A Sustainability Planning Toolkit for Municipalities in Ontario

Prepared for

Association of Municipalities of Ontario

by

Blackstone Corporation
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in association with
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June 4, 2008

AMO Association of Municipalities of Ontario

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EXECUTIVE SUMMARY

A PRACTICAL NEW SUSTAINABILITY PLANNING GUIDE FOR ONTARIO'S MUNICIPALITIES

The Association of Municipalities of Ontario (AMO) has recently commissioned an Integrated Community Sustainability Planning (ICSP) Guide, which is provided on the accompanying CD. The Guide provides practical assistance to Ontario's municipalities as each considers measures to fulfill the spirit of the Federal Gas Tax (FGT) Agreement. Under the FGT Agreement, which is being renewed for another four years (to 2014), funds have been allocated to all of Canada's municipalities for investment in infrastructure that achieves cleaner air, cleaner water and lower greenhouse gases (GHGs). In return, municipalities are expected to show demonstrable progress towards sustainable community planning. This Guide provides a set of thirteen practical tools to enable any municipality to identify where it lies along a "sustainability continuum" and to choose the specific tools that are most appropriate to its unique circumstances, to realize tangible progress towards greater sustainability. These tools, based on lessons learned from case studies of various Ontario municipalities, provide practical advice regarding, for example:

- how to make the case for new sustainability planning;
- how to engage key stakeholders and the community as a whole;
- how to link sustainable planning with the new accounting practices related to the PSAB and the requirement of a Capital Investment Plan; and,
- how to collaborate as a group of municipalities (e.g. at a County level) to capture and effectively utilize FGT funding.

The Guide also describes some innovative and economically attractive approaches being taken by a number of Ontario's municipalities through a series of case studies. Interestingly, some of the most successful approaches do not require development of a "plan", but rather, reflect more of a "learn-by-doing, adaptive management approach".

ACKNOWLEDGEMENTS

This Guide would not be possible without the time and effort provided by many individuals and organizations who freely offered their ideas, stories and insights regarding the best ways to support municipalities to move towards greater sustainability. At the municipal level, our sincere appreciation and thanks go to representatives of: Frontenac and Huron Counties, City of Burlington, City of Guelph, Town of Collingwood, City of Pickering, City of Hamilton, City of Vaughan, City of Orillia, Town of East Gwillimbury, Southwest Middlesex, McGarry Township, City of Sudbury, Town of Markham, Town of Caledon, City of Kingston, Town of Orangeville and City of Ottawa. We would also like to thank, for their inputs: The Federation of Canadian Municipalities (FCM), The International Center for Local Environmental Initiatives (ICLEI), The CIEL (The Centre for Innovation and Entrepreneurial Leadership), Clean Air Foundation; Clean Air Partnership, Alberta Urban Municipalities Association (AUMA), Alberta Association of Municipal Districts and Counties (AAMDC), Local Authorities Services Limited (LAS), Jack McInnis of Durham SustainAbility, and Nigel Bellchamber. Infrastructure Canada and Agriculture and Agri Food Canada were also very helpful and are thanked for their contributions and insights.

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*see all case studies (one document)

INTRODUCTION

GUIDE TO SUSTAINABILITY PLANNING

WHY THIS GUIDE?

This Guide has been commissioned by the Association of Municipalities of Ontario (AMO) to encourage and empower municipalities in Ontario, whether big or small, urban or rural, to realize enhanced economic, environmental, social, and cultural sustainability. **Measures taken by Ontario's municipalities towards enhanced sustainability will fulfill the spirit of the Federal Gas Tax (FGT) Agreement,** which requires municipalities to demonstrate progress towards enhanced sustainability planning by 2010 in return for the Federal Gas Tax funds received.

The Guide provides a set of Sustainability "Tools" to assist municipalities to move in a positive direction towards greater sustainability that incorporate some of the latest in best practice as well as "lessons learned" from municipal sustainability planning experience in Ontario and other parts of Canada. It demonstrates, through a number of municipal case studies, that there are not only increasingly obvious environmental reasons to adopt a more sustainable course, but also compelling financial/business reasons for most of Ontario's municipalities to embrace new sustainability measures.

ARE ALL ONTARIO MUNICIPALITIES REQUIRED TO PREPARE AN INTEGRATED COMMUNITY SUSTAINABILITY PLAN (ICSP) UNDER THE FGT AGREEMENT?

Since 2005, each of Canada's municipalities have been receiving Federal Gas Tax (FGT) funding to enable municipal investment in eligible[1], incremental[2] environmentally sustainable municipal infrastructure that achieves either cleaner air, cleaner water or lower greenhouse gas (GHGs) emissions. While municipalities in other provinces across Canada are obliged to prepare "Integrated Community Sustainability Plans" (ICSPs) in order to receive FGT funds, **in Ontario the Oversight Committee has agreed that has an Official Plan is deemed to have fulfilled its obligation under the FGT Agreement.** If an Official Plan does not exist, then an ICSP should be prepared.

The 2007 Federal Budget committed to extend the FGT Fund across Canada by an additional five years (2010-2014), which will bring an additional, estimated $2.9 billion to Ontario's communities. When it comes time to renegotiate the Agreement in 2010, however, **municipalities must be in a strong position to demonstrate they have made progress towards greater sustainability.**

Some of Ontario's municipalities have already fulfilled the spirit of the Federal Gas Tax by initiating one or more sustainability-related planning processes, such as strengthening Official Plans, enacting Environmental Management Plans, developing "Integrated Community Sustainability Plans (ICSPs)", and/or engaging in the on-going implementation of projects and programmes supportive of sustainability. Other Ontario municipalities are still in their early stages.

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[1] See Appendix A for a list of eligible and ineligible projects.
[2] The Agreement specifies that Gas Tax Funding will be incremental to provincial infrastructure funding available to Municipalities and to Unincorporated Areas.

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GUIDE TO SUSTAINABILITY PLANNING (continued)

By 2010, when the next phase of Federal Gas Tax funding begins, it will be highly desirable for Ontario's municipalities, whatever your situation, to show that you have in fact taken some measure(s) towards greater sustainability since 2005 and/or that your municipality has a plan to take action in the near future.

This Guide is designed to help municipalities by first providing a method to self-identify where you are along a "sustainability continuum", and second by providing practical tools that can be selected on an as-needed basis to enable your municipality to move in a positive direction.

WHAT IS MEANT BY "THE SPIRIT" OF THE FEDERAL GAS TAX AGREEMENT AND HOW DO WE KNOW IF WE HAVE MET IT?

As noted above, for Ontario's municipalities, the existence of an Official Plan is sufficient, at a minimum, to meet the requirements of the FGT Agreement. However, the FGT provides guidance regarding what the underlying expectations are of the municipal planning process. Schedule G of the FGT Agreement establishes that a municipality should:

"…demonstrate through its existing planning instruments and processes or through the creation of new planning documents that the municipality has:

▶ A coordinated approach to community sustainability (e.g., linkages of various plans, planning and financial tools that contribute to sustainability objectives);

▶ Reflected and integrated social, cultural, environmental and economic sustainability [the "four pillars"] objectives in community planning;

▶ Collaborated with other municipalities where appropriate to achieve sustainability objectives; and,

▶ Engaged residents in determining a long-term vision for the municipality."

Section 8.1 of the Agreement also requires that all municipalities complete, prior to the end of the fourth year of the Agreement, a Capital Investment Plan (CIP). If an Official Plan and/or other initiatives fulfill these criteria, then the municipality has met the spirit of the FGT Agreement.

WHAT KINDS OF PROJECTS ARE ELIGIBLE FOR FUNDING UNDER THE FEDERAL GAS TAX (FGT) AGREEMENT?[3]

There is a considerable range of projects eligible for funding under the Federal Gas Tax (FGT) Agreement. Examples of projects that can be funded using Federal Gas Tax revenues are broad in scope:

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Figure 1: Eligible Projects Under FGT

PUBLIC TRANSIT INFRASTRUCTURE
- Rapid Transit
- Transit Buses
- Intelligent transport System (ITS)
- ITS technologies to improve signaling, etc.
- Capital investments (e.g. HOV lanes)
- Active transportation infrastructure
- Para transit

CAPACITY BUILDING
- Collaboration/partnerships
- Knowledge
- Integration/planning/policy

WATER INFRASTRUCTURE
- Drinking water supply
- Water purification
- Water distribution
- Water metering

SOLID WASTE MANAGEMENT
- Waste diversion
- Material recovery
- Organics
- Collection depots
- Waste disposal
- Gas recuperation

COMMUNITY ENERGY SYSTEMS
- Cogeneration/heat & power
- District heating/cooling

WASTEWATER SYSTEMS
- Sanitary & combined sewer systems
- Separate storm water systems

LOCAL ROADS & BRIDGES
- Local roads, bridges & tunnels
- Active transportation (bike lanes)

From a review of these projects, it is evident that the FGT Agreement wants funding to be allocated to projects that are consistent with objectives of enhanced sustainability. The FGT Agreement requires that municipalities develop Capital Investment Plans that incorporate the new PSAB requirements. One of the tools provided in this Guide addresses these new demands and shows how the Capital Investment Plan can begin to inform the decision as to how to spend FGT funding to maximum benefit.

DOES THIS GUIDE MANDATE A STEP-BY-STEP PROCESS THAT MUNICIPALITIES SHOULD FOLLOW, OR ARE THERE OPTIONS?

There is no single "right" approach to increase long-term sustainability. Every one of Ontario's municipalities is unique and different. Each has its own history, demographic make-up, geographic characteristics, and economic, environmental, social, and cultural challenges and opportunities. Some are growing rapidly while others are facing decline. Some are urban, some are rural, and some are both. Given these considerable variations,

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the prescription of any one process towards sustainability is unrealistic, and each municipality will, to some extent, need to "chart its own course".

This Guide offers options that represent very different, but valid and productive approaches. For example, some municipalities are choosing to prepare specific sustainability "Plans", such as "ICSP's, while others are pursuing more of a "learn by doing" project-by-project approach that does not entail preparation of a "Plan". Both types of approaches can produce impressive results and are offered as separate tools in this Guide.

Whatever the path chosen, sustainable development, defined by the Brundtland Commission's Our Common Future [4] in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", appears, today, to be more relevant than ever.

HOW IS THIS GUIDE SET UP?

As shown below, the Guide begins with a Self Assessment process that enables each municipality to quickly locate itself along a "sustainability continuum". The Guide continues with a series of "lessons learned" from the experience of municipalities in Ontario and other parts of Canada. Finally, there are 13 tools that municipalities are invited to pick and choose from, based on their self-assessment, and on their unique circumstances: This Guide has been prepared with two key goals in mind:

▶ **Simplicity:** Recommended steps should be clear, simple, logical and appropriate to the different needs and financial and human resource capacities of municipalities; and

▶ **Results:** Recommended steps should generate results and momentum, and avoid the pitfalls of "too much talk and not enough action."

Figure 3 shows the three straightforward steps to using this Guide, each of which is discussed in greater detail, in the remainder of this Guide.

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[4] World Commission on Environment and Development (WCED). Our Common Future. (1987).

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Figure 2: Three Steps to Using this Guide

Three Steps to Using This Guide

STEP 1:
Undertake Self-Assessment

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STEP 2:
Review "Lessons Learned"

↓

STEP 3:
Select Tools Appropriate to Your
Stage and Unique Circumstances

→

THE SUSTAINABILITY
"TOOLKIT"
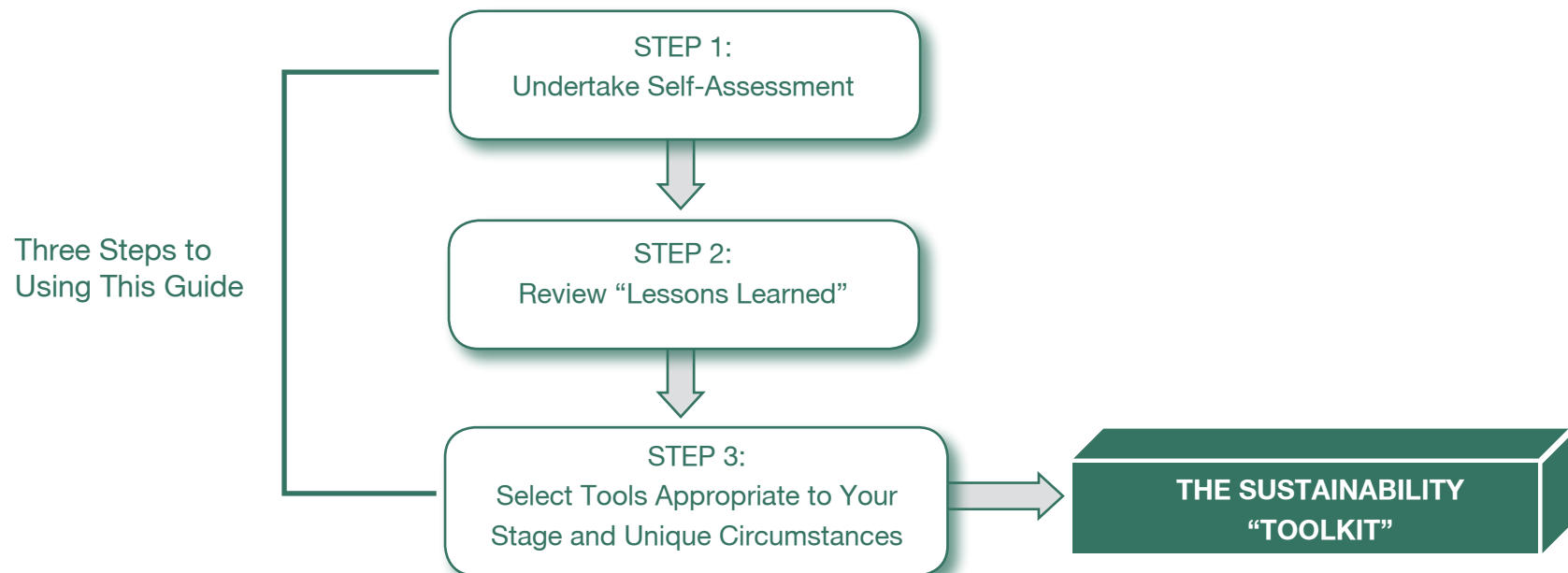
THREE STEPS TO USING THIS GUIDE EFFECTIVELY

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STEP 1:
Undertake Self-Assessment

IDENTIFY WHICH OF THE THREE STAGES OF SUSTAINABILITY APPLIES TO YOUR MUNICIPALITY?

| STAGE 1 Getting Started | STAGE 2 Planning/Implementation | STAGE 3 Embedding Sustainability |

Sustainability Continuum   X   Y   Z

STEP 2:
Review "Lessons Learned"

STEP 3:
Select Tools Appropriate to Your Stage and Unique Circumstances

THE SUSTAINABILITY "TOOLKIT"
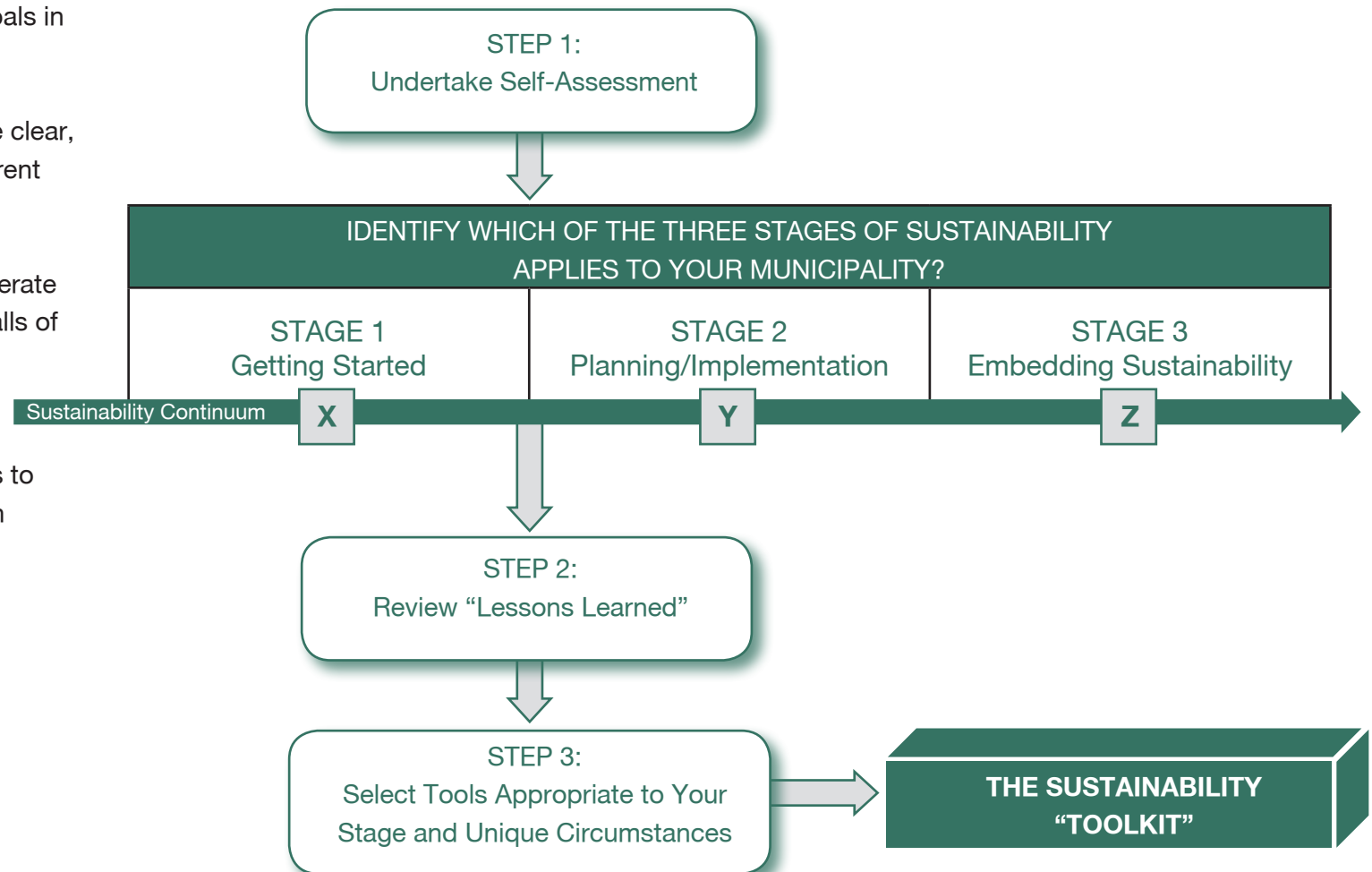
THREE STEPS TO USING THIS GUIDE EFFECTIVELY

Step 1:

Undertake a Self-Assessment of the Municipality's Place Along a "Continuum" Towards Sustainability

A straightforward approach has been developed to help you to self-identify in which of three "Stages" your municipality falls along a "sustainability continuum", whether it is:

▶ **"Getting Started";**

▶ **"Planning and Implementation"; and,**

▶ **"Embedding Sustainability" as a routine part of day-to-day decision-making.**

Completion of this self-identification task will make it easier for you to identify the processes and tools that may be most appropriate and applicable to move your community towards greater sustainability.

Step 2:

Take Time to Review "Lessons Learned" to Build on the Experience of Other Municipalities

The review of lessons learned from the experience of municipalities from Ontario and other jurisdictions that are actively moving towards greater sustainability will help you to avoid some pitfalls and build on the positive experience of others.

Step 3:

Select & Implement Tools Appropriate to Your Stage and Unique Circumstances

The "Toolkit" contains thirteen tools. While some tools may be applicable and useful to all municipalities whatever their stage along the continuum, others will be more relevant to one stage than another. It is designed so that each municipality can select the most appropriate combination of tools, depending on its own unique circumstances.

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 1: LOCATE YOUR MUNICIPALITY'S STAGE ALONG A SUSTAINABILITY CONTINUUM

a) Review Characteristics of the Three Stages of Municipal Sustainability

Based on case studies of various Ontario municipalities' paths to sustainability, three general Stages have been identified. A series of criteria distinguish these three Stages from each other, as briefly described below and elaborated in Table 1.

▶ **STAGE 1: Inactive/Getting Started:** Many of Ontario's municipalities are in this stage, where limited or no sustainability-related planning or projects have been undertaken. In some cases, municipalities in this stage may have good intentions but simply have not yet started sustainability planning, while in others, the status quo is considered satisfactory. In some cases, municipalities may be experiencing economic, socio-cultural and/or environmental decline. Council will not likely have endorsed "sustainability" as a goal. In many of these cases, there may be relatively low awareness of any practical financial, economic and other reasons for adopting new measures to move the community in a positive direction along the sustainability continuum.

▶ **STAGE 2: Planning and Implementation:** Typically, for municipalities in this stage, Council will have endorsed a statement that reflects some commitment to the pursuit of sustainable systems. Some level of planning that touches on sustainability has likely occurred beyond the required minimum, although this planning has been basically sectoral in nature (e.g., transportation, energy, water), and may involve the formal adoption of Plans by Council, and/or implementation of specific projects. Some level of community engagement and "visioning" will have taken place, however, community engagement is often limited to the "same old crowd" and decisions are made in traditional silo/departmental ways. While there is some recognition of the importance of sustainability measures, progress is being hampered by a number of barriers (e.g., lack of community/Council buy-in, limited funds, lack of partnerships with community/business interests, continued silo approaches to decision-making, lack of systems to measure benefits of sustainability").

▶ **STAGE 3: Embedding Sustainability:** Relatively few of Ontario's municipalities have reached this advance stage along the sustainability continuum, which may be characterized by, among others:

▷ Adoption by Council of a formal resolution that explicitly makes sustainable development a priority;

▷ Integrated decision-making across departments to capture benefits of sustainability;

▷ Increasing proportion of staff trained in sustainability;

▷ Widespread engagement of the community, business and NGOs, and evident "ownership" of plans;

▷ Longer term planning, with or without formal "Sustainability Plans";

▷ Increasing monitoring and evaluation of the on-going projects being implemented;

▷ Increasing momentum towards even more sustainability initiatives as a result of the successes and savings;

▷ Increasing financial savings and economic, social and environmental benefits.

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

Table 1 – MUNICIPAL SELF-ASSESSMENT ALONG A SUSTAINABILITY CONTINUUM

VARIABLE	STAGE 1: INACTIVE/GETTING STARTED	STAGE 2: PLANNING & IMPLEMENTATION	STAGE 3: EMBEDDING SUSTAINABILIY
PLANNING	▶ Single-sector/few plans beyond those required	▶ Several plans completed (energy, transportation, waste management, etc.)	▶ Sustainability Plans are prepared and/or a "learn-by-doing"/adaptive management approach is used (See Tools 7 and 8)
COMMUNITY ENGAGEMENT	▶ Rare public engagement related to sutainability	▶ Committees formed ▶ Community engagement is high in some instances, but not in others ▶ Engagement of broad community base is limited	▶ Business/NGO partners involved in implementation ▶ Community support and awareness are high ▶ Higher level of civility in community-Council interactions
POLITICAL BUY-IN	▶ Perception of other more pressing concerns than sustainability per se	▶ Council has endorsed sustainability	▶ Office of Sustainability created and/or long-term vision of sustainability endorsed and guides decisions
DECISION-MAKING PROCESS	▶ Silo approach with rare consideration of integrated planning/sustainability impacts	▶ Primarily a silo approach with occasional inter-departmental meetings	▶ Inter-departmental meetings have become common practice
COLLABORATION	▶ Little contact with neighbouring municipalities regarding sustainability initiatives	▶ Rare contact made with no active collaboration strategy	▶ Neighbours consulted regarding opportunities across boundaries
VISION/PLANNING HORIZON	▶ Generally short-term decision-making ▶ Outlook is for continuing on an "as is" course	▶ Planning and/or Plans prepared for some sectors include vision processes	▶ Long-term thinking is more prevalent for some sectors (e.g. energy) though long-term "backcasting" may, or may not be deemed appropriate
ADAPTABILITY TO CHANGE	▶ Need for adaptability may not be seen as an issue	▶ Change is recognized as necessary ▶ Openness to change exists	▶ Need for fluidity of decision-making is recognized and built into programming
CAPACITY	▶ Often constrained human and/or financial resource capacity	▶ Greater human resource capacity training	▶ Staff trained in sustainability
	HOW DO WE MOVE?	HOW DO WE MOVE?	HOW DO WE MAINTAIN? / ADAPT?

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 1: LOCATE YOUR MUNICIPALITY'S STAGE ALONG A SUSTAINABILITY CONTINUUM

b) *Self-Identify Which Stage Your Municipality Is In*

In order to determine which Stage your municipality is in, consider the variables highlighted in Table 1 with respect to your municipality's particular circumstances.   This subjective self-assessment should be completed taking into consideration the following four main goals of sustainability highlighted in the FGT Agreement:

▶ **a coordinated approach to community sustainability** (e.g., linkages of various plans, planning and financial tools that contribute to sustainability objectives);

▶ **integration of social, cultural, environmental and economic sustainability objectives** in community planning;

▶ **collaboration with other municipalities** where appropriate to achieve sustainability objectives; and,

▶ **engagement of residents** in determining a long term vision for the municipality.

In some cases, you may find that your municipality straddles two Stages (e.g., you have political buy-in suggesting you are in Stage 2, but for other variables you are in Stage 1).   This self-assessment of your municipality on a variable-by-variable basis will allow you to more effectively choose Tools most useful to your situation, and to develop a vision of where you would like to be in the next five to ten years.

The following type of Self-Assessment Indexing Diagram (Figure 4) can be an effective visual method of evaluating your current 'sustainability status' and presenting results to the public. Rank the current status of each variable on a scale of 1 to 10 and plot the rankings. With the goal of a perfect circle, this diagram provides a simple picture of where more work is required to enhance overall sustainability. The municipality can also use this tool to periodically reassess their status and visually highlight areas of change.

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 1: LOCATE YOUR MUNICIPALITY'S STAGE ALONG A SUSTAINABILITY CONTINUUM

Figure 4: Indexing Diagrams

Sample Municipal Self Assessment –
A Municipality in Stage 1
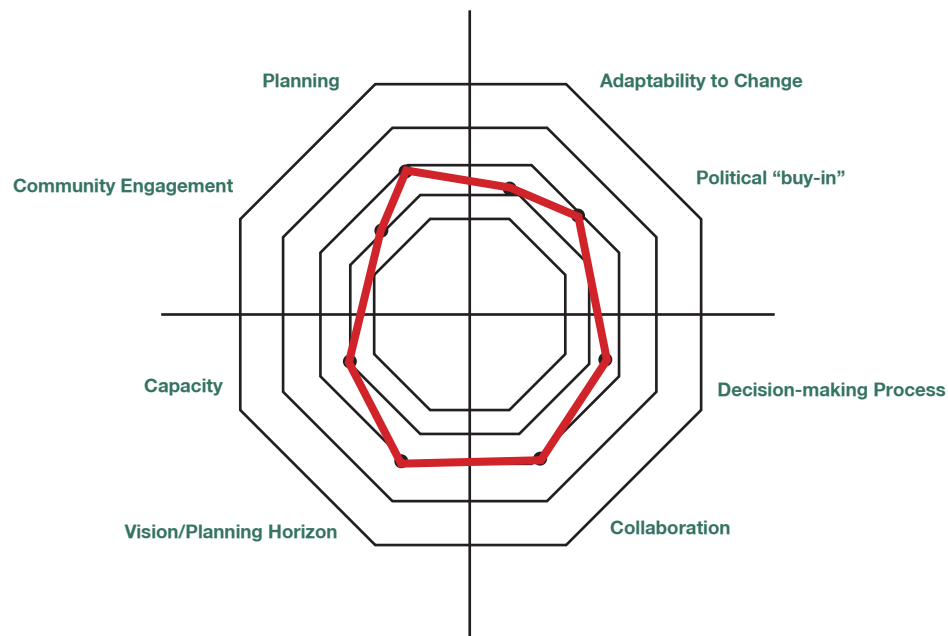
Sample Municipal Vision Process –
Goal of Municipality for Next 5 Years:
Increased Capacity, Planning, etc.

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 2:   REVIEW LESSONS LEARNED

This Guide builds strongly on key lessons learned from municipalities from Ontario and across the country, some of which are highlighted below:

> **"Without clear motivation and "buy-in", sustainability efforts are not likely to succeed…"**

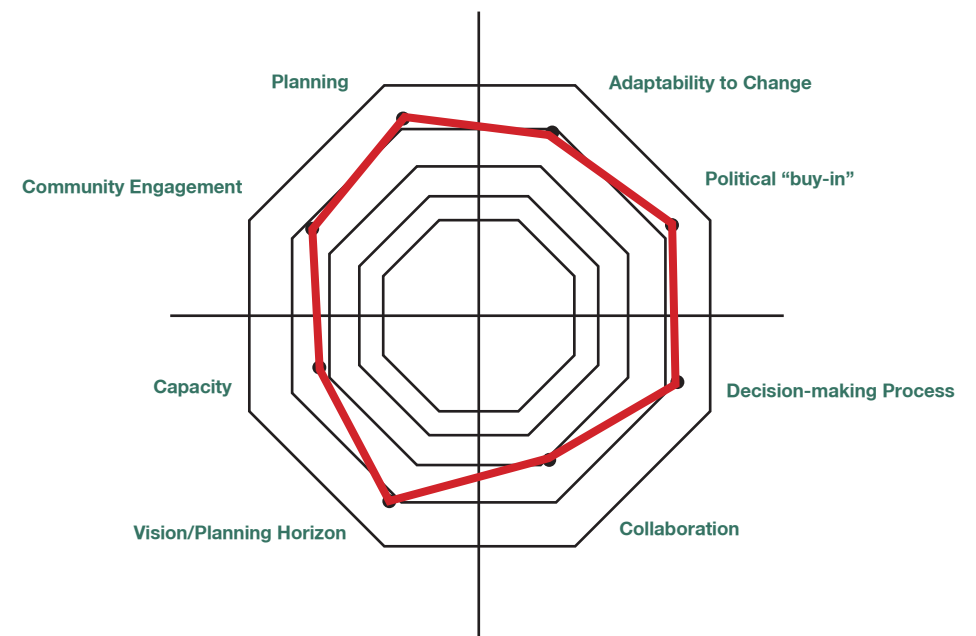▶ **Keep it simple!**

▶ **Sustainability processes succeed when the motivation for them is made clear.** There are practical and compelling reasons for most municipalities to take measures towards greater sustainability. A tool related to making the business case is provided in the Toolkit to enable municipal champions of sustainability to articulate the value of sustainability planning to their municipal leaders.

▶ **The early buy-in of Council and the CAO is essential to realizing meaningful and lasting movement along the sustainability scale:** With Council's support in place, valuable social and financial capital can be optimized.

▶ **Generally, people are becoming more receptive to the sustainability message:** Businesses and the community at large are often surprisingly supportive. Don't be surprised if they are even ahead of government in their desire for, and willingness to support, sustainability measures.

▶ **Best results come when a plan/course of action is "owned" by the larger community:** A plan or project that is perceived as "the government's plan" risks failure. Community-wide ownership needs to be developed.

▶ **One of the biggest challenges related to getting "buy-in" is achievement of meaningful stakeholder engagement:** Tool 9 of the Toolkit provides a discussion of the techniques and approaches that appear to be working in municipalities that are having success in overcoming this barrier. (See 🔗 Tool 9)

▶ **An important distinction needs to be made between the general public and key stakeholders in the pursuit of sustainability:** The experience of successful municipal sustainability initiatives shows that the engagement of respected local leaders and key stakeholder groups can play a major role even before obtaining the support of the community as a whole. Partnerships with community organizations (NGOs/CBOs/private sector) are critical elements of ownership, buy-in and success. Such ownership reflects the stake that people feel in the plan's realization.

▶ **Broad community consultations cannot be useful or meaningful until a municipality has credible information and a case to put in front of the general public.** There needs to be "meat on the bones" before you get the public involved. In the absence of good information, any "vision" process may be wishful thinking.

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 2: REVIEW LESSONS LEARNED

"Preparation of a specific "Sustainability Plan" or formal ICSP may not be appropriate for every municipality…"

▶ **Some municipalities are suffering from "Plan" fatigue,** particularly when they have already completed several (e.g., Official, Transportation, Energy, Water, Transit Plans, etc.), all involving community "visioning" processes, priority setting, etc.. For these, the most effective next step may not necessarily be a formal ICSP, even if it could be prepared largely based on existing information. While providing a methodology for preparation of an Integrated Community Sustainability Plan (see ⦿ Tool 7), other tools within the Toolkit also offer other positive opportunities for action.

▶ **One such option, which has proven to be highly successful, is the adaptive management approach** (see ⦿ Tool 8). More descriptively termed a **"learn by doing"** model, it involves implementation of successive sustainability projects/programmes over a period of years. These initiatives not only generate their own results, but also gradually create a critical mass of informed and involved community members, as well as partnerships. This incremental approach is advocated by some of the municipalities who have arguably moved the farthest and fastest along the sustainability continuum, and may be suited to municipalities in any of the three stages of development.

▶ **Demonstrable, visible results need to be produced early in the process, and thereafter on a regular basis.** Many stakeholders note that momentum is created and sustained if tangible results are realized in the short term. A corollary of this lesson is to avoid "too much talk and not enough action."

"Organizational considerations also affect the success of sustainability-related efforts…"

▶ **Rural municipalities may wish to consider the option of pooling resources to prepare a regional or county-wide ICSP.** Financial benefits and value-added may be associated with a regional approach to sustainability planning (see ⦿ Tool 2).

▶ **Staff capacity building contributes to a common base and language regarding sustainability and is** seen as invaluable by those who have done it.

▶ **Performance monitoring and evaluation are important and necessary, but can be expensive.** Municipalities have almost universally indicated that measures of progress are essential. However, the collection of baseline information and on-going monitoring can involve substantial cost. The Toolkit includes guidance regarding cost-efficient assembly of baseline data and development of monitoring programmes.

▶ **Realization of sustainability requires integrated, cross-sectoral decision-making.** Municipalities that have become highly involved in sustainability planning agree that inter-departmental data sharing and interactions are important.

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 3: SELECT TOOLS MOST APPROPRIATE TO YOUR STAGE AND SITUATION

Using the Figure 5, below, select Tools that are most applicable to your Stage. While you can pick and choose any or all Tools of most value to you, some specific Tools are recommended for each Stage. For example:

▶ Stage 1 municipalities may find the first four tools particularly valuable (e.g. "Making the Case", "Structuring the Process", "Agreeing on the Meaning of Sustainability", etc).

▶ Stage 2 municipalities that are already engaged in planning and implementation may find the two main options (ICSP preparation versus the alternative approach – Adaptive Management) worth considering, along with tools related to stakeholder engagement.

▶ Stage 3 municipalities may find tools related to performance indicators particularly useful.
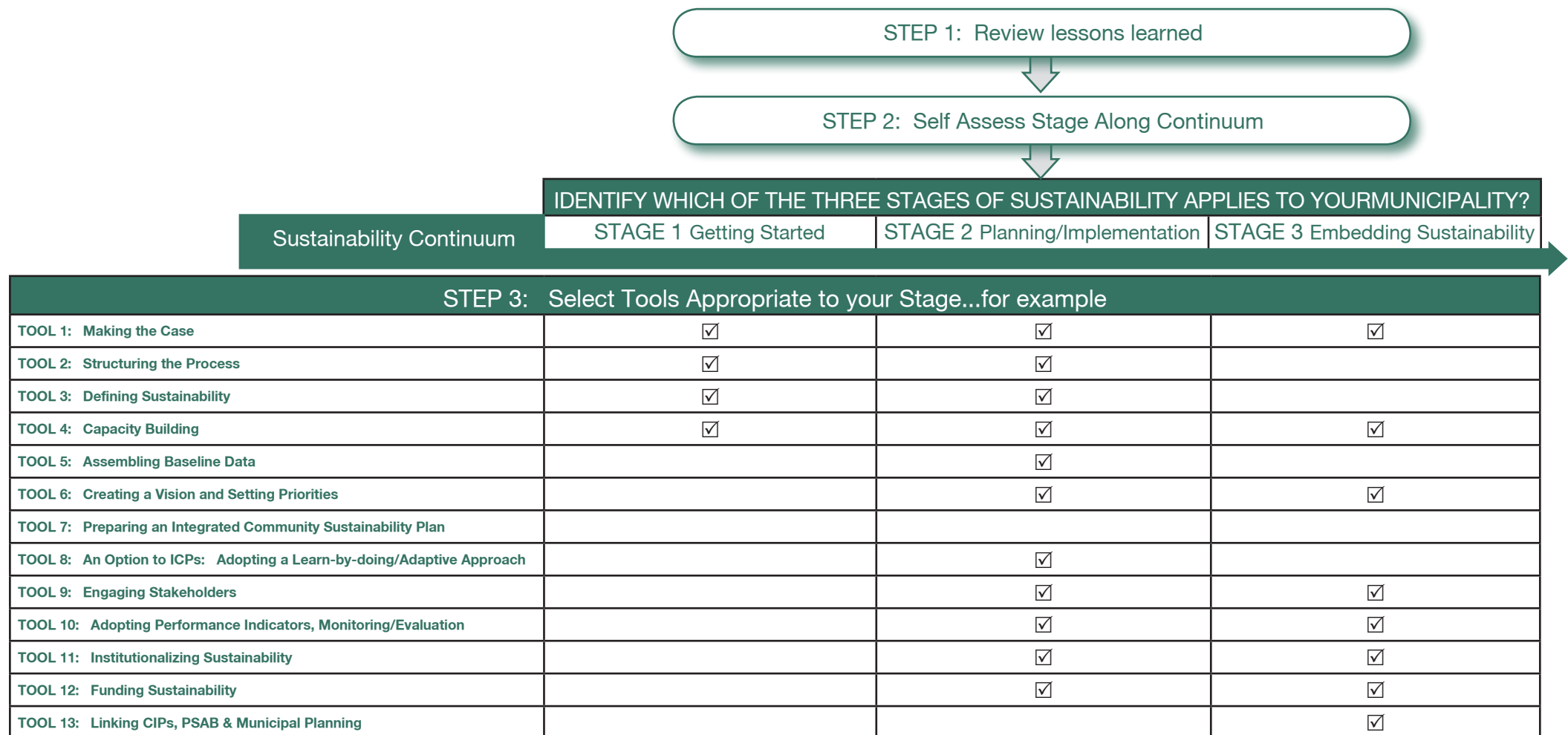
Tools relating to funding, and to the new PSAB and Capital Investment Plan requirements, and their relevance to sustainability planning may be of interest to all municipalities, whatever their stage:

THREE STEPS TO USING THIS GUIDE EFFECTIVELY

STEP 3: SELECT TOOLS MOST APPROPRIATE TO YOUR STAGE AND SITUATION

Figure 5: Selecting Tools to Meet Your Municipality's Needs

STEP 1: Review lessons learned

STEP 2: Self Assess Stage Along Continuum

IDENTIFY WHICH OF THE THREE STAGES OF SUSTAINABILITY APPLIES TO YOUR MUNICIPALITY?

Sustainability Continuum	STAGE 1 Getting Started	STAGE 2 Planning/Implementation	STAGE 3 Embedding Sustainability
STEP 3: Select Tools Appropriate to your Stage...for example			
TOOL 1: Making the Case	☑	☑	☑
TOOL 2: Structuring the Process	☑	☑	
TOOL 3: Defining Sustainability	☑	☑	
TOOL 4: Capacity Building	☑	☑	☑
TOOL 5: Assembling Baseline Data		☑	
TOOL 6: Creating a Vision and Setting Priorities		☑	☑
TOOL 7: Preparing an Integrated Community Sustainability Plan			
TOOL 8: An Option to ICPs: Adopting a Learn-by-doing/Adaptive Approach		☑	
TOOL 9: Engaging Stakeholders		☑	☑
TOOL 10: Adopting Performance Indicators, Monitoring/Evaluation		☑	☑
TOOL 11: Institutionalizing Sustainability		☑	☑
TOOL 12: Funding Sustainability		☑	☑
TOOL 13: Linking CIPs, PSAB & Municipal Planning			☑

THE SUSTAINABILITY TOOLKIT

TOOL 1:   MAKING THE CASE FOR SUSTAINABILITY

WHY THIS TOOL?

As highlighted under Step 2, lessons-learned have shown that both the commitment of Council and early 'buy-in' by stakeholders are essential to realizing meaningful and lasting movement along the sustainability continuum. This Tool sets out the very practical business case as to why sustainable planning and programming are essential to municipal futures. It provides a basis for municipal leadership to consider the answers to the following questions, among others:

▶ Why are some municipalities adopting sustainability plans and activities? What are the benefits?

▶ What is the likely future for our community if we continue the path we are on?

▶ Do we want, or can we afford, to continue in the direction we are heading, or do we know that change is needed?

▶ Do the costs of sustainable development initiatives outweigh the benefits?

▶ How can we make a strong case to get started?

▶ Is sustainability planning relevant to small communities and rural areas?

It draws together relevant experience and leading edge research to inform municipal stakeholders of the often compelling economic, environmental and socio-cultural arguments for moving towards greater sustainability.

THE BUSINESS CASE

1. TRADITIONAL MOTIVATIONS

While *compliance* with environmental and other planning regulations has been a longstanding motivator, on the horizon and approaching fast is a new generation of sustainability-related legislation/regulation to address greenhouse gas emissions.

Voluntary sustainability planning is being undertaken by some municipalities:

▶ To address serious, interrelated problems (polluted air and water environments; loss of industry and jobs; a reduced tax base; decaying infrastructure; loss of skilled labour force, etc.).

▶ To increase and build on the benefits they have already seen from implementation of sustainability-related projects (e.g. Partners for Climate Change; 3R's and water initiatives, etc. (See for example, ⬚ Pickering and ⬚ Sudbury case studies.)

▶ To avert costly problems such as water shortages, inefficient energy/transportation systems, etc., by beginning to plan now.

TOOL 1:   MAKING THE CASE FOR SUSTAINABILITY

2. THE FINANCIAL CASE

To be eligible for some important Federal and/ or provincial municipal infrastructure funding programmes[5] municipalities are required to demonstrate municipal sustainability planning efforts:

The Federation of Canadian Municipalities' **Green Municipal Fund** (GMF), for example, lists links to a "sustainable community plan" as "a common pre-requisite" for its Capital Fund.   It is reasonable to expect that many future funding programmes will require the demonstration of some form of community sustainability planning.

In order for municipalities in Ontario without Official Plans to receive Federal Gas Tax funding, they must have an Integrated Community Sustainability Plan:

Frontenac County in Ontario (see 🔗 Frontenac case study) and Kings County, Nova Scotia are examples of proactive leadership.   In both cases, member municipalities have joined with the County to share

both the costs of preparing an ICSP and FGT proceeds. Such planning will bring important FGT revenues to residents.

There is a limited financial downside to sustainability planning. There are funding sources that will pay for a percentage of the cost of preparation of a municipal sustainability plan, thereby reducing the expense to a municipality. (See 🔗 Tool 12 - Funding Sustainability].

Experience of many municipalities in Ontario shows that there are significant cost savings that can accrue to a municipality's bottom line from sustainability planning and programming initiatives[6]:

▶ **Demand-side management (DSM)** of water, gas, and electricity.

▶ **Capturing of secondary resource value:** Selection of infrastructure that generates useful by-products (e.g. biomass to biogas; waste heat used for cogeneration; 3Rs).

▶ **Siting of facilities to realize efficiencies.**

▶ **Engaging natural (biological and passive) functioning:** Use of gravity, geothermal energy or sunlight/wind instead of fossil fuels.

▶ **Strengthening local resilience to disruptions:** Development of multiple, local renewable energy sources, buffering communities against power outages.

Many of Ontario's municipalities are already taking the initiative and are realizing considerable savings through a variety of measures. Case studies linked to this Guide provide examples of some of them. Among others, several municipalities have converted all municipal lighting to energy efficient systems after doing a business analyses that showed it would pay for itself over time. (See case studies for 🔗 Burlington, 🔗 Markham and 🔗 Orillia). Several have changed their arenas and pools to energy efficient systems, realizing thousands of dollars annually in savings.   McGarry Township has started a modified Blue Box programme using Federal Gas Tax revenues, thereby achieving positive financial

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5   See 🔗 Tool 12 for links to funding sources.
6   Refer to the Federation of Canadian Municipalities' extensive and invaluable sustainability-related data base, icluding those listed under its Centre for Sustainable Community Development. See 🔗 www.fcm.ca

TOOL 1:   MAKING THE CASE FOR SUSTAINABILITY

and environmental results (See McGarry case study).   Caledon (see Caledon case study) is one of the first[6] Ontario municipalities to purchase Bullfrog Power, the Province's first 100% "green" electricity retailer, which provides clean, renewable power. Its Recreation and Wellness Centre has a cogeneration facility that generates its power. The Municipality of Greater Sudbury, through its extensive energy efficiency programmes, has saved over $1 million per year for its citizens (see Sudbury case study).

3.   THE ECONOMIC CASE

Emerging research shows that the most successful communities of the future may be those that have placed strategic, high-priority emphasis on quality-of-life conditions.

There is a body of emerging research indicating that we have undergone a paradigm shift from an industrial society to a "creative economy"[7], whereby the most valued and competed for segments of the labour market are increasingly motivated not simply by money but by the quality of the place they live in. Affordable housing, creative design, energy and transportation efficiency, rich cultural expression and tolerance, recreational and green spaces and stakeholder inclusion are among the ingredients that will enable urban areas to compete successfully for the highly desirable creative class and for investment capital. As energy costs rise, society will increasingly be looking for affordable, energy efficient housing, efficient transportation and short travel distances to and from work. Those centres that make these sustainability-related goals their priority will attract investment, talented work forces and economic growth.

East Gwillimbury Council has shown leadership by adopting a municipal policy in 2006 directing all new Town facilities and new industrial, commercial, institutional and high-rise residential buildings within the municipality to be built to LEED "Silver", "Certified" or "Made in East Gwillimbury" standards (depending on the building's size). (See East Gwillimbury case study).   The Town of Caledon has established development charge discounts for developers who build to higher standards (see Caledon case study). One of the rationales of Frontenac County for undertaking an ICSP was that "it's easier to attract new investors if you can tell them where you're going…You either react, or you take control and determine your own future" (See Frontenac case study).

There is also leading edge research being applied to rural communities.

Emerging rural-related research supports the preceding "creative economy" discussion, as it, too, indicates that we are undergoing a transformation[8]. Rural centres can maintain or reacquire their vitality if they can appeal to a new form of workforce who, by virtue of technology, often does not need, or want, to be in a big city. Those rural centres that provide quality of life conditions and values, as embodied by sustainability principles, can successfully compete for this type of workforce. Huron County, which is predominantly rural, has created **"Sustainable Huron"** (See Huron case study), a community-wide initiative led by County officials to raise awareness and develop actions to reduce Huron's vulnerability and to enhance community

7   See Richard Florida: _The Rise of the Creative Class, The Flight of the Creative Class_, etc. or www.creativeclass.com
8   See sohodojo.com/ribs/support-economy.html

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capacity in the face of global macro-factors such as peak oil, global competition, demographic change, environmental stress, and geopolitical conflict. It is undertaking a widespread community consultation effort to identify sustainability principles and goals of its residents, and represents a good example of a visionary rural sustainability initiative.

CIEL, the Centre for Innovative and Entrepreneurial Leadership, a Canadian-based group,[9] has developed a "community matrix" and a Community Vitality Index (CVI) that is being applied to rural communities in Canada in order to enable them to increase their economic vitality through measures that are largely related to the pillars of sustainability. (See ⬭ CIEL case study).

4.   THE ENVIRONMENTAL CASE

The environmental rationale is at the foundation of the original coining of the phrase "sustainable development."   To the extent that we deplete our natural resources at a greater rate than we can replace or renew them, we are on a path that

threatens our planet's survival.   Climate change, water and air quality degradation, depletion of non-renewable resources, and unsustainable use of our renewable resources all hold potentially disastrous consequences to our communities' health, and economic and social welfare.   A sustainable environment is the foundation that supports our economies and our ability to live healthy lives.

The interdependence – the inseparability - of economic viability, environmental health and societal well-being is at the heart of sustainability. You cannot have a healthy economy or society over the long term if you pollute the environment. Without a healthy economy, people will not be attracted to the community.

Just as shareholders demand good corporate oversight when they invest in a corporation, residents are increasingly looking to their municipal governments for responsible governance that goes beyond bottom line considerations into more intangible, quality of life variables. At some point, communities and leadership recognize that the

pursuit of sustainability is simply the right thing to do.   (See ⬭ Burlington, ⬭ Pickering, ⬭ Sudbury, ⬭ Markham and ⬭ Caledon case studies, for example.)

5.   THE CULTURAL CASE

Cultural heritage can be a more elusive sustainability goal and yet, achievement of cultural heritage preservation and an emphasis on cultural expression can have very positive impacts on achievement of social, economic and environmental goals. Orangeville (See ⬭ Orangeville case study) provides a good example.   The Municipality had placed a sustained emphasis on heritage preservation through the 1970s, 1980s and 1990s. Heritage interests became threatened when, in the late 1990s, Walmart began to indicate interest in locating at a location outside of the downtown area. The development proposal was contested at the Ontario Municipal Board, as studies indicated that it would likely impact Orangeville's historic BIA/ downtown core and member businesses' viability. As a settlement to its successful OMB appeal, the

TOOL 1: MAKING THE CASE FOR SUSTAINABILITY

Town and BIA, rather than accepting a cash buy-out from Walmart, negotiated that Walmart become a member of the BIA. Under this arrangement, it has paid annual BIA dues based on its property's assessed value. (To make this happen, the City amended the BIA Bylaw to include the Walmart Property in the BIA).   The increased revenues flowing from Walmart's contributions to the BIA have enabled investments in beautification, tree planting, street festivals and other initiatives that maintain and enhance the heritage and economic values of the downtown. This model has been adopted for other "box stores" that have since come to Orangeville, enabling BIA levies to increase by 400% between 1997 and 2003.
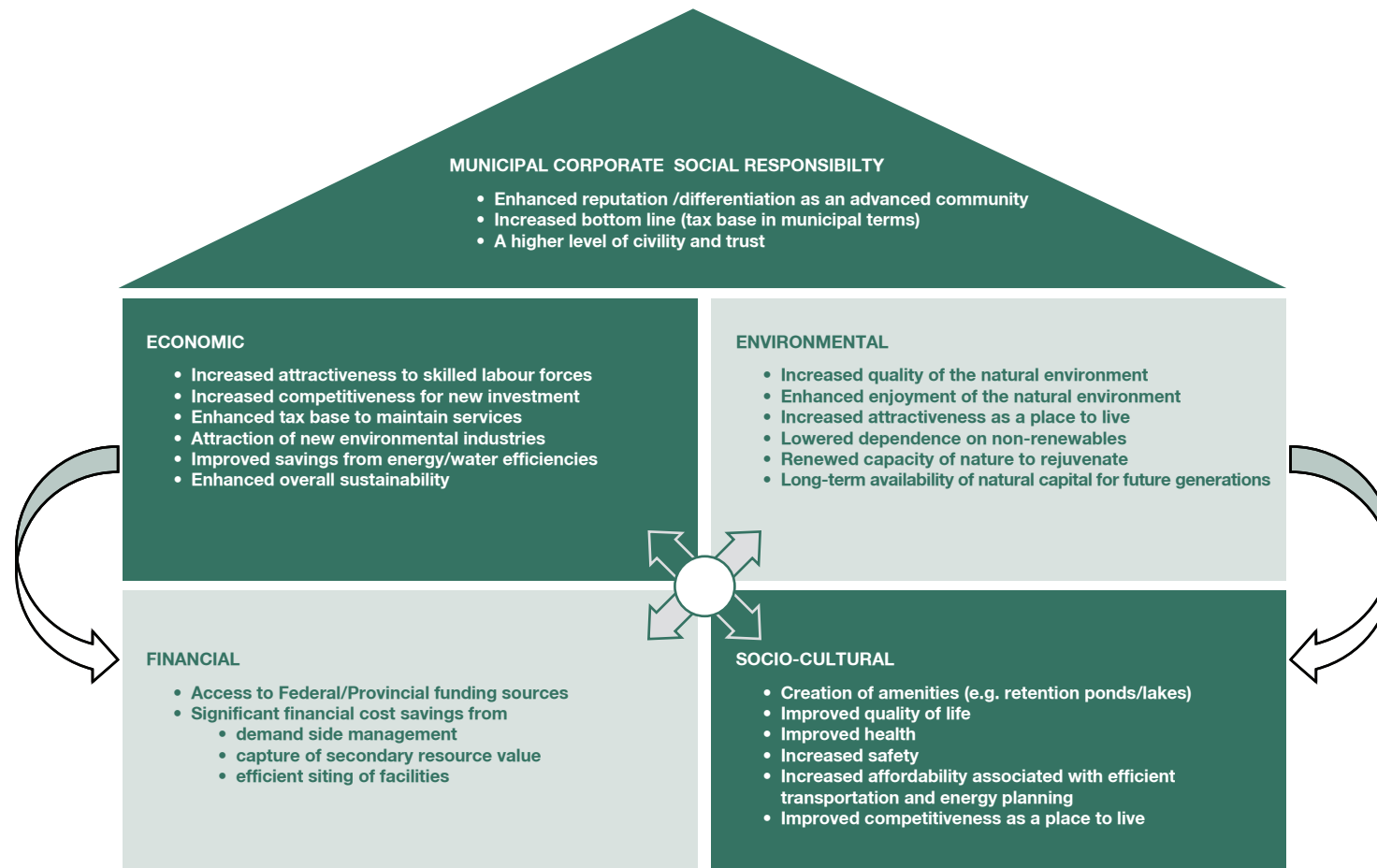
Thus, cultural heritage values contributed to the identification of an innovative arrangement that contributed to the economic and heritage values of the downtown. With investments in beautification, it also had a positive cultural, social and environmental value.

Figure 6, following, summarizes benefits to municipalities of adoption of sustainability measures, in relation to the "four pillars" of sustainable development:

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Figure 6: Benefits to Municipalities of a Strong Sustainability Foundation

MUNICIPAL CORPORATE SOCIAL RESPONSIBILTY

- Enhanced reputation /differentiation as an advanced community
- Increased bottom line (tax base in municipal terms)
- A higher level of civility and trust

ECONOMIC

- Increased attractiveness to skilled labour forces
- Increased competitiveness for new investment
- Enhanced tax base to maintain services
- Attraction of new environmental industries
- Improved savings from energy/water efficiencies
- Enhanced overall sustainability

ENVIRONMENTAL

- Increased quality of the natural environment
- Enhanced enjoyment of the natural environment
- Increased attractiveness as a place to live
- Lowered dependence on non-renewables
- Renewed capacity of nature to rejuvenate
- Long-term availability of natural capital for future generations

FINANCIAL

- Access to Federal/Provincial funding sources
- Significant financial cost savings from
    - demand side management
    - capture of secondary resource value
    - efficient siting of facilities

SOCIO-CULTURAL

- Creation of amenities (e.g. retention ponds/lakes)
- Improved quality of life
- Improved health
- Increased safety
- Increased affordability associated with efficient transportation and energy planning
- Improved competitiveness as a place to live

TOOL 2: STRUCTURING A SUSTAINABILITY PLANNING PROCESS

WHY THIS TOOL?

Having reviewed 📎 *Tool 1: Making the Case*, you will need to make a number of decisions and develop an organizational plan of action that answers the questions:

▶ "Who" will be responsible for, and involved in, efforts to move along the sustainability continuum? Is it in the municipality's interest to join with other municipalities and/or the County to develop our sustainability approach?

▶ "What" are the main considerations that need to be addressed in order to move forward?

▶ "How" will we proceed? What specific steps will form our plan of action?

This Tool recommends a set of straightforward tasks to put the people, plans and ideas in place to move forward on the sustainability continuum.

WHO?

Lessons learned show that:

▶ Formal commitment of the CAO and Council is crucial to any long-term progress regarding sustainability.

▶ Multiple townships may benefit from banding together where they are a part of the County and/or where common interests and the ability to share costs make sense. (See 📎 Frontenac case study. See also 📎 Tool 1: Making the Case, Financial Rationale).

▶ In virtually every municipal government *and* community, there will invariably be (a) champion(s) able to develop and lead the case for enhanced sustainability measures. These champions need to be found and mobilized.

WHAT?

To get organized you will need:

▶ A compelling business case for sustainability.

▶ A definition of sustainability.

▶ A logical plan of action, including targets, goals, objectives and costs/benefits.

▶ Endorsement of the plan of action and definition.

▶ Adequate financial and human resources to implement the plan of action.

TOOL 2: STRUCTURING A SUSTAINABILITY PLANNING PROCESS

HOW?

The following steps are recommended to get organized:

1. Find other influential champions within government and/or the community to help you build the case. Lessons learned show that often the economic development department is the catalyst for action, recognizing the economic and financial value of pursuing sustainability goals. In other cases, it can be municipal staff, Council members and/or community-based environmental groups.

2. Build the case for adopting new sustainability measures for subsequent presentation to Council. For communities that are in the first Stage where consideration of sustainability is new and/or where resistance is expected, arguments should always include a strong business case, along with other social/health/economic rationales. Be sure to build a case that is specific to your municipality's circumstances (see ⬚ Tool 1). Are there sources of government funding you are missing because of a lack a plan? Are there savings that can be realized?

Are there obvious environmental issues that need to be addressed? Is there already a constituency of support within the community?

3. Prepare a Draft Process/Plan of Action. To accomplish this task, you will need to consider, among others:

▶ The **degree of support** you are likely to encounter within Council and, therefore, the extent of action that is wise to propose: **In some cases, a simple endorsement by Council of a Resolution in favour of pursuing sustainability further may be a major stride forward.** In other cases, a more elaborate set of actions may be realistic to propose.

▶ The **approach best suited to your circumstances:** For example, is a specific "Sustainability Plan" the best course of action for your community, or would an "adaptive management/learn by doing" approach be more appropriate? (see ⬚ Tool 7 and ⬚ Tool 8)

▶ A **definition for "sustainability":** A key lesson learned is that considerable time can be expended in discussion about the meaning of sustainability. It may be best to simply choose a definition that can be easily understood and accepted and get on with results-oriented activities.

▶ **Required financial and human resources:** To the extent that implementation of the plan of action is going to require human and financial resources, these need to be factored into the plan of action, ensuring that the benefits articulated in the business case clearly warrant the allocation of these resources.

▶ **Your ideal organizational structure:** Which of these are most appropriate to your financial and human resource capacity?

▷ Assignment of an informal sustainability "leader" among the staff? (possibly most realistic for small municipalities with limited capacity that are just getting started).

▷ A Citizens Advisory Committee? (particularly helpful in the early stages if they are well informed and strong advocates and/or if you are preparing a "Plan").

TOOL 2: STRUCTURING A SUSTAINABILITY PLANNING PROCESS

▷ A multi-departmental oversight committee that enables different facets of sustainability issues and solutions to be addressed in an integrated way?

▷ An Office of Sustainability?

► Baseline information that needs to be assembled to get going (see 📎 Tool 5).

► Time lines, budgets and assignment of responsibility.

4. Prepare a Draft Resolution regarding sustainability to be passed by Council (see example below).

DRAFT/SAMPLE COUNCIL ENDORSEMENT RESOLUTION

WHEREAS sustainability means satisfying our present needs without compromising the ability of future generations to meet their needs; and

WHEREAS sustainable or "green" practices conserve energy, water and other natural resources, preserve local and global environmental quality, strengthen the local economy, promote human health and safety, create higher quality enduring structures, and offer cost reductions in maintenance, solid waste disposal and energy; and

WHEREAS the citizens and the government of _____ have continually demonstrated commitment to the preservation of our natural resources and to quality of life; and

THEREFORE, be it resolved by the Council of _____that, as representatives of _____, we commit to the on-going pursuit of greater environmental, economic and socio-cultural sustainability

And that we direct _____municipal department(s) to develop a SUSTAINABILITY PLAN OF ACTION for review by Council within __ weeks of approval of this resolution. The _____Department in conjunction with the _____Department shall be charged with overseeing the development and implementation of such Plan of Action while providing necessary training and guidance for affected staff and consultants and regular updates to Council.

TOOL 2: STRUCTURING A SUSTAINABILITY PLANNING PROCESS

5. **Present the case for sustainability to Council, along with the Draft Resolution.** Be prepared to describe the draft Plan of Action so that Council can be aware of recommended activities;

6. **Obtain the endorsement/resolution of Council to implement your sustainability plan of action.**

7. **Identify and implement Tools in this Toolkit that can help to operationalize your plan of action.**

LESSONS LEARNED

AMALGAMATION

In Frontenac County in eastern Ontario, the economic development department initially saw the value to all member municipalities of working more closely together and of preparing an ICSP. The process it followed and the benefits that the County and its member Municipalities have realized are contained in a 🔗 Frontenac case study.

A SUSTAINABILITY PLAN OR AN "ADAPTIVE MANAGEMENT/LEARN BY DOING" APPROACH? WEIGHING WHICH IS BEST FOR YOUR MUNICIPALITY

In some cases, communities have decided to prepare an Integrated Community Sustainability Plan (ICSP) (e.g. 🔗 Frontenac) Such an approach is described in 🔗 Tool 7).

In other cases (see 🔗 Pickering case study), implementation of several sustainability projects in the 1980s, 1990s and in the early years of the new Millennium had the effect of increasing the involvement, awareness and trust of the community regarding the value of sustainability efforts to the community. In addition, the private sector became involved in some of the planning initiatives. This "learn by doing/adaptive management" approach (see 🔗 Tool 8) has culminated in creation of an Office of Sustainability within the municipality, and the creation of a set of sustainability goals arrived at through widespread community consultation.

TOOL 3: DEFINING SUSTAINABILITY

WHY THIS TOOL?

Some municipal sustainability processes have stalled or suffered a loss of valuable momentum because of prolonged stakeholder discussions regarding the meaning of sustainability, how many "pillars" it has, and which of these pillars are most important. Some see sustainability as an outcome, while others see it as a way in which to make decisions (e.g., through a decision-making sustainability "lens" that recognizes social, economic and environmental interests). The aim of this tool is to facilitate consideration of "sustainability" in a way that maintains momentum, and enables informed decisions to be made in a timely manner.

WHAT? DEFINITIONS OF, AND APPROACHES TO, "SUSTAINABILITY"

There are many definitions for "sustainable development." The most widely known one was popularized by the Brundtland Report in 1987 as:

"development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [1].

The FGT Agreement calls for sustainability planning that encompasses environmental, **economic, social and cultural "pillars".** Sound municipal planning decisions, then, should ideally be made in consideration of all four pillars. There are, however, no "hard and fast" rules about application of this concept. Different "weightings", for example, may apply to different pillars, depending on the nature of the particular decision that is being made, or on the circumstances of the particular community. What is important is that the *approach, whatever it may be,* takes into consideration all of the pillars.

HOW?

Representatives of some municipalities that have moved well along the "sustainability continuum" advise that excessive time should not be devoted to coming to a common agreement regarding what

"sustainable development" is or isn't, as valuable momentum can be lost. Such philosophical discussions, they argue, can be endless and impossible to "pin it down" exactly. Their strong advice is to "adopt a definition that captures the spirit of sustainable development, and get on with it!" (See Pickering case study.)

Another school of thought is engendered in *The Natural Step*[10]. This international non-governmental organization supports municipalities and businesses to achieve sustainable development based on long-term goal setting/"visioning" that is compliant/consistent with "four system conditions for sustainability"[11], which define sustainability as follows:

▶ In the sustainable society, nature is not subject to systematically increasing concentrations of substances extracted from the Earth's Crust;

▶ In the sustainable society, nature is not subject to systematically increasing concentrations of substances produced by society;

10 See: http://www.naturalstep.ca.
11 James, Sarah & Lahti, Torbjorn. The Natural Step for Communities: How Cities and Towns can Change to Sustainable Practices. (2007) pp. 6-8.

TOOL 3: DEFINING SUSTAINABILITY

▶ In the sustainable society, nature is not subject to systematically increasing degradation by physical means; and,

▶ In the sustainable society, people are not subject to conditions that systematically undermine their capacity to meet their needs.

The Natural Step has developed a comprehensive, scientific systems approach[12] to setting a course to realize these sustainable development conditions at the municipal level. Whistler, BC is a prime example of a Canadian municipality that has adopted, and found great success in, this methodology. The *Alberta Urban Municipalities Association* has used *The Natural Step* methodology as the basis for its *Integrated Community Sustainability* manual[13].

As noted above, review of the widely varying levels of sustainable planning-related experience and capacity across Ontario's municipalities illustrates that there is no single "right" method. Those municipalities that have considerable financial and human resource capacity and a disposition towards

The Natural Step's systems approach should avail themselves of the links provided in this document.

Approaches such as that developed by *The Natural Step* require long-term planning horizons of decades, since many decisions taken today and over a period of many years will affect compliance with the four conditions of sustainability. Again, while this type of detailed approach may be suitable for some, others argue that, at least over the short term, the need is to get results that will build community support and awareness. Many municipalities may not have the political will or the resources to undertake long-term "visioning" exercises.

LESSONS LEARNED

There are many ways in which municipalities can promote sustainability. Table 2, below, provides a sample "Checklist" of goals and initiatives to achieve environmental, economic, social and cultural heritage sustainability goals.

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12 See James, Sarah & Lahti, Torbjorn. The Natural Step for Communities: How Cities and Towns can Change to Sustainable Practices. (2007).
13 See: The Natural Step and Alberta Urban Municipalities Association. Comprehensive Guide for Municipal Sustainability Planning. (June, 2006).
    See also: http://msp.auma ca/Comprehensive_Track/

![AMO - Association of Municipalities of Ontario]

Sustainability Planning Toolkit for Municipalities in Ontario

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TABLE 2: A CHECKLIST OF SUSTAINABILITY GOALS AND POTENTIAL INITIATIVES

SUSTAINABILITY CATEGORY	TYPES OF GOALS	SUSTAINABILITY INITIATIVES
A. ENVIRONMENTAL SUSTAINABILITY		
Water Quality/ Management	- Efficiently obtained, dependable supply of high quality water - Watershed protection - Elimination of pollution sources	- Water protection plans - Water treatment facility upgrading - Distribution system upgrading - Measure to capture rainwater (e.g. green space; permeable surfaces, etc.) - Training/awareness building
Storm water management Storm surge/flood risk	- Efficient storm water management	- Creation of integrated soil and groundwater management strategies - Collection of stormwater runoff for treatment prior to discharge and/or usage on-site - Improve quality of stormwater runoff through various measures
Municipal energy management	- Reduction of GHG (see additional GHG category blow) - Reduction in long-term municipal asset operating costs - Reduced reliance on the grid/increased independence - High level of energy efficiency in buildings	- Retrofitting of municipal lighting (in municipal buildings; traffic and street lighting, etc.) - Incentives/policies to ensure new construction achieves green building certification (e.g. LEED; EnergyStar; Green Globes, etc.) - Installation of energy efficient water pumps - Purchase of energy at spot prices - Use of solar/renewable sources - Undertaking of energy audits - Development of district heating - Implementation of co-generation/purchase of green electricity (See �ℓ Caledon case study) - Creation of energy conservation plan - Creation of energy conservation office (See ⊍ Markham case study)

TABLE 2: A CHECKLIST OF SUSTAINABILITY GOALS AND POTENTIAL INITIATIVES *(continued)*

SUSTAINABILITY CATEGORY	TYPES OF GOALS	SUSTAINABILITY INITIATIVES
A. ENVIRONMENTAL SUSTAINABILITY (continued)		
Solid waste management	- Accommodation of material use and disposal through promotion of the most efficient and environmental-lysafe use and reuse of materials, and reduction of waste going into the natural environment	- Introduction/extension of blue box, composting, etc., thereby reducing waste disposal and extending the lifecycle of the sanitary landfill - Education of staff and community on the 3 R's
Transportation management	- Efficient movement of residents, labour force, visitors and materials to/from/within community - Increase in usership and viability of transit - Improved walking/cycling options	- Increase investment in transit based on well thought out transit plans - Create bike paths and pedestrian linkages - Provide extensive on-site bicycling/parking facilities
Air Quality	- Improvement of air quality as measured by the air quality index	- Upgrading of the transit system and other measures to reduce use of the car - Planning to situate shopping and personal services within walking distance of residential units - Adoption of smog alert protocols - Adoption of demolition and construction dust control protocols - Continued protection/upgrading of municipal green space and trees - Retrofitting of existing municipal assets to reduce emissions - Establishment of new policies regarding building codes

TABLE 2: A CHECKLIST OF SUSTAINABILITY GOALS AND POTENTIAL INITIATIVES *(continued)*

SUSTAINABILITY CATEGORY	TYPES OF GOALS	SUSTAINABILITY INITIATIVES
A. ENVIRONMENTAL SUSTAINABILITY (continued)		
GHG	- Reduction of Greenhouse Gas Emissions	- Setting of targets for reduced per capita energy use - Incentives/policies to ensure new construction achieves green building certification (e.g. LEED; EnergyStar; Green Globes, etc.) - Installation of software to track carbon savings from energy efficient housing/ICI - See municipal energy management, above
Biodiversity Protection/Green Space/parks	- Maintenance of ecosystem integrity and protection of biodiversity	- Native species policies for landscaping - Minimum soil depths for new development
Asset management	- Optimization of municipal assets/buildings	- Development of Capital Investment Plans utilizing new PSAB requirements, thereby providing a stronger basis for assessment of potentially more economically and environmentally sound long-term investment decisions (see 📎 Tool 13 of this Guide)
B. ECONOMIC SUSTAINABILITY		
Economic Development	- Attraction of new investment based on attractiveness of sustainability policies	- Application of such tools as the Business Vitality Index (See 📎 CIEL case study) - Attraction/establishment of "eco-businesses - Increase in % of population employed locally - Provision of affordable housing and transit and other amenities that attract and sustain a healthy labour force - Undertaking of sound sustainability policies, planning and implementation that have the effect of attracting new investment

TABLE 2: A CHECKLIST OF SUSTAINABILITY GOALS AND POTENTIAL INITIATIVES *(continued)*

SUSTAINABILITY CATEGORY	TYPES OF GOALS	SUSTAINABILITY INITIATIVES
B. ECONOMIC SUSTAINABILITY (continued)		
Tourism	- Support tourism growth by providing a clean, safe, vibrant, healthy community	- Heritage preservation - Walkable/bikeable city (provision of bike lanes/ walkways) - Promotion of "green tourism" (Toronto Green Tourism Association. See 📎 www.tourgreen.ca/ indexphp?option=com_ content&task=view&id=309&I temid=97.) - Increase in/protection of, green space
Town centre vitality	- Heritage buildings preserved - Businesses operating profitably to enable long-term sustainability - Good access to city centre - Continual upgrading and investment (e.g. through a Business Improvement Area-BIA)	- Encouragement of mixed use residential/ commercial to encourage vitality past work hours - Planning of buildings and streets to ensure good sunlight for walking zones - Installation of attractive walkways suitable for four seasons' usage - Designation of car-free zones - Maintenance/increase of green space; - Enhancement of BIA funds to enable upgrading (see 📎 Orangeville case study) - Improved transit to/from the centre
Tax base	- Improvement of tax base	- Development of sustainability policies, related for example, to densification, downtown (re)vitalization, affordable housing, and transit; energy retrofitting, LEED certification, etc. in order to attract and keep labour forces and attract new investment
Food production		- Promotion of community gardens/public plots - Encouragement of organic farming - Incorporation of roof gardens into designs

TABLE 2: A CHECKLIST OF SUSTAINABILITY GOALS AND POTENTIAL INITIATIVES (continued)

SUSTAINABILITY CATEGORY	TYPES OF GOALS	SUSTAINABILITY INITIATIVES
C. SOCIAL SUSTAINABILITY		
Housing affordability and sustainability	- Increase long-term affordability in view of rising energy costs - Be a "showcase" for high-performance building design	- Design of development/building placement to improve opportunities for district energy options - Planning to ensure housing for all age groups and families of all types, sizes and economic status - Provision of incentives to developers and/or mandating of such Certifications as LEED, EnergyStar, etc. (see 📎 East Gwillimbury and 📎 Caledon case studies) - Convening of workshops for municipal staff, developers/contractors to communicate goals
Population growth	- Maintain and/or increase population	- Development of incentives to developers and/or mandating of such Certification as LEED, EnergyStar, etc. (See 📎 East Gwillimbury and 📎 Caledon case studies)
Labour force	- Maintenance/growth of the labour force	- Development of affordable housing options, energy efficiency and overall sustainability plans that demonstrate long-term thinking about environmental issues to reassure and attract high-quality labour
Social Services	- Attention to the needs of community members	- Provision of community services such as outdoor play areas, community recreation centres, schools, hospitals, etc.
Health	- Enhancement of community health through smart planning	- Development of ambient noise levels in residential areas - Mandating/encouragement of LEED/other Certifications that create more healthy business environments - Provision of bicycle and walking paths to enable exercise and improve health

TABLE 2: A CHECKLIST OF SUSTAINABILITY GOALS AND POTENTIAL INITIATIVES *(continued)*

SUSTAINABILITY CATEGORY	TYPES OF GOALS	SUSTAINABILITY INITIATIVES
C. SOCIAL SUSTAINABILITY (continued)		
Safety	- Reduction in crime and increase in perceptions of, and actual, safety	- Provision of good lighting - Provision of safe walkways, separated from traffic - Creation of vital city centres
D. CULTURAL HERITAGE SUSTAINABILITY		
Cultural/Heritage Preservation	- Integration of cultural heritage considerations into land use planning, parks design, tourism planning, etc. - Recognition of cultural heritage's part in being competitive as a town/city in attracting high quality labour force and new investment	- Preservation and retrofitting of heritage buildings (See 📎 Orillia and 📎 Orangeville case studies) - Heritage inventorying, planning and protection, integrating heritage resources into planning a design, including adaptive re-use, restoration, etc. - Creation of cultural and heritage destinations - Support of cultural expression in new buildings and infrastructure and in green spaces
E. OVERALL SUSTAINABILITY		
		- Development of Community-wide awareness building programmes that encourage pride and participation in day-to-day sustainability/green practices - Creation of a Sustainability Office and embedding of sustainability into daily decision-making (see 📎 Pickering case study) - Interaction with other adjacent communities to achieve efficiencies in development of transit, energy, water, green space/natural heritage protection, etc.

TOOL 4: CAPACITY BUILDING

WHY THIS TOOL?

Capacity building strengthens organizations so that they have the skills, knowledge, organizational structures and resources to achieve their goals.

Case studies undertaken in preparation for this Toolkit reveal that capacity building is a prerequisite for achievement both of immediate and longer-term progress towards sustainability. Issues are becoming increasingly complex and unavoidable, whether they involve energy conservation, reduction of the carbon footprint, watershed protection, densification or transit planning.

Municipal officials have a leadership role to play in the sustainable development of their communities, but they must have the tools and knowledge to do so effectively. Capacity building can save municipalities time and money, and avoid sub-optimal results over the longer term. Municipalities that emphasize capacity building and continuously update information and skills will experience a high return on investment.

The targets of capacity building should, first and foremost, be:

▶ Municipal political leaders (mayors; councilors), who must ultimately "sign off" on new approaches and initiatives; and,

▶ All municipal staff involved in decision-making and operations positions.

WHAT?

There is a wide range and wealth of capacity-building support available to Ontario's municipal staff and Councils. This support covers a wide variety of best practice and experience addressing, among others:

▶ **Sustainable Development:** A good starting point for training is related to what sustainable development and sustainability planning actually mean in a municipal context, and how they may lead to improved decision-making models. This training should provide approaches that emphasize longer term planning horizons.

▶ **Community Engagement Approaches:** This type of training should provide the latest principles and best practice for encouraging and facilitating public participation and achieving buy-in and is useful at any Stage along the sustainability continuum.

▶ **Energy efficiency and carbon footprint reduction:** As energy costs rise and climate change/GHG concerns mount, municipalities and society in general are going to be forced through, among others, legislation and/or economic incentives to reduce their carbon footprint. There is a emerging best practice regarding realization of energy efficiencies and cost savings through green building, for example.

▶ **Remediation and redevelopment of brownfields:** Best practice in this area can be vital to municipalities faced, among others, with densification, dealing with financial, technical and legal issues.

TOOL 4: CAPACITY BUILDING

▶ **Local infrastructure management:** This training addresses financial and technical best practice to manage and optimize local infrastructure, from transportation and energy to solid waste.

▶ **Water supply and quality and their link to climate change:** This training addresses demand management, cost recovery and other mechanisms to promote long-term sustainability of supply.

▶ **Housing and Sustainable Development:** What is the relationship between housing and sustainable development? Training in this area might include helpful tools for developing community policies and regulations and examples from Affordability and Choice Today (ACT), a national program aimed at improving regulations for more housing affordability and choice.

HOW?

Refer to 📎 Tool 12, which provides references to various funding sources focused on capacity building.

TOOL 5: ASSEMBLING BASELINE DATA

WHY THIS TOOL?

Compilation of baseline data is important to establish some basic benchmarks as to where you are today, what goals you want to establish for the future, and what performance measurements you will apply as a means to evaluate success.

Sustainability planning involves an integrated approach to decision-making that recognizes the inter-relationships between social, cultural, economic and environmental factors. A starting point towards establishment of sustainability planning initiatives and recognition of important linkages is the assembly of available information including:

▶ **A Community Profile:** Collection and review of baseline data about current conditions in the community, such as population, economy, environmental conditions, social issues, etc., will provide decision-makers with an overview of "where we are at now". (See ⎙ Frontenac case study, which demonstrates use of a GIS tool for this purpose.)

▶ **Existing Plans and Policies related to Municipal Development:** Compilation of existing plans will provide an overview of what has been done to date to plan for the future of the municipality.

Once a Community Profile prepared, analysis can be carried out of the municipality's planning and development activities using an integrated "sustainability lens" that leads towards movement along the sustainability continuum, and begins to identify priorities for action. For example, the municipality can begin to evaluate questions such as:

▶ Does our Official Plan reflect the principles of sustainability? Do we need to update it?

▶ What other plans do we have in place that reflect sustainability planning goals?

▶ Are our community consultation processes suitable to fully engage the public as we move towards greater sustainability?

▶ Do we need to do more with regard to planning for a sustainable future?

WHAT?

To move towards a more integrated decision making approach, a useful place to start is to bring together as much relevant information as possible in one place so that the municipality can identify the current conditions in the community and "who's doing what" with regard to planning activities. This will allow for an evaluation of linkages that exist, overlaps and gaps, and opportunities to carry out more integrated planning activities.

Examples of data that should be assembled include:

▶ **Existing municipal plans and policies:** e.g., Official Plan; regional plans; environmental management plans; capital infrastructure plans; economic development plans; transportation plans; tourism plans; recreation plans; housing programmes; social and cultural plans.

▶ **Mapping:** land use; resources; natural areas; future development; geographic information systems.

TOOL 5: ASSEMBLING BASELINE DATA

▶ **Socio-economic data and social services:** demographics, population changes and trends; health; education; labour force and employment statistics; incomes; social services availability and plans.

▶ **Cultural heritage:** cultural diversity; arts and culture resources; archaeology; historical development; facilities and services.

▶ **Environment:** natural resources; water supply and quality; flora and fauna; air quality and pollution sources; energy sources and utilization.

▶ **Infrastructure plans and issues:** waste management; energy; transportation; water and sanitation facilities.

▶ **Consultation activities:** processes; key stakeholders and local organizations and community-based groups; local resources/experts who may be able to contribute to sustainability planning.

▶ **Finance:** municipal finances; affordability issues.

▶ **Scientific and scholarly articles and reports:** Internet and library searches can reveal a wealth of information about your community, in terms of environmental baseline information and issues, historical development, economic situation, etc., as well as many lessons learned from neighbouring and comparable communities.

▶ **GIS:** A Geographical Information System (GIS) is an excellent way to compile information in an updatable format, although this may be costly for smaller municipalities.

▶ **Funding sources.**

HOW?

Key tasks could include the following:

▶ **Take stock of plans** and critically evaluate whether/how they create a sustainable community.

▶ **Get people together:** It is important to get people together who may not traditionally liaise, to encourage sharing of information and assessment of linkages that can contribute to sustainable development.

▶ **Establish a repository/data management system(s)/GIS for information:** The database that is compiled represents a valuable "institutional memory" and will need to be housed at an appropriate venue. Data should be stored in a manner that will ensure that it can be easily accessed, used on an on-going basis, and updated as necessary.

▶ **Review and assess municipal development history looking through a sustainability lens:** Once data is compiled, it should be reviewed and assessed based on the sustainability principles, vision, and goals that have been established by the municipality. A good starting point is to compile a historical overview of how the municipality has evolved in regard to its planning and development activities. This type of assessment can provide some initial answers to useful questions such as:

TOOL 5: ASSEMBLING BASELINE DATA

▷ "What has worked for us/succeeding in terms of moving us along a path towards sustainability?"

▷ "What has failed/not been successful and why?"

▷ "What strategic directions and actions should we be considering to move us along the path to sustainability?"

▶ **Link sustainable planning to a capital investment plan (CIP)**[14] : Reference how the capital investment plan links to sustainability planning and the sustainability "pillars." Municipal infrastructure plays a key role in not only environmental sustainability but also economic sustainability. Demonstration of a linkage between a capital investment plan and sustainability planning fits with the principles of coordination and collaboration.

LESSONS LEARNED

"Lessons learned" from several municipalities is strongly indicative of the value associated with compiling and assessing existing data and past activities:

▶ **Capitalize on the wealth of information that already exists:** One of the lessons learned from municipalities' experience is that there is almost always a tremendous amount of information already available from different sources on the economic, environmental and socio-cultural baseline of any community.

▶ **Avoid redundancy and overlapping activities:** Integrated data management and inter-departmental collaboration can identify areas where redundancy is occurring and activities can be managed more effectively.

▶ **Identify gaps where action is required, and look for linkages between sectors:** Data gathering and analysis allows for a review of issues that might not be receiving attention.

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[14] See Association of Municipalities of Ontario, Integrated Community Sustainability Plan Backgrounder, August 2007.

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TOOL 6:   CREATING A VISION AND IDENTIFYING PRIORITIES

WHY THIS TOOL?

Establishment of a shared vision is an integral step towards sustainability. A "sustainable community" vision that is created and shared among the widest range of municipal stakeholders will empower municipal government to take action towards sustainability planning.

WHAT?

A vision defines the kind of community local residents envisage for the future.   It should capture:

▶ the core **values** that are important to the community;

▶ the **desired characteristics** that should define the community;

▶ the **assets and resources** the community has to build on; and,

▶ the **strategic goals** that will lead towards a desired future.

HOW?

A community visioning process need not be overwhelming. In fact, it needs to be respectful of the resource capacity and constraints of each individual municipality. Stakeholder engagement is a pre-requisite for development of a community vision (See ⬙ Tool 9).

Various tools can be employed during stakeholder engagement to derive a sustainable community vision:

▶ **Search Conferencing/Open Space/World Café Techniques**:[15] These types of conferencing with stakeholders are often employed by large businesses and organizations. The hallmark of a search conference is the invitation of a core group of key stakeholders/leaders/organization heads to carry out collaborative, experiential learning and planning. This type of conferencing

is being used, reportedly very successfully, in some Ontario municipalities. Typically, an invited group is assembled to work together to develop shared language, to consider how the municipality should look in the future, to identify core values and principles that will guide the sustainability planning process, and to establish a strategic plan of action to move forward. With the assistance of trained facilitators, they "search" for a strategy, or create "open space" to do important and creative thinking. One of the powerful aspects of this type of technique is that the people who form the group tend to be diverse but they are also highly interested in the subject matter, and likely to continue involvement during implementation. The conferencing takes place over the period of a two or more days with a report produced during the process. Groups of five to several hundred people can be involved. World Café and Open Space are other such consultation and interactive discussion tools that can also be employed, and links to relevant web sites are provided here for the benefit of interested parties.

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15 ⬙ www.worldtrans.org/qual/searchconf.html; ⬙ www.openspaceworld.org; ⬙ www.theworldcafe.com.

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TOOL 6:   CREATING A VISION AND IDENTIFYING PRIORITIES

▶ **Backcasting:** "Backcasting" is a somewhat trendy term for a practice that we are all familiar with - the idea of first envisaging a future desirable outcome and then, identifying the steps to reach our desired outcome.[16]   It is a two-step process that allows for a measure of idealism ("where do we ideally want to be in the future?") followed by identification of the pragmatic steps to realize that vision.   Backcasting is different from "forecasting," which looks at past trends and then tries to plan based on projection of similar trends into the future. In the case of planning for complex issues such as municipal sustainability, backcasting can be useful, particularly because it's generally long-term planning horizon enables more efficient allocation of resources rather than on a focus on short-term solutions to immediate problems.

▶ **Centre for Innovative and Entrepreneurial Leadership (CIEL) and the Communities Matrix and Community and Business Vitality Indexes (CVI and BVI)[17].** CIEL is a Canada-based group that has developed interesting approaches to municipal self-assessment and strategies to move forward. Through its Communities Matrix and Community Vitality Index (CVI), the CIEL "works with communities to help draw out residents' own powers of perception about their community and the assets and barriers that exist for a thriving community. The Matrix harnesses these perceptions to enable communities to gain a deeper understanding about where their community is at a certain point in time and the stages communities go through. The BVI enables a unique assessment (the 'Index') and action process that measures the business friendliness of a community and then helps the community take action to build economic vitality."[18]   Its tools appear to be particularly useful for the economic and social dimensions of municipal sustainability. (See 🔗 CIEL case study).

▶ **Computerized community analysis and stakeholder engagement tools:** Some communities are using web-based municipal analysis tools to help them define their vision and solicit community involvement, (e.g., MetroQuest[19] (which may be most applicable to larger municipalities as it involves a significant expense); Alberta Association of Municipal Districts and Counties (AAMDC) "Integrated Community Sustainability Planning Toolkit"). The "MetroQuest" software has been used with reported success by some Ontario municipalities, particularly as a tool for engaging the public (e.g., Collingwood's Nottawasaga-Quest process).

LESSONS LEARNED

Some municipal experiences with vision-setting processes are provided below:

▶ **Whitehorse, Yukon Territory:** Whitehorse has prepared a two-part "Sustainability Plan". The first part is their ICSP, which is focused on Gas Tax projects. The second process focuses on a broader more comprehensive plan. The vision is stated as follows:

"Whitehorse will be a well planned self sustaining community that is a leader in energy conservation and innovation that maintains

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[16] See: James, Sarah & Lahti, Torbjorn. The Natural Step for Communities: How Cities and Towns can Change to Sustainable Practices. (2007)
[17] See 🔗 www.theciel.com
[18] See 🔗 www.theciel.com
[19] See 🔗 www.questforthefuture.com

TOOL 6:   CREATING A VISION AND IDENTIFYING PRIORITIES

and conserves wilderness spaces for future generations. Whitehorse will continue to strive for a better quality of life that is reflected in its vibrant economy and social life."

▶ **Calgary, Alberta**[20]: "imagineCALGARY"[21] is a process designed to develop a 100-year vision for a sustainable Calgary.   Some 17,000 citizens were asked five questions about their visions and values. Subsequently, a 40-person Citizen's Roundtable was set up to synthesize the results. A number of other volunteer citizens' groups were established to act as working groups, and a number of expert advisors provided input on specific topics. "Imagining sessions" were also set up with members of the public using CalgaryQuest interactive software. The MetroQuest software facilitates residents' choices given various options, and then shows participants outcomes associated with their choices.

USEFUL SOURCES/LINKS

▶ Cook, D. (2004) *The Natural Step: Towards a Sustainable Society*, Green Books, Foxhole, pp.37-44

▶ MetroQuest software tool, ⌀ www.envisiontools. com; see also NottawasagaQuest used by Collingwood and region

▶ Cabana, S. , "What is a Search Conference?", ⌀ http://www.worldtrans.org/qual/searchconf.html

▶ *Establishment of Sustainable Development Committee* and/or, in larger communities, Task Forces that can address different issues

▶ "Communities Matrix: 69 TOOLS, TECHNIQUES, AND RESOURCES FOR COMMUNITIES " December 2006: ⌀ cielcommunitiesmatrix-69toolstechniquesforcommunitiesv1dec061.pdf

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[20] Alberta Urban Municipalities Association (AUMA), Comprehensive Guide for Municipal Sustainability Planning, (June 2006), "Tool H", pp. 63-64
[21] See ⌀ www.imaginecalgary.ca

TOOL 7:   PREPARING AN INTEGRATED COMMUNITY SUSTAINABILITY PLAN

WHY THIS TOOL?

As noted above, development of a specific Integrated Community Sustainability Plan (ICSP) is not currently required for Ontario municipalities to qualify for Federal Gas Tax grant funds. As a result, Ontario's municipalities are choosing a variety of alternative sustainability planning paths, including, among others:

▶ Preparation of some form of sustainability plan not directly linked to the Federal Gas Tax requirement (e.g., Ottawa's "Choosing Our Future" planning process; Vaughn's new "Environmental Management Plan"; etc.);

▶ Updating of Official Plans and other existing plans, to include additional consideration of sustainability objectives and strategies; and/or,

▶ A more "adaptive management approach" based on "learning by doing" (see 🔗 Tool 8).

This Tool is intended to provide those municipalities who do choose to prepare an ICSP with a summary of the steps that may be taken.

WHAT?

An ICSP is defined in Ontario's Municipal Funding Agreement as:

"…a long-term plan, developed in consultation with community members that provides direction for the community to realize sustainability objectives, including environmental, cultural, social and economic objectives."[22]

Given this broad definition, it must be noted again that there is no one "right way" to prepare a sustainability plan, nor any specific "steps" that are prescribed for every municipality. Rather, municipalities are obliged[23], under the terms of the FGT Agreement, to demonstrate through their existing planning instruments and processes, or through the creation of a new planning document, that the municipality has:

▶ **a coordinated approach** to community sustainability (e.g., linkages of various plans, planning and financial tools that contribute to sustainability objectives);

▶ **an integrated approach** considering social, cultural, environmental and economic sustainability objectives in community decision-making;

▶ **collaborated with other municipalities** where appropriate to achieve sustainability objectives; and,

▶ **engaged residents** in determining a long-term vision for the municipality.

HOW?

Given the different needs and resources of municipalities, there are many ways to meet the goals described above and demonstrate movement along a continuum towards sustainable development. While larger communities with greater human and financial resource capacities may be able to carry out an extensive and detailed process, it is possible for smaller municipalities to develop scaled down ICSPs. In some cases in Ontario and other parts of Canada, smaller municipalities have

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22 Canada, Ontario, the Association of Municipalities of Ontario and The City of Toronto. Agreement for the Transfer of Federal Gas Tax Revenues Under the New Deal for Cities and Communities (June 17, 2005) p.5.
23 Ibid. Schedule. G. p. 42.

TOOL 7: PREPARING AN INTEGRATED COMMUNITY SUSTAINABILITY PLAN

joined forces and pooled resources to prepare an ICSP.

Whatever level of detail is envisaged, some basic "ingredients" of any ICSP will generally include the following:

1. Preparation of a business case for the municipality's decision to take action towards a more sustainable future (see Tool 1).
2. Exploration of "sustainability" in the context of the municipality and articulation of values, sustainability principles and a vision (see Tool 6).
3. Assembly of community profile/baseline information (see Tool 5).
4. An assessment of the municipality's current position and progress to date towards realization of sustainable development.
5. Community priority-setting and engagement processes and outcomes (see Tool 9).
6. Identification of sustainability issues facing the municipality: (e.g., housing/affordability; transportation; economic development; water/sanitation/infrastructure; energy; institutional buildings; public safety and protective services; health; education, etc.).
7. Goals and strategies for action: Definition of "what" will be done and "how" it will be achieved.
8. Definition of priorities and action plans, including the specific activities that may be eligible to be funded under the Federal Gas Tax programme.
9. Development of an implementation plan, including responsibilities, capital and operating budgets, partnerships, funding sources, time schedule.
10. Targets, indicators and monitoring/evaluation processes to track and measure success (See Tool 10).

The Tools in this Guide are specifically intended to provide guidance to achievement of each of these activities.

NOTE: Federal Gas Tax funding can be allocated to the development of an ICSP under the capacity building category.

USEFUL SOURCES/LINKS

As noted above, there are a wide range of options available for the development of ICSPs. A number of different manuals, templates and checklists have been developed in other parts of Canada that can provide excellent guidance for municipalities who want to develop such a plan. Some useful examples/links are as follows:

1. Detailed methodology:

▶ **Alberta Urban Municipalities Association:** The AUMA has prepared a "Comprehensive Guide for Municipal Sustainability Planning"[24], based on *The Natural Step* process[25]; an on-line ICSP guide also exists, including a step-by-step method to complete an ICSP. The Natural Step process is quite comprehensive, and has been used effectively by municipalities such as Whistler, BC.

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[24] Alberta Urban Municipalities Association, "Comprehensive Guide for Municipal Sustainability Planning", June 2006.
[25] Cook, D., The Natural Step: Towards a Sustainable Society, Green Books: Foxhole, pp. 37-44
[26] See www.infrastructure.gov.yk.ca/gas_tax/docs/icsp_template.pdf>

TOOL 7:   PREPARING AN INTEGRATED COMMUNITY SUSTAINABILITY PLAN

2. Checklist-based approach:

▶ **Yukon Territory:** The Yukon Territory has prepared a manual and templates[26] to assist municipalities and First Nations within the Territory to develop their own ICSPs. This manual includes a number of checklists that may be useful to those who are in the early stages of sustainability planning

3. Template-based approach:

▶ **Nova Scotia:** A manual has been created by the Union of Municipalities of Nova Scotia[27] to assist municipalities to meet the requirements of the FGT Agreement. They have taken the approach of establishing three "Templates" that municipalities with differing arrays of plans/ information can fill out to comply

4. Software-based graphic modeling methodology:

▶ **MetroQuest**[28] : As described on their web site, MetroQuest is an interactive planning support tool that evaluates alternative future scenarios

on the fly, facilitates the creation of sustainable visions, and supports the implementation of smarter plans.   It is a scenario-planning tool and a visual communications tool. MetroQuest has been successfully used by several municipalities, including Collingwood, Ontario ("Nottawasa-gaQuest"). Some municipalities have noted that this tool is best used as a stakeholder engagement tool rather than a planning tool, and also that its cost may be out of reach for many smaller municipalities.

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[27] See ⌀ www.unsm.ca/sustainability/
[28] See ⌀ http://www.questforthefuture.com

TOOL 8: AN OPTION TO ICSPs: ADOPTING AN ADAPTIVE MANAGEMENT/"LEARN BY DOING" APPROACH

WHY THIS TOOL?

The *adaptive management approach* deserves to be highlighted as a viable option for sustainability planning as it has been used by some of the most successful municipal examples of advancement along the "sustainability continuum". (See the Pickering and Sudbury case studies.) As described below, its approach is to continually, over time, **"think, then act, then measure"**, learning from each process/project and feeding the learning experience back into the development of the next initiative.

Adaptive management, often referred to as "learn by doing", can be a powerful alternative to the preparation of a sustainability "Plan" for some municipalities. While a good option for any municipality, it can be particularly attractive option for municipalities whose residents have, as yet, fairly limited awareness of sustainability goals and who have not yet "bought in" to such principles.

The approach has the additional effect of **building awareness and community-wide support over time.**   It can place less pressure on human resource capacity while still enabling a municipality to make steady progress along a "sustainability continuum."

WHAT?

This approach entails the **successive implementation of municipal sustainability projects.** These projects can represent incremental steps towards sustainability, generally avoiding the need for expensive and time-consuming long-term planning and "visioning" processes. Also referred to as a the "learn by doing" approach, *adaptive management* has the effect of gradually increasing the awareness, involvement and support of community members for sustainability, as stakeholders participate in a series of projects. Hallmarks of this approach are:

▶ **A commitment to continual, purposeful implementation of incremental projects and measurement of the results:** "Keep moving, even if you are not sure of exactly where you're headed. Don't get bogged down. Don't be afraid to make mistakes."

▶ **The involvement of many different departments of government, as well as widespread buy-in of, and partnerships with, the community.**

▶ **On-going integration of "lessons learned"** into the sustainability journey, to ensure continuous adaptation, even if some of the lessons are from "mistakes".

▶ **Acceptance that sustainability is "a journey that has no end" rather than a goal.** In many respects it is a context for decision-making, rather than a specific targeted output.

▶ **Support of Council and the CAO as a necessary precondition for effective action.** If you don't have this, then you must persist until you have such support or else long-term efforts risk failure.

▶ **Develop performance benchmarks** to measure progress towards enhanced sustainability.

TOOL 8: AN OPTION TO ICSPs: ADOPTING AN ADAPTIVE MANAGEMENT/"LEARN BY DOING" APPROACH

▶ **A dedication to "keep moving"** with projects, to avoid getting bogged down with questions such as "what is sustainability?" or elaborate and expensive "Plan" production.

This approach represents a legitimate alternative to the undertaking of a sustainability "Plan", which can run the risk of being costly and time-consuming and/or shelved.

Its advocates note that the emphasis on implementation, which is the hallmark of the approach, ultimately overcomes many challenges including "making the case," engaging stakeholders, capacity-building, creating performance indicators, monitoring and evaluation, etc. In other words, by implementing projects, all of these aspects are satisfied.

HOW?

Under this model, municipalities pursue funding for, or finance, projects themselves, that achieve ends of obvious need in the community. Such projects might relate, for example, to the 3R's, adapting to climate change, water and energy conservation, parks preservation, etc. Over time, these projects build a constituency of interest, involvement, and support within the community that propels municipal staff and government to continue their sustainability-related efforts. (See 🔗 Tool 12 for various funding sources for these types of projects.) This approach can generate long-term municipal/community/private sector partnerships, as each project will have a focus that attracts the specific interest and support of those with a stake in the subject matter.

The adaptive management approach does not rule out development of a sustainability plan as well. By beginning with this approach, communities that have completed a succession of projects will be in a strong position to involve a much more aware and engaged community in longer-term planning and visioning processes.

LESSONS LEARNED

Pickering, Ontario is an impressive example of a municipality that has adopted an adaptive management approach with concrete success. In the late 1980s and early 1990s, the municipality began with modest projects to involve the community in the 3Rs and composting. It progressed with projects to address water issues, and then with a climate change initiative funded through the FCM's Partner's for Climate Projection (PCP) initiative. These initiatives generated, among others, community working groups, town hall meetings, and other public engagement opportunities.

Ultimately, the cumulative effect of this work was the creation of an Office of Sustainability within Pickering's municipal government. Pickering has chosen to create an "Office", rather than a "Department", to avoid the pitfall of becoming one more "silo". Its mandate is to facilitate integration of sustainability principles into decision-making across all sectors and to encourage inter-departmental interaction. The Office has spearheaded capacity

TOOL 8:   AN OPTION TO ICSPs: ADOPTING AN ADAPTIVE MANAGEMENT/"LEARN BY DOING" APPROACH

building and training of all staff and, most recently, a "Sustainability Benchmarking Framework" visioning process that has resulted in identification of five main areas and twenty-four sub-areas of interest of the community as far as sustainability is concerned. The municipality will now be in a position to better identify a new pipeline of projects in support of these areas, and has a line item in its budget for sustainability. (See 📎 Pickering case study.)

TOOL 9: ENGAGING STAKEHOLDERS

WHY THIS TOOL?

Development of a highly engaged, interested, and contributing population will be a major factor in any successful sustainable planning process. Lessons learned indicate that plans and programming that have community "buy-in", and that are essentially "community" plans rather than the municipal government's, have a much better likelihood of implementation.

Community engagement is mentioned throughout this Guide as it is an integral aspect of many tasks related to sustainability planning. The purpose of this Tool is to present an overview of some stakeholder engagement approaches and opportunities that can help your municipality to move along the path towards enhanced environmental, economic, and socio-cultural sustainability.

WHO?
Who needs to take action?

Council will typically authorize engagement programmes aimed at educating and informing residents/stakeholders about issues related to sustainable development, and gaining their inputs. Sustainable development is everybody's business, and elements of it affect all citizens, present and future.

Who are the stakeholders?

To design a stakeholder engagement and development programme as part of sustainability planning process, begin by identifying the *diverse array of stakeholders* that exist in the community. The "public" is not homogenous, but rather is comprised of a range of people and groups with different interests and needs. Lessons learned indicate that it is more effective to "cast the net widely," to include stakeholders from health, education, community-based organizations, non-governmental organizations and the private sector.

Some of the more effective modern stakeholder engagement approaches start with *leaders* from a wide array of groups within the community. These leaders might be from the Chamber of Commerce/business associations, the education sector, healthcare and emergency services, public works, tourism and recreation groups, transportation, seniors clubs, youth organizations, non-profit groups, church, etc. It has also proven effective to target people who are already supportive and/or who have a stake in realization of sustainability measures. The point of this approach is to first engage the "do-ers" in the community, who can then mobilize their members/associates. The approach also allows for a productive "first cut" at identification of key issues, development of a vision for the community, and distillation of other information that can then be taken out to the broader community for discussion and refinement.

WHAT?

Effective consultation includes three kinds of communication[29]:

TOOL 9: ENGAGING STAKEHOLDERS

▶ **Output:** Provide technical information from the municipality to stakeholders about current conditions, issues, and possible solutions. If you do not provide information and analyses as part of your public engagement – if you do not "put some meat on the bones" - then your engagement process risks being largely wishful thinking.

▶ **Input:** Solicit information from stakeholders regarding their interests, knowledge and perceptions of the issues.

▶ **Exchange:** Adopt approaches that get information flowing in both directions.

Engagement has to be meaningful and undertaken in the context of the planning process. Basic criteria that should be applied when designing a good stakeholder engagement process include the following[30]:

▶ **Appropriate representation:** Ensure consultation encompasses a representative sample of the population.

▶ **Independence:** Ensure a lack of bias.

▶ **Early involvement:** Get the public involved as early as possible in the process.

▶ **Influence:** Make sure the outputs from the process have a genuine impact on policy and planning.

▶ **Transparency:** Release information regularly so people can see what is going on and how decisions are being made.

HOW?

In decades past, the *"decide-announce-defend"* approach was typical, focused on simple presentation of municipal plans at a public meeting once they had been developed. This "information dissemination" model eventually evolved into more extensive methods of "public consultation" and "public participation," involving interactive open house forums and focus groups. Over time, other public involvement techniques have been developed to facilitate more meaningful engagement and empowerment. Use of these techniques goes far beyond simple "consultation" and "participation," towards actual "stakeholder development" where local people are actively involved in decision-making. This can lead to true empowerment, whereby people feel ownership of planning processes and initiatives, and are much more likely to support them.

The following stakeholder engagement process[31] can produce effective results:

1. **Develop the case for sustainable municipal planning** (see 🔗 Tool 1) including definitions, information about why a sustainability planning process is desirable, the type of process envisaged, baseline data about current conditions in the municipality, and other basic data suitable for educating people about what it is, why it is a good idea, what types of planning may occur and what role the stakeholders can/should have.

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30 Rowe, Gene and L. Frewer, "A Summary of the Criteria from Public Participation Methods: A Framework for Evaluation", 2000, in Science, Technology & Human Values
31 For example, see web site of 🔗 International Association for Public Participation, "Public Participation Toolbox"

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TOOL 9: ENGAGING STAKEHOLDERS

2. **Prepare a clear message and materials to educate the public about what the sustainability process is about:** Initial information can be disseminated in the form of written briefs, media announcements, power point slide presentations for school and other groups. It will be important to make sustainability meaningful, compelling and vibrant to the public, demonstrating the linkages with their quality of life (e.g., clean air and health; energy efficiency and cost savings).

3. **Begin by engaging key stakeholders/ organization leaders in the community:** As noted above, recent lessons learned indicate that involvement of a diverse group of community leaders can help to kick-start a municipal planning process before going out to the broader public. Some examples of techniques that can be used and/or adapted as required include:

   ▷ **Community Leaders Conferencing:** The first critical step involves identification of a representative range of the most concerned and active individuals within the community.

They are brought together in an invited forum to "puzzle solve" in a collaborative, experiential knowledge-sharing manner to, for example, define a visions and establish strategic goals associated with a sustainability planning process. While these techniques are normally associated with large group problem-solving processes, the basic concept can be usefully applied in many municipalities regardless of size and resources.

   ▷ **Small discussion/focus groups:** Invited small special interest groups can be brought together to discuss issues.

   ▷ **Committees and task forces:** Specific issues/sectoral areas can be addressed though the formation of groups focused on specific areas of interest.

   ▷ **Expert Panels/Workshops:** It is very often very useful to bring in outside experts to present information about sustainability planning and facilitate discussion among the stakeholders.

4. **Broader public engagement once basic information and goals have been established:**

   ▷ **Surveys:** Although they can be costly and cumbersome, in some cases a quantitative survey may be desirable to ask a representative sample of the community specific questions. The intended use of resulting data should be carefully considered before implementing this type of activity.

   ▷ **Electronic Democracy:** Web-based consultation is being effectively used in many instances (e.g., with an interactive tool such as MetroQuest or via the municipality's web site).

   ▷ **Small group discussions with representatives of the general public:** Citizens' Committees, randomly selected focus groups, and other types of small group consultations are often useful.

   ▷ **Interviews:** One-on-one interviews with a wide sample of stakeholders can provide excellent quality data.

TOOL 9: ENGAGING STAKEHOLDERS

LESSONS LEARNED

A summary of key lessons learned from the experience of various municipalities include the following:

► **Know who your stakeholders are,** so you can design a consultation programme that will be effective, reach people and facilitate broad community ownership.

► **Recognize that public engagement takes time and should not be rushed:** Appropriate time needs to be allocated to consult with the stakeholders.

► **Work with key stakeholders/organizations at the outset of the planning process, before going out to the general public:** As noted above, newer techniques involving engagement of key organizations and community leaders before consulting with the general public are generating good results.

► **Develop a message and good information for the public before going out to consult them:** As one municipal representative noted: "You cannot just ask people for their input. You need to educate them about the issues that are being discussed. You should bring in speakers, give them the language, and provide real information about the issues. Otherwise people are often just reacting in emotional ways to a lot of myth and misinformation. The issue of densification is a good example. We need to educate people about how it can work in our community".

► **Use good facilitators and experts to assist with consultation processes.**

USEFUL SOURCES/LINKS

► **"Community Strategic Planning Conference"**, Kingston, January 18-20, 2007, Managers Report. (See www.spckingston.ca/Resources/SC%20Managers%20Report%20-%20Feb%201.doc)

► Peggy Holman, Tom Devane, Steven Cady. Change Handbook: The Definitive Resource on Today's Best Methods for Engaging Whole Systems (2006). (See www.opencirclecompany.com)

► **MetroQuest:** MetroQuest is an interactive planning support tool that evaluates alternative future scenarios on the fly, facilitates the creation of sustainable visions, and supports the implementation of smarter plans. MetroQuest can act as a visual communications tool, turning stakeholders into constructive partners (See www.envisiontools.com)

TOOL 10: ADOPTING SUSTAINABILITY INDICATORS, PERFORMANCE MONITORING AND EVALUATION

WHY THIS TOOL?

Part of the visioning process for sustainable communities involves describing what success looks like. This raises key questions with respect to sustainability initiatives, i.e., how do you measure success? Can you demonstrate whether the policies, plans and activities are actually leading towards improvement?

In order to monitor performance and measure progress effectively, it is necessary to develop sustainability indicators. Sustainability indicators are selected key statistics or parameters that, tracked over time, can represent or summarize trends in social, economic, and environmental conditions. Sustainability indicators should be something that the individual municipality can track reliably and economically, and ideally, indicators for sustainability should be selected that make use of existing information already collected (e.g., water use per capita, energy costs, etc.). The use of existing data will greatly facilitate the development of a sustainability indicator program.

The FGT funding of environmentally sustainable infrastructure projects and capacity building projects is specifically intended to support three key outcomes, i.e., reduced greenhouse gas emissions, cleaner water and cleaner air. Therefore, the government is specifically looking for demonstrated performance in terms of these three key outcomes. **Outcome Indicators that must be used by Ontario's municipalities to measure the environmental impact of their Federal Gas Tax investments in infrastructure have already been provided by the Oversight Committee** (See 🔗 Appendix B).

Municipalities also need to develop indicators to measure progress and performance towards greater sustainability so that they can periodically re-evaluate their position along the sustainability continuum and identify opportunities for improvement. Being able to track performance and progress is not only important in terms of annual reporting to the AMO on the FGT funded projects, but also in maintaining Council and public support and assisting the municipality in setting priorities for further resource allocation for sustainability initiatives and projects. Measures of success can really build momentum for further progress.

GOALS, INDICATORS AND TARGETS

As part of the visioning process, the municipality will identify goals that would make the community more sustainable. For each goal, appropriate sustainability indicators and performance targets are developed. As discussed above, indicators are selected key statistics or parameters that can be tracked over time to assess trends in social, economic, and environmental conditions. A target is a measurable commitment to be achieved in a specified period. The indicators and targets will help the municipality to monitor its progress and guide planning efforts. A goal that cannot be measured is probably not a good goal for planning purposes.

To demonstrate the relationships between goals, indicators, and targets, a number of examples have been outlined in Table 3 below. Some goals are broader in scope than others. For example, in Table 3, "Reduce energy consumption" is a broad goal, or an objective. A goal like "Reduce energy use for street lighting" is a more specific goal, or a mechanism, which is one of many possible ways to work towards the broader objective.

TABLE 3: Example Goals, Indicators, and Targets

Goal (Objective or Mechanism)	Indicator	Target
Reduce energy consumption	**Electrical power consumed annually per household**	**Reduce electrical consumption by X% by year XXXX**
Replace street lights with more efficient LED lights	Percentage of street lights with LED lights installed	X% increase in the percentage of street lighting converted to LED each year
Promote construction of smaller houses	Average area of houses (sq. m.) in municipality	X% decrease in average house size by year XXXX
Reduce fossil fuel usage	**Total fossil fuel use in the community**	**Reduce fossil fuel usage by X% before year XXXX**
Use hybrid vehicles in municipal fleet	Percentage of municipal fleet vehicles that are hybrids	Use hybrid vehicles in X% of the municipal fleet by year XXXX
Promote use of public transportation	Monthly transit ridership statistics	Increase ridership to X,000 people/month by year XXXX
Increase use of renewable energy	**Fraction of electrical power used in the municipality obtained from renewable sources**	**Obtain X% of energy from renewable sources by year XXXX**
Obtain more energy from wind power	Energy (kW) provided to municipality from wind power	Provide X kW of energy from wind power by year XXXX
Promote use of household solar units	Number of houses using solar units	That X% of households would get some energy from solar units by year XXXX
Reduce consumption of potable water	**Per capita water use**	**Lower per capita water use to X L/capita/day by year XXXX**
Repair leaks in municipal distribution system	Fraction of treated water lost according to biannual water audit	Limit losses in distribution system to X% of total consumption by year XXXX
Promote water conservation in households	Water consumption in selected households	Reduce water consumption in selected households by X% by year XXXX

TOOL 10: ADOPTING SUSTAINABILITY INDICATORS, PERFORMANCE MONITORING AND EVALUATION

HOW TO SELECT SUSTAINABILITY INDICATORS

Selecting appropriate sustainability indicators can be challenging. The choice of an indicator will reflect how progress (or success) is defined. For example, to use a country's Gross Domestic Product (GDP) as an indicator for its success implies that success is measured by the quantity of goods and services consumed. With respect to sustainability, good indicators for success might reflect an increased standard of living (improved health and safety, a cleaner environment, etc.) achieved without "borrowing from the future" (through excessive usage of non-renewable energy and pollution, for example). Ideally, indicators should have simple and quantifiable parameters (e.g., km of transit/capita; litres/capita water consumption, etc.) that can be linked to the desired outcomes of cleaner air, cleaner water, and reduced GHGs.

Indicators for the overall goals and objectives will be different from indicators for specific mechanisms. Monitoring and evaluation of both is important,

to assess whether the municipality accomplished a project as planned, and if so, to determine if success at the project level achieved the overall desired result.

Data availability is a significant criterion in selecting sustainability indicators — which indicators you use will depend on the accessible data. For example, using one of the indicators provided in Table 3 above, measuring the number of hybrids in the municipal fleet inventory should not be difficult. Actions fully within the municipal government's control, i.e.: measuring fossil fuel consumption by the municipal fleet (which would be more relevant to the desired output of reducing GHGs) are easier to measure than those regarding community actions as a whole.

An excellent resource to help municipalities develop and use indicators of sustainability is the Sustainable Communities Indicators Program (SCIP) website (see the reference provided at the end of this Tool). As the SCIP points out, there are common criteria used by a range of groups and organizations (in Canada and internationally),

although specific criteria for selecting indicators can be adapted to suit local needs and priorities.

The three main criteria for good sustainability indicators are:

1) Issue Relevance (scientific validity, soundness, representativeness, etc.);
2) User Relevance (understandable, unambiguous, useful and integrates social, economic and environmental factors); and,
3) Data Reliability (data availability and cost-effectiveness).

It is very difficult to find indicators that satisfy all criteria perfectly, and a balance needs to be achieved between two main types of criteria — reliable information versus useful information.

INDICATORS ARE MUNICIPALITY-SPECIFIC

There is no such thing as a "one-size fits all" list of sustainability indicators that a municipality must use. The indicators will be specific to the municipal

TOOL 10: ADOPTING SUSTAINABILITY INDICATORS, PERFORMANCE MONITORING AND EVALUATION

goals, objectives and targets and data available to the municipality. Municipal staff can evaluate the suitability of existing data and statistics collected within the municipality for use in sustainability tracking (resources to assist in indicator development and existing mechanisms for performance tracking and reporting are discussed in following sections).

Community input can also be valuable in developing indicators and priorities. As an example, as part of the City of Pickering's Framework for Benchmarking Sustainability process, they established five working groups to discuss the question of how to measure sustainability in five key objective areas (Healthy Environment, Healthy Economy, Healthy Society, Responsible Development and Responsible Consumption). Each working group was asked to identify possible sustainability indicators and within the first meeting more than 200 potential sustainability indicators were identified. At a second meeting, the groups refined this list of possible indicators, and determined a draft short list of about 30 of the highest priority indictors for the City of Pickering. Selected examples of some of these priority indicators are:

▷ Has the air quality index improved this year?
▷ What percentage of the population is employed locally, or in a home-based business?
▷ Of all residents who commute, what percentage do so by transit, bicycle, walking?
▷ What percentage of new construction (residential and non-residential) has achieved a recognized form of certification (LEED, Green Globes)?
▷ How many kilometres of walking/cycling paths are there per capita?
▷ How much water is consumed per household?
▷ What volume of wastewater is discharged to sewers per household?
▷ What percentage of solid waste is still being sent to disposal – from residences, from all non-residential facilities?

RESOURCES FOR INDICATOR DEVELOPMENT

As mentioned above, the Sustainable Communities Indicators Program (SCIP) website is really a comprehensive resource for municipal staff to begin to develop and use indicators of sustainability. This site identifies some of the common criteria used by a range of groups and organizations (in Canada and internationally). Specific criteria for selecting indicators can be adapted to suit local needs and priorities.

Another potentially invaluable resource for municipalities is the Centre for Innovative and Entrepreneurial Leadership (CIEL). CIEL has developed its Community Vitality Index (CVI) and Matrix, as well as a Business Vitality Index (BVI), each of which is briefly summarized below and which are described further in a case study (See):

▶ The Community Vitality Initiative (CVI) provides a community with an assessment of where the community currently is, and provides a structured process for action and improvement. The CVI provides an alternate assessment lens that serves as a process to focus the community, and initiate improvement efforts.

▶ The Communities Matrix is a tool designed to identify patterns and characteristics that

TOOL 10: ADOPTING SUSTAINABILITY INDICATORS, PERFORMANCE MONITORING AND EVALUATION

are common to communities, measure the community's capacity and identify how the community can move forward. Rural communities in particular require a tool to benchmark themselves in relation to others and determine what development strategies are indeed realistic. Through research and field experience a range of community attributes were identified and used to create a ladder of community stages of development. The Matrix is a tool that goes beyond purely quantitative indicators and furthers people's understanding of the stages communities go through.

▶ The Business Vitality Initiative (BVI) gives communities an assessment of its ability to support and expand its business growth, and results, among others, in identification of short-, medium-, and long-term actions – the basis for developing a Community Business Action Plan – to encourage vitality, prosperity, and entrepreneurship.

▶ "Green Light Check-up" is a tool that allows a community to assess its readiness to undertake

comprehensive sustainability planning without expending significant resources on it.

PERFORMANCE MONITORING AND EVALUATION

'Benchmarking' is a performance evaluation technique. Benchmarking implies comparison against some kind of standard, either against other municipalities or highest standards, or perhaps in this case, against the desirable sustainability vision, goals and targets for the municipality. Once the key performance indicators have been set, there should be a regular evaluation process (perhaps annually) to enable the municipality to develop plans for improvement.

Mechanisms Already In Place

Municipal Performance Measurement Program

In 2000, the Ontario government introduced the Municipal Performance Measurement Program (MPMP). The MPMP requires municipalities to

report annually on 54 measures of effectiveness and efficiency in 12 key municipal service areas as follows:

▶ Municipal government
▶ Fire protection
▶ Police services
▶ Roadways
▶ Public transit
▶ Drinking water
▶ Wastewater (Sewers)
▶ Storm water management
▶ Solid waste management
▶ Parks and recreation
▶ Library services
▶ Land use planning

These service areas were selected because they are primarily a municipal responsibility, represent a high percentage of municipal budgets, and because municipalities already collect data for these services. A number of these key municipal service areas overlap with the Environmentally Sustainable Municipal Infrastructure Project areas supported by FGT funding (described above). Therefore, through

TOOL 10: ADOPTING SUSTAINABILITY INDICATORS, PERFORMANCE MONITORING AND EVALUATION

the MPMP, municipalities already have mechanisms in place for collecting and reporting financial and statistical performance information. Similar tracking of selected sustainability indicators will provide information on the efficiency and effectiveness of the sustainability initiatives.

Partners for Climate Protection

The Partners for Climate Protection (PCP) program is a network of 164 Canadian municipal governments who have committed to reducing greenhouse gases and acting on climate change. The program is based on a five milestone framework used to guide municipalities to reduce greenhouse gas emissions. The five milestones are:

▷ Creating a greenhouse gas emissions inventory and forecast;
▷ Setting an emissions reductions target;
▷ Developing a local action plan;
▷ Implementing the local action plan or a set of activities; and,
▷ Monitoring progress and reporting results.

Milestones can be implemented in the order that is most appropriate for the municipality. While many municipal governments start by completing a greenhouse gas inventory, others have moved immediately to actions aimed at reducing greenhouse gas emissions. The emissions reductions must be quantified and compared to the emissions inventory and forecast. Progress must be routinely monitored, tracked and reported to ensure that the emissions reduction measures are implemented effectively and on schedule.

More than 40 Ontario municipalities participate in this program (funded by the Green Municipal Fund), and as such, these municipalities may have already developed capacity for indicator development and performance tracking related to GHG emissions that can be readily incorporated into the ICSP performance monitoring and evaluation process.

LESSONS LEARNED

▶ Keep it simple – select only one or two key performance indicators per sector. If the indicators are very difficult to understand, they will not be used.

▶ Rely on existing municipal information tracking and reporting mechanisms where possible.

▶ Do periodic performance evaluations using the target based indicators and use the results to guide the monitoring process.

▶ Be flexible - as performance data become available and the municipality evolves, the key sustainability indicators may need to change.

▶ Create partnership structures for implementation and internal management systems for municipal compliance.

USEFUL SOURCES/LINKS

▶ Sustainable Communities Indicators Program (SCIP)
   http://www.ec.gc.ca/soer-ree/English/scip/default.cfm

TOOL 10: ADOPTING SUSTAINABILITY INDICATORS, PERFORMANCE MONITORING AND EVALUATION

SCIP is an Internet-based reference guide developed by Environment Canada in association with the Canada Mortgage and Housing Corporation and the Federation of Canadian Municipalities. SCIP is designed to help communities and organizations develop and use indicators of sustainability and establish a sustainability indicators and monitoring program. This is a very comprehensive resource site.

▶ Canadian Sustainability Indicators Network (CSIN)
http://www.csin-rcid.ca/
CSIN aims to accelerate progress toward sustainable development by furthering sustainability indicator best practices in Canada. Using CSIN tools and resources, Canadian sustainability indicator and reporting practitioners exchange ideas, data and methods, and circulate announcements. Membership in CSIN is free and open to sustainability indicator and reporting practitioners from across Canada.

▶ National Round Table on the Environment and the Economy (NRTEE)
http://www.sustreport.org/indicators/nrtee_esdi.html.
NRTEE completed the Environment and Sustainable Development Indicators (ESDI) Initiative in 2003. They produced a set of six key sustainability indicators as follows: air quality in terms of ground-level ozone, freshwater quality in terms of meeting government criteria, greenhouse gas emissions, forest cover to track the extent of our forests, extent of wetlands in Canada and human capital measured by education.

▶ Municipal Performance Measurement Program (MPMP)
http://www.mah.gov.on.ca/Page297.aspx
The MPMP is an initiative designed to provide information on service delivery and municipalities with a tool to improve those services over time. The program requires municipalities to collect data to measure their performance in 12 core municipal service areas. (54 measures in 12 key service areas).

▶ Imagine Calgary Plan for Long Range Urban Sustainability, September 2007
http://www.imaginecalgary.ca/imagineCALGARY_long_range_plan.pdf
Imagine Calgary was an 18 month City of Calgary led project which was launched in January 2005 with the goal of producing a long range urban sustainability plan for the city. Over 18,000 Calgarians participated in the community visioning process and over 150 active and committed stakeholders were responsible for developing the plan. The plan includes a long-range vision and goals for the future, as well as a series of specific targets that provide useful reference points for organizations and individuals to determine what action can be taken to reach the goals.

TOOL 11: INSTITUTIONALIZING SUSTAINABILITY

WHY THIS TOOL?

This Tool is targeted to municipalities that wish to move from the planning and implementation stage to the third stage, where municipal decision-making is routinely undertaken through the lens of sustainability, and where municipal staff recognizes pursuit of sustainability as an underpinning of the municipality. Such an approach marks the departure from more *ad hoc* to *institutionalized, day-to-day* integration of sustainability considerations into decision-making. This Tool is intended to provide some examples of how some municipalities have moved to this stage.

(For a more detailed discussion of the case for institutionalizing sustainability see 🔗 Tool 1, "Making the Case for Sustainability".)

HOW?

There are different ways in which municipalities are realizing institutionalized sustainability:

▶ **Establishment of an Office of Sustainability:** The City of Pickering, Ontario has established an Office of Sustainability. (See 🔗 Pickering case study.) The City had adopted an *adaptive management/learn by doing approach*, and had implemented several sustainability-related projects over the years. As a result of this process, Council and staff became increasingly aware, as they put it, that "sustainability is a journey that has no end. We need to look at development through the three lenses [economic, social and environmental]…We got a "Sustainability Pickering Advisory Committee" going. We knew we were on to something. So we decided to create a Sustainability Office". Representatives stressed that **they deliberately chose an "office" rather than a "department", which could become just one more silo of municipal government.** The Office's mandate is to facilitate integration of sustainability across departments, rather than to implement sustainability. They report benefits as including greater civility in discussions between residents and council. They have enjoyed a higher profile as a community, being contacted by other municipalities for information sharing. They have also started to attract interest of companies looking for places to locate their businesses.

▶ **Establishment of an Environmental and/or Energy Department/Office:** Some municipalities have achieved across the board integration of aspects of sustainability into the day-to-day functioning of their governments. For example, the Town of Markham established its **Markham Energy Conservation Office (MECO)** – the first of its kind in Ontario. (See 🔗 Markham case study.) The Town of Caledon has established a dedicated environmental staff position, enabling, among others, development of an Environmental Progress Action Plan, including activities associated with seven priority sustainability areas (See 🔗 Caledon case study).

▶ **Adoption of principles of sustainability:** Some municipalities such as Ottawa and Whistler, BC have adopted "principles/conditions of sustainability". Decisions made by those in municipal government must be consistent with such principles. In the case of Whistler and

TOOL 11: INSTITUTIONALIZING SUSTAINABILITY

other municipalities across Canada, the four conditions of sustainability devised by *The Natural Step* (see 🔗 Tool 3) have been adopted, such that decisions must be taken in compliance with these conditions.

▶ **Overcoming "Silo" decision-making by adopting a more integrated approach to decision-making**: The essence and power of sustainability planning – and a true pre-requisite – is integrated decision-making and implementation that overcome traditional "silo" thinking.   The decisions of one municipal department/"silo" will often have profound impacts on achievement of other departments' long-term goals. The breaking down of "silos" through routine, cross-departmental collaboration will result in greater efficiencies, cost savings and results. Conversely, the lack of integrated decision-making is a direct barrier to movement towards greater sustainability.

▶ **Triple bottom line accounting:** Municipalities such as Hamilton, Ontario have integrated Triple Bottom Line (TBL) accounting. It requires that decisions recommended by municipal staff include application of TBL. The power of TBL is that it:

▷ Enables the municipality to measure and report on its progress against sustainability targets.
▷ Allows for balanced and meaningful public reporting on issues across the municipality.
▷ Improves accountability to the community.
▷ Allows priorities to be set and resource allocation to occur based on more complete consideration of social, environmental and economic effects.
▷ Makes more efficient use of resources to maximize economic, environmental and social outcomes.
▷ Has positive impacts on the external community (e.g.it creates sustainable markets by purchasing green products).
▷ Establishes TBL performance trends over time.

▶ **Sustainability Capacity Building:** Some municipalities, such as Pickering, have required that all staff be trained regarding sustainable development, its value and the role of each staff member in supporting sustainability efforts, among others. Such training strengthens staff members' ownership of municipal goals and creates a consistency of purpose within the organization.

▶ **Search Conferencing/Open Space Techniques:** Discussed in 🔗 Tool 9, this engagement technique involves the *invitation* of community *leaders* and, in turn, the invitation by these leaders of *other leaders* in the community who have a stake in municipal sustainability-related decisions, to engage in a process towards sustainability planning/programming. These types of techniques help to move a municipality from the prime instigator to a partner in sustainability efforts. Kingston, Ontario has used this technique effectively.

TOOL 12: SECURING FUNDING/OTHER SUPPORT FOR SUSTAINABILITY INITIATIVES

There are various sources of funding/technical support for pursuit of sustainability initiatives and municipal capacity building, in particular. A list of useful resources and links is provided below:

▶ **Federal Gas Tax Funds**
📎 http://www.infrastructure.gc.ca/ip-pi/gas-essence_tax/gt_can_on_e.shtml
The Gas Tax Fund is helping to build communities by providing predictable funding in support of municipal infrastructure that enhances the environment and quality of life. In addition, it benefits communities by providing funding to increase the capacity of communities to undertake long-term planning.

▶ **Federation of Canadian Municipalities (FCM) - Green Municipal Fund (GMF)**
📎 http://sustainablecommunities.fcm.ca/GMF/
The GMF offers a range of resources and services that specifically address the sustainable community development needs of municipal governments. The Fund provides low-interest loans and grants, builds capacity, and shares knowledge to support municipal governments and their partners in developing communities that are more environmentally, socially and economically sustainable. GMF is managed by the FCM Centre for Sustainable Community Development. The Partners for Climate Protection (PCP) program receives financial support from the Green Municipal Fund as part of the Capacity Building Program.

▶ **Federation of Canadian Municipalities (FCM) - Centre For Sustainable Community Development**
📎 http://sustainablecommunities.fcm.ca
The Centre for Sustainable Community Development offers financial services and resources to Canadian municipal governments to improve environmental performance and reduce greenhouse gas emissions. Their website provides resources to help municipalities pursue and achieve sustainable development goals.

▶ **The Northern Ontario Heritage Fund Corporation**
📎 http://www.mndm.gov.on.ca/nohfc/program_iacdp_e.asp
The Northern Ontario Heritage Fund Corporation (NOHFC) Infrastructure and Community Development Program helps northern communities make the investments necessary to improve critical infrastructure and develop partnerships that find effective ways to create jobs and improve economic prospects in the North. Eligible applicants may include partnerships and alliances comprising municipalities, private sector businesses and organizations, federal government and other government-related agencies. Municipalities, First Nations, not-for-profit corporations and educational institutions may also apply individually. Eligible infrastructure projects include, but are not limited to: industrial parks, winter roads projects, waterfront development, community facilities for economic development purposes (e.g. call centres).

▶ **ecoENERGY for Aboriginal and Northern Communities**
📎 http://www.ecoaction.gc.ca/ecoenergy-ecoenergie/aborignorth-autochnord-eng.cfm
The ecoENERGY for Aboriginal and Northern

TOOL 12: SECURING FUNDING/OTHER SUPPORT FOR SUSTAINABILITY INITIATIVES

Communities Program, which began on April 1, 2007, will provide $15 million in new funding over four years to support Aboriginal and Northern communities working on clean energy projects, including the approximately 130 remote communities that rely on diesel power generation. Goals include: catalyzing renewable energy projects, improving energy efficiency, and adopting alternative energy sources to reduce dependence on diesel fuel. The program focuses on three key areas to address climate change challenges facing Northern and Aboriginal communities: community energy planning and management; renewable energy and energy efficiency projects; and, capacity building, training and tools.

▶ **ecoENERGY Retrofit Grants and Incentives**
  http://ecoaction.gc.ca/retrofit
  Natural Resources Canada's (NRCan's) ecoENERGY Retrofit program provides financial support to homeowners, small- and medium-sized businesses, public institutions and industrial facilities to help them implement energy saving projects that reduce energy-related greenhouse gases and air pollution, thereby contributing to a cleaner environment for all Canadians.

▶ **Hydro One Conservation and Rebate Programs**
  http://www.hydroonenetworks.com/en/efficiencelectricity_retrofit_incentive_program/
  Hydro One offers rebates for qualifying technologies on a per-unit or performance basis. Technologies may include: Energy-efficient Lighting, Unitary A/C Units (up to 25 tonnes) that are ENERGY STAR®-qualified/CEE compliant, Three-phase premium efficiency motors, Three-phase ENERGY STAR® Power Transformers. Incentives are also available for agricultural fans, creep heat and controls. Applicants must be owners or tenants of business premises served by Hydro One.

▶ **Municipal Eco Challenge Fund (MECF)**
  Ontario is helping municipalities cut their energy costs and reduce their environmental impact by exploring leading-edge green building technologies. Municipalities wishing to determine availability of funds should refer to: http://www.energy.gov.on.ca/index.cfm?fuseaction=conservation.mecf

▶ **Local Authority Services Ltd. (LAS)**, which was created by, and is a wholly owned subsidiary company of, AMO is making available a dynamic on-line energy management software application. The Energy Management Tool (EMT)[32] enables all AMO members to benchmark and compare facility performance, measure and verify savings from energy conservation projects, reduce operational costs and improve processes, and meet corporate environmental stewardship goals including greenhouse gas (GHG) reductions. Those municipalities with interval meters will also be able to utilize the software to manage demand control schemes such as load shedding, peak shaving, or on-site generation. The EMT has robust reporting, billing, trending, and modeling capabilities that can create text, numerical, and graphic summaries of sophisticated operations on any range of data sets—simple or complex. LAS will offer the software to all member municipalities

TOOL 12: SECURING FUNDING/OTHER SUPPORT FOR SUSTAINABILITY INITIATIVES

through the existing MIDAS web-based portal. The EMT is an effective management system of all aspects related to energy matters, products and services, technologies, and the implementation and reporting of results including the relationship between energy consumption and greenhouse gas emissions. (See http://www.amo.on.ca//AM/Template.cfm?Section=AboutUs1

▶ **The Clean Air Foundation's Go Solar Programme** is able to work with municipalities to increase the uptake of solar energy technologies among their residents. Since the program's launch in September 2007, Go Solar has worked with several municipalities to have workshops. It can provide assistance by co-hosting solar focused events with municipalities in 2008-2009. Municipalities need policies in place that enable solar energy technologies among residents, such as appropriate municipal permits.[33]

There are also some important sources of funding for **municipal capacity building**:

▶ **Federal Gas Tax Funds:** The FGT Agreement includes as one of its eligible project costs, capacity building. Capacity-building funding can be allocated towards preparation of an ICSP. (See http://www.infrastructure.gc.ca/ip-pi/gas-essence_tax/gt_can_on_e.shtml.)

▶ **FCM Green Municipal Fund:** The GMF has an annual budget dedicated to municipal capacity-building (see: http://sustainablecommunities.fcm.ca/GMF/).

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[33] See www.gosolarontario.ca

TOOL 13: MAKING THE LINKS AND CREATING VALUE: CIPs, PSAB AND SUSTAINABLE MUNICIPAL PLANNING

WHY THIS TOOL?

There are three separate, but related, modifications to/requirements and/or expectations that Ontario's municipalities are addressing:

▶ **Completion of a Capital Investment Plan (CIP):** Section 8.1 of the Agreement for the Transfer of Federal Gas Tax Revenues requires that municipalities complete a Capital Investment Plan (CIP) by the end of 2009.

▶ **Adoption of new Public Sector Accounting Board (PSAB) Standards:** Beginning in 2009, municipalities will be required to report on their tangible capital assets and to change from a modified accrual format to full accrual accounting with new financial statements.

▶ **Integrated Community Sustainability Planning:** Municipalities are expected to fulfill the spirit of the Federal Gas Tax agreement by demonstrating that they have undertaken some form of integrated community sustainability planning, be it the development of a specific ICSP, or some appropriate surrogate (e.g., environmental management plans; sustainability projects; Official Plan updates to reflect principles of sustainability; etc.).

The question arises as to the value of these to municipalities, specifically as they relate to their sustainability goals. The intention of this Tool is to:

▶ Describe and explore the strategic linkages among PSAB standards, CIPs and ICSPs; and,

▶ Demonstrate how these three "forces" can work together to produce opportunities at the municipal level, including improved asset management, financial benefits and greater long-term sustainability.

WHAT?

Figure 7, on the following page, shows the integral relationship among the PSAB, CIP and ICSPs.
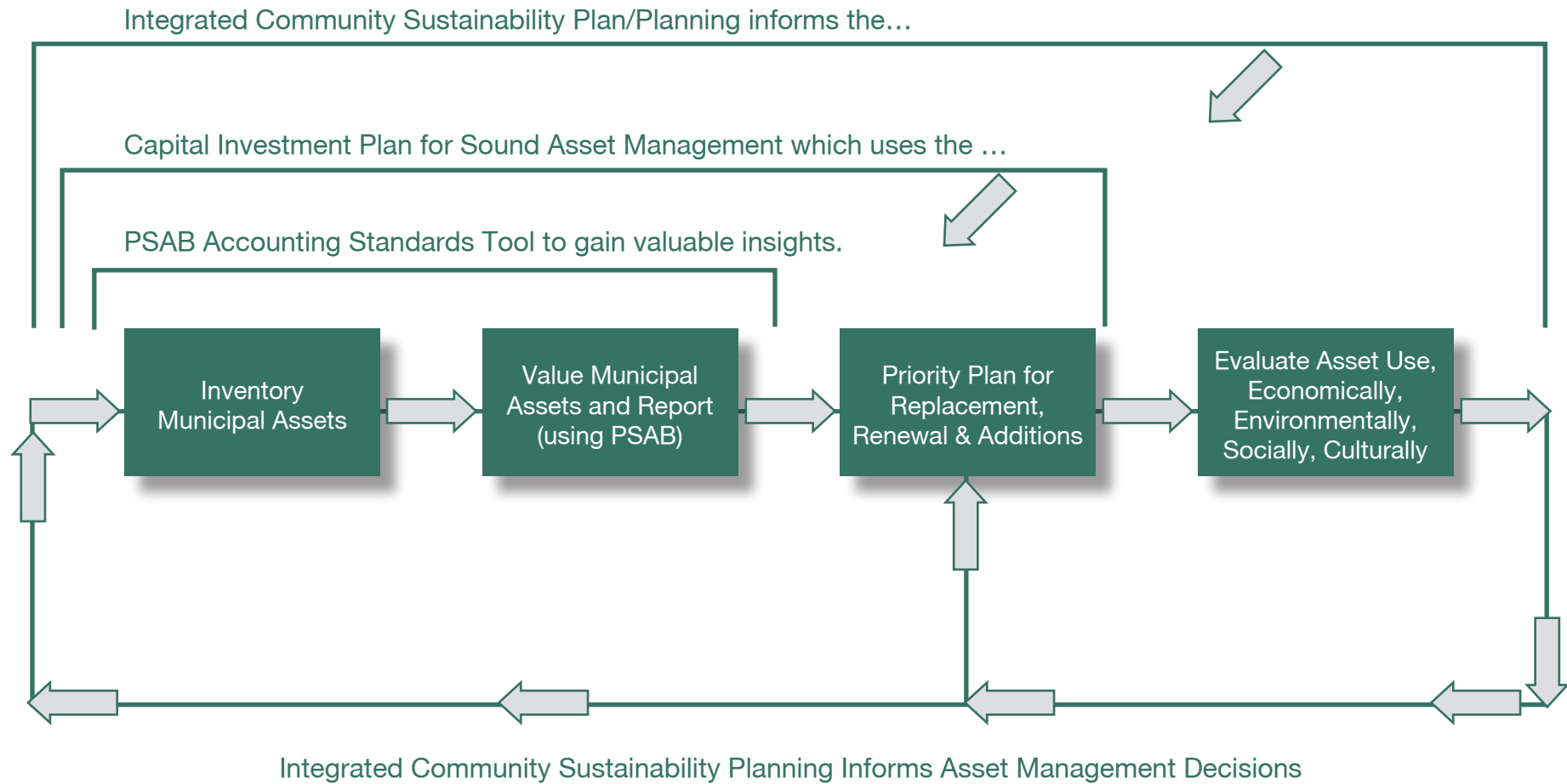
NEW PSAB STANDARD MEASUREMENT REQUIREMENTS

PSAB (Public Sector Accounting Board of the Canadian Institute of Chartered Accountants) has approved important changes with respect to municipal accounting practices (particularly PS 1200 and 3150 of the PSAB Handbook). As Figure 7 depicts, these changes require municipalities to inventory and assign values to each municipal asset, taking into consideration amortization (i.e., factoring in the anticipated lifespan of the asset). The results of the process will enable municipalities to undertake decisions through a Capital Investment Plan (CIP) regarding asset operation, maintenance and replacement in a much more informed manner, and to achieve improved asset management. It also enables greater insight into overall municipal financing.

Sustainability Planning Toolkit for Municipalities in Ontario

Executive Summary	Acknowledgements	Table of Contents	Introduction	The Sustainability Toolkit	Appendices

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TOOL 13: MAKING THE LINKS AND CREATING VALUE: CIPs, PSAB AND SUSTAINABLE MUNICIPAL PLANNING

Figure 7: Linking New PSAB Standards, CIP's and Integrated Community Sustainability Planning

Integrated Community Sustainability Plan/Planning informs the…

Capital Investment Plan for Sound Asset Management which uses the …

PSAB Accounting Standards Tool to gain valuable insights.

Inventory Municipal Assets → Value Municipal Assets and Report (using PSAB) → Priority Plan for Replacement, Renewal & Additions → Evaluate Asset Use, Economically, Environmentally, Socially, Culturally

Integrated Community Sustainability Planning Informs Asset Management Decisions

TOOL 13: MAKING THE LINKS AND CREATING VALUE: CIPs, PSAB AND SUSTAINABLE MUNICIPAL PLANNING

CAPITAL INVESTMENT PLAN (CIP)

A CIP is currently[34] defined as:

> "A document, such as a capital plan, created through a public process, with approval from municipal elected officials, providing a detailed understanding of anticipated investments into tangible capital assets that are considered "priorities", along with a "rationale."

It is a financial management tool designed to support municipalities to plan for and select the capital projects that are in their best, long-term interests. CIPs are directly linked to the PSAB changes, as they will need to reflect the new requirements. Information that was previously unavailable in most cases will provide a much stronger and informed platform for decision-makers to choose options that are sustainable and that generate financial benefits.

Using a theoretical example, Asset "A", which cost $100 originally, has depreciated after 5 years and is worth $50. Under the current maintenance regime, the asset will need to be replaced in two years. The choices that the municipality must now consider are to: 1) improve maintenance thereby deferring replacement by several years and enabling capital investment in other assets that hold higher priority for replacement; or 2) purchase an exact replacement (which has risen drastically in cost to $200 will require a municipal loan in two years); or 3) consider other replacement options, some of which cost $250, but which would be more energy-efficient, thereby producing considerable cost savings over its lifespan.

In another case, the municipality is valuing the landfill asset. Based on the asset's evaluation it is determined that, through aggressive waste diversion programming, millions of dollars can be saved as the lifespan of the landfill will be extended by ten years. Success of the aggressive waste diversion programme will induce municipal industrial, commercial, institutional and resident contributors to the landfill to factor in cradle-to-grave costs related to their purchase/use of disposable, versus reusable/recoverable resources.

One can begin to see how sustainability considerations and asset valuation enter into the CIP. Particularly useful for municipalities with constrained/limited resources, it not only helps with priority setting, but represents a framework for succession planning. The CIP will become a tool for arriving at the best allocation of resources to all municipal assets, as they will be linked to overall municipal priorities, which, as shall be discussed immediately below, will increasingly be linked to sustainable development goals.

INTEGRATED COMMUNITY SUSTAINABILITY PLANNING/PLANS

As Figure 7 shows, municipal integrated sustainability planning/plans should, ideally, provide the framework – the economic, social, environmental and cultural context – within which municipal decision-making related to asset management is to occur. For example, the agreed upon aim (realized through sustainability planning processes) of reducing greenhouse gases will inform the evaluation of various options regarding

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[34] Note: A decision was taken by the Oversight Committee responsible for managing the implementation of the federal gas tax revenue in 2007 to further clarify this definition.

TOOL 13: MAKING THE LINKS AND CREATING VALUE: CIPs, PSAB AND SUSTAINABLE MUNICIPAL PLANNING

the selection, use and replacement of specific municipal assets. This evaluation will feed into the CIP, which uses as its platform/launching pad, the PSAB-related generation of information on municipal assets' value. In this way, a CIP is directly linked to integrated community sustainability planning, as it accommodates/contains new infrastructure and capital investments that have been identified as aligning with larger integrated sustainable planning goals and/or that are being funded through FGT revenues. There is a "feedback loop" that develops between asset management findings and evaluation and the over-arching sustainability goals of the municipality.

HOW?

The process to prepare a capital investment plan (CIP) includes the following steps:

▶ An assessment of the programs and services that the municipality offers.

▶ An assessment of the condition and investment needs of existing infrastructure.

▶ An assessment of new infrastructure needs.

▶ An assessment of known revenue sources.

▶ A mechanism to prioritize capital projects.

▶ A resulting 5-year capital investment plan that identifies capital priorities and investment/borrowing needs to meet the objectives of the plan.

USEFUL SOURCES/LINKS

▶ AMCTO/MFOA PSAB/Asset Management Webpage: 🔗 http://www.amcto.com/db/assetmgmt.asp

▶ OMBI Capital Asset Webpage: 🔗 http://www.ombi.ca/accounting.asp

▶ Public Sector Accounting Board: 🔗 http://www.psab-ccsp.ca/index.cfm/ci_id/225/la_id/1.htm

▶ PSAB Implémentation Guide: 🔗 http://www.psab-csp.ca/client_asset/document/3/7/5/3/6/document_4DB34918-C308-D283-6FCFF13D-68CF8700.pdf

APPENDICES

APPENDIX A

AGREEMENT FOR THE TRANSFER OF FEDERAL GAS TAX REVENUES UNDER THE NEW DEAL FOR CITIES AND COMMUNITIES June 17, 2005

SCHEDULE A – Eligible Categories

1. Environmentally Sustainable Municipal Infrastructure (ESMI) Projects include the following:

   a) Public transit Infrastructure Category, e.g.,
      i. Rapid Transit: tangible capital assets and rolling stock (includes light rail, heavy rail additions, subways, ferries, transit stations, park and ride facilities, grade separated bus lanes and rail lines)
      ii. Transit Buses: bus rolling stock, transit bus stations
      iii. Intelligent Transport System (ITS) and Transit Priority Capital Investments
      iv. ITS technologies to improve transit priority signalling, passenger and traffic information and transit operations
      v. Capital investments, such as transit queue jumpers and High Occupancy Vehicle (HOV) lanes
      vi. Para transit: rolling stock, fixed capital assets and systems
      vii. Related capital infrastructure: bus-loading bays, road rehabilitation for bus only lanes.
      viii. Active transportation infrastructure (e.g., bike lanes).

   b) Water Infrastructure Category, e.g.:
      Drinking water supply; drinking water purification and treatment systems; drinking water distribution systems; water metering systems.

   c) Wastewater Systems Category, e.g.:
      Wastewater systems including sanitary and combined sewer systems; and separate storm water systems.

   d) Solid Waste Management Category, e.g.:
      Waste diversion; material recovery facilities; organics management; collection depots; waste disposal landfills; thermal treatment and landfill gas recuperation.

   e) Community Energy Systems Category, e.g.:
      i. Cogeneration or combined heat and power projects (where heat and power are produced through a single process)
      ii. District heating and cooling projects where heat (or cooling) is distributed to more than one building.

   f) Local Roads and Bridges Category, e.g.:
      Local roads, bridges and tunnels, active transportation infrastructure (e.g., bike lanes) that enhance sustainability outcomes.

2. For the purposes of this Agreement, Large Municipalities will be defined as all Municipalities with a population of 500,000 or more. For Large Municipalities, the list of eligible categories will consist of no more than two (2) of categories a) to f) listed above. Large municipalities include: Durham Region, Peel Region, York Region, the City of Mississauga and the City of Ottawa.

APPENDIX A

3. Capacity Building includes the following activities:
   i. Collaboration: building partnerships and strategic alliances; participation; and consultation and outreach
   ii. Knowledge: use of new technology; research; and monitoring and evaluation
   iii. Integration: planning, policy development and implementation (e.g., environmental management systems, life cycle assessment).

SCHEDULE B – Eligible Costs

1. Project Costs

Eligible costs, as specified in each funding agreement, will be all direct costs, which are, in Canada's opinion, properly and reasonably incurred and paid by an Eligible Recipient for under a contract for goods and services necessary for the implementation of an Eligible Project. Eligible costs may include only the following:

   a) the capital costs of acquiring, constructing, renovating or rehabilitating a tangible capital asset and any debt financing charges related thereto;
   b) the fees paid to professionals, technical personnel, consultants and contractors specifically engaged to undertake the surveying, design, engineering, manufacturing or construction of a project infrastructure asset and related facilities and structures;

   c) the costs of environmental assessments, monitoring, and follow up programs as required by the Canadian Environmental Assessment Act; or a provincial equivalent; and,
   d) the costs related to strengthening the ability of municipalities to enhance or develop Integrated Community Sustainability Plans.

1.1   Employee and Equipment Costs

In the case of Eligible Recipients that are remote municipalities, the out-of-pocket costs (not overhead) related to employees or equipment may be included in its eligible costs under the following conditions:

   a) the Eligible Recipient has determined that it is not economically feasible to tender a contract;
   b) employees or equipment are employed directly in respect of the work that would have been the subject of the contract; and,
   c) the arrangement is approved in advance and in writing by the Oversight Committee.

1.2   Administration Costs

That portion of Funds representing interest earned may be used to pay for administration costs.

APPENDIX A

SCHEDULE C - Ineligible Costs

Costs related to the following items are ineligible costs:

a) Eligible Project costs incurred before April 1st , 2005;

b) services or works that are normally provided by the Eligible Recipient or a related party;

c) salaries and other employment benefits of any employees of the Eligible Recipient or related party except as indicated in sections 1.1;

d) an Eligible Recipient's overhead costs, its direct or indirect operating or administrative costs, and more specifically its costs related to planning, engineering, architecture, supervision, management and other activities normally carried out by its applicant's staff;

e) costs of feasibility and planning studies for individual Eligible Projects;

f) taxes for which the municipality is eligible for a tax rebate and all other costs eligible for rebates;

g) costs of land or any interest therein, and related costs;

h) cost of leasing of equipment by the municipality except for as indicated in section 1.1 above;

i) routine repair and maintenance costs;

j) legal fees;

k) administrative costs incurred by the municipality as a result of implementing a funding agreement, subject to 1.2 above; and,

l) audit and evaluation costs.

SCHEDULE D – Outcome Indicators

The impact of the use of the Funds will be measured through a set of core indicators, to be developed by the Oversight Committee and linked to the following outcomes and outputs:

Outcomes:

a) Cleaner Air: [DETERMINE INDICATOR]

b) Cleaner Water: [DETERMINE INDICATOR]

c) Lower GHGs: [DETERMINE INDICATOR]

Outputs: See Appendix B, following.

APPENDIX B

OUTCOME INDICATORS TO MEASURE IMPACTS OF MUNICIPAL FGT INVESTMENTS

TRANSIT – Expected Outcome: Cleaner air/reduced greenhouse gas emissions		
Project Type	**Potential Indicator**	**Source**
Conventional Transit	**Ridership** • # of conventional passenger trips per person in the service area in a year • Change over time in passengers per revenue hour (regular service passenger trips divided by revenue vehicle hours) **Capacity** • Change over time in amount of service – revenue vehicle hours divided by service area population • Change in number of alternative fuel buses • Average age of fleet • Average operating speed • Service interruption per 1000 service hours annually • Percentage of transit fleet that uses alternative fuels or hybrids • Increased km HOV lanes	MPMP/CUTA
	• Increased express bus lanes • Percentage of fleet that uses alternative energy sources • Percentage of fleet with electronic cards • Percentage of fleet with installation of bike racks • Percentage of fleet with better connectivity with other transport routes (park and ride lots) • Increased dedicate ROW km • Change in number of bike racks • Litres per passenger mile	

APPENDIX B

OUTCOME INDICATORS TO MEASURE IMPACTS OF MUNICIPAL FGT INVESTMENTS

Project Type	Potential Indicator	Source
Para transit	• % transit fleet accessible to wheelchairs • %transit fixed facilities accessible to wheel chairs • % surf/subway routes with auto stop announcements • CUTA also has indicators for specialized transit services	
Active transportation Infrastructure (e.g., bike lanes)	• Ratio of bike lanes to roadways over life of program • Ratio of improved sidewalks over life of the program • Ratio of new sidewalk over life of the program	

WATER – Expected Outcome: Improved Water quality		
Project Type	**Potential Indicator**	**Source**
	• Percentage of test results that showed adverse water quality or exceeded maximum concentrations as prescribed by regulation	Drinking Water Surveillance Program (MOE) Activity undertaken by Municipal water works owners
Project Type	**Potential Indicator**	**Source**
Drinking water supply/ Drinking water distribution systems	• Weighted number of days when a boil water advisory issued by the medical officer of health, applicable to municipal water supply, was in effect • Number of water main breaks per 100 kilometres of water distribution pipe in a year	MPMP MPMP

APPENDIX B

OUTCOME INDICATORS TO MEASURE IMPACTS OF MUNICIPAL FGT INVESTMENTS

Project Type	Potential Indicator	Source
Drinking water purification and treatment systems	• Change in the level of water contaminants after investment in water treatment or purification system compared to prior to the investment	Safe Drinking Water Act requires municipalities to continuously monitor and eport on drinking water quality to the Ministry of the Environment
Water metering systems	• Suggestion: Increase percentage of households with water meters over the life of the program	MPMP

WASTEWATER – Expected Outcome: cleaner water		
Project Type	Potential Indicator	Source
Wastewater systems, including sanitary and combined sewer systems, separate storm water systems	• Percentage of wastewater test results that indicated that waste water discharge objectives (defined for the site by a certificate of approval) were not met	OWRA Sec 53 water works approval
	• Number of current households on municipal wastewater collection whose wastewater will be treated to a higher quality	
	• Number of wastewater main backups per 100 kilometres of wastewater main in a year	MPMP
	• Percentage of wastewater estimated to have by-passed treatment	MPMP
	• Number of beach closures days prior to work	

APPENDIX B

OUTCOME INDICATORS TO MEASURE IMPACTS OF MUNICIPAL FGT INVESTMENTS

Project Type	Potential Indicator	Source
Wastewater systems, including sanitary and combined sewer systems, separate storm water systems cont'd.	• Level of improvements to treatment plants (i.e., primary to secondary to tertiary – lagoons also play a role in improving treatment quality) • Increased kilometres of wastewater systems separated from storm water systems • Indicator to be developed to demonstrate how efficiencies achieved through investments in wastewater systems can reduce energy consumption, improve, improve air quality and reduce GHG emissions	

SOLID WASTE		
Project Type	Potential Indicator	Source
Waste diversion	• Percentage of residential solid waste diverted from landfill (for recycling) • Reporting of water, gas or air volume of waste in a waste management system or waste disposal site – as identified in a certificate of approval	MPMP Ontario EPA Sec 27
Remediation at waste site	• Changes/improvements in ground and surface water based on data collected through conditions of certificate of approval for the site after gas tax investments compared to prior to investment	MOE – certificates of approval
Organics management	• Participation rates in organics collection or recycling program	
Collection depots		
Waste disposal landfills		
Thermal treatment		
Landfill gas recuperation	• Number of m^3 of methane gas collected per hour as indicated in the Air Certificate of Approval	

APPENDIX B

OUTCOME INDICATORS TO MEASURE IMPACTS OF MUNICIPAL FGT INVESTMENTS

COMMUNITY ENERGY SYSTEMS		
Project Type	**Potential Indicator**	**Source**
	• Increase in renewable and clean energy capacity supplied by smaller generators in Ontario • Increase in district energy systems for industrial, commercial and community heating • Fewer wires projects implemented as renewable and cogeneration projects avoid wires investment	Renewable and Clean Energy Standard Offer Programs (RESOP and CESOP)
Smart Metering	• Number of households that have converted to smart metering by 2010, compared to 2005	Municipality/Utility
	• Total volume of energy (heat, fuel, electricity) saved • Decrease in electricity used by municipal buildings and facilities (kWh per m^3 per annum) • Decrease in heating fuel used by municipal buildings (BTU equivalent per m^3 per annum)	
	• % of total energy consumption from alternative renewable sources	
	• % of streetlighting converted to LED	
	• % of traffic signals converted to LED	
	• % of service population with "Smart Metering"	
	• % of municipal fleet incorporating alternative vehicle echnologies (e.g., hybrid, electric, natural gas, ethanol)	
Distributed energy and district heating and cooling	• Ministry of Energy to develop indicators	

APPENDIX B

OUTCOME INDICATORS TO MEASURE IMPACTS OF MUNICIPAL FGT INVESTMENTS

ROADS AND BRIDGES		
Project Type	**Potential Indicator**	**Source**
Roads and bridges, tunnels	• % of paved lane kilometres where the condition is rated as good to very good	MPMP
	• Reduced energy required when resurfacing road at appropriate lifecycle (measured in megajoules (MJ))	Road and Bridge Tool
	• Reduced energy required when recycling asphalt vs. mill and overlay (MJ)	Road and Bridge Tool
	• Reduced energy required by eliminating bridge load restrictions (CO2kg/day and CO2kg/year)	Road and Bridge Tool
	• Reduced energy required by reducing construction timelines (bridge work with detours) (CO2kg total)	Road and Bridge Tool
	• Reduced energy required by minimizing traffic delays by installing turning lanes (CO2kg/day, CO2kg/year)	Road and Bridge Tool
	• Reduced energy required by minimizing traffic delays by installing traffic lights (CO2kg/day, CO2kg/year)	Road and Bridge Tool
	• Reduced energy required to maintain gravel road as gravel (MJ)	Road and Bridge Tool