrofit programs
- Innovative partnerships for MUR and ICI renewal
- Leverage infrastructure renewal for multiple actions

Community:

- Reframe environmental projects to deliver socio-economic outcomes
- * { • Empower community participants to become leaders
- Innovate engagement



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Objectives for Capacity Building and Community-Wide Engagement

Support Implementation:

- Cross-promote programs
- Foster peer-to-peer dialogue
- Celebrate and develop pride
- Measure and collect data

Achieve Health and Well-being:

- Create community connections
- Build community capacity and leadership
- Access healthy food
- Participate in active living
- Experience supportive environments and activities



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Empowering Community Participants to become Leaders



Innovative Engagement – Responding to local interests

Case Study: County Court Neighbourhood, Brampton



Enticing regular participation and community connections



Monthly Coffee
Nights

Profiling Champions, Building Capacity for Leadership



Green Home Champions

Formation of resident-led Neighbourhood Association

The Power of Local Networks



450+ residents participated in SNAP's 2017 County Court Neighbourhood Festival



60+ residents provided input to design of local SNAP stormwater pond retrofit project

Emergency Preparedness Planning



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SNAP Socio-Economic Indicator Domains



CATEGORY	DOMAIN
SKILLS TRAINING & INCOME OPPORTUNITIES	<ol style="list-style-type: none"> 1. Knowledge, education & skills training 2. Local employment and entrepreneurships
ECONOMIC BENEFITS	<ol style="list-style-type: none"> 3. Financial benefits
COMMUNITY ENGAGEMENT & CAPACITY BUILDING	<ol style="list-style-type: none"> 4. Civic engagement 5. Community ownership 6. Partnerships & collaboration
COMMUNITY CONNECTIONS	<ol style="list-style-type: none"> 7. Community cohesion & inclusion 8. Sense of belonging 9. Civic pride
HEALTH & WELLBEING	<ol style="list-style-type: none"> 10. Healthy & local food availability 11. Active living 12. Mental health benefits

Conclusions

- Neighbourhood scale is effective for community engagement
- Deep engagement takes time, needs regular presence, yields a strong foundation for sustained community-led action
- Socio-economic factors are often the drivers for action

What's next?

- Neighbourhood-scale vulnerability assessment and adaptation plans integrated with SNAP
- Tracking socio-economic metrics
- Local groups growing, raising funds, creating social enterprise



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Thank you!



Questions?

BREAK

Please post your WOW ideas on the wall.
Take a look at other WOWs!

PANEL – The Practical Realities

Interactive Activity – WOW! Inspiration “to go”

At tables – share your “WOW” ideas and discuss how you might apply them at home.

Credit: Ascentia

Wrap Up and Thank You!

@TRCA_SNAP



www.sustainableneighbourhoods.ca



Evaluation

Please fill out the form on your table or online (bit.ly/2BM9mq1)

Évaluation

Veillez svp compléter le formulaire sur votre table ou en ligne (bit.ly/2nz4sYr)



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