

Honour Roll

We would like to recognize 9 municipalities whose asset management work set a new bar for capital planning in Ontario. Although there are many innovative ideas in each of the asset management plans, these municipalities have been selected because they adopted trend-setting practices in the following core areas of financial asset planning:

- ◆ **Cost-benefit Analysis**
- ◆ **Innovative Funding and Delivery**
- ◆ **Cost Management**
- ◆ **Marshalling Resources**
- ◆ **Financial Planning**
- ◆ **Integrated Long Term Planning**
- ◆ **Forecasting**
- ◆ **IT Solutions**
- ◆ **Budgeting**

“In Canada, a recent spike in severe weather-related events – including severe rainstorms, tornadoes, flooding and forest fires – has resulted in social and economic consequences for individuals and governments across the country.” - The Institute for Catastrophic Loss Reduction, 2012

Every municipality that has experienced asset failure recognizes their reliance on infrastructure. It is often in the context of deterioration and disaster that people appreciate the importance of physical infrastructure and the consequences of taking it for granted.



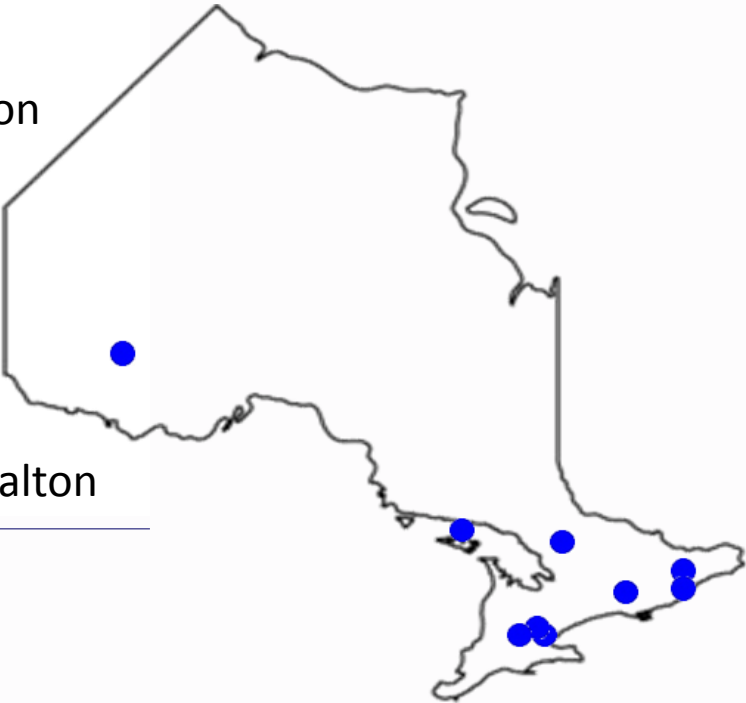
Ontario-wide, municipalities are taking a proactive approach to managing infrastructure

To build on the work of the provincial *Guide to Municipal Asset Management Plans*, (hereafter referred to as ‘the Guide’), the Honour Roll showcases a handful of municipalities that adopted leading practices in a demonstration of their commitment to community sustainability and infrastructure stewardship. Rather than trying to re-invent the wheel, by teasing out strengths of small and medium-sized municipalities’ plans, we hope to expedite staff research, fast-track the plan revision cycle and encourage municipalities to learn from some of the good ideas and best practices championed by other communities when updating their own plans.

We are grateful for municipalities’ permission to hyperlink to their asset management documents for the benefit of municipal staff who can use more detailed information as a reference point for revising their own municipality’s plan.

Presenting Ontario's Asset Management Honour Roll

Distinction	Recipient
Cost-benefit Analysis	Township of Billings
Innovative Funding and Delivery	Village of Burk's Falls
Cost Management	Township of Ignace
Marshalling Resources	Township of Stirling-Rawdon
Financial Planning	Town of Perth
Integrated Long Term Planning	City of Brockville
Forecasting	City of Guelph
IT Solutions	City of Cambridge
Budgeting	Regional Municipality of Halton



Legend

Municipal population



= ± 1,000 pop.

>> = approx. 2,000 pop.



= ± 50,000 pop.

// = approx. 100,000 pop.

Asset snapshot



Roads (lane kilometers)



Bridges (number of bridges and culverts combined)



Social housing (number of communities)



Water (kilometers of mains)



Wastewater (kilometers of mains)




Stormwater (kilometers of mains)

Note on the asset snapshots

Some of the assets included in each municipality's asset management plan are profiled in the case studies as a proxy for the size of the municipality's asset base; snapshots give context to the plan and enhance inter-municipal comparability. Similar assets types are combined, for example surface treated roads and gravel roads are added together in lane kilometres of road.

Township of Billings

Asset snapshot

	194 lane kms
	303 structures
	10 kms of mains



“The financing strategy includes the following key components: Annually assessing the Township’s financial position and making adjustments when necessary to maintain the objective of having a sustainable Asset Management Plan...” (p. 17).

COST-BENEFIT ANALYSIS








Billings’ compares the cost and risk involved in two asset management strategies, 1. Replacement only, 2. Inspection, maintenance, rehabilitation and replacement. The second strategy is shown to produce lower costs and risk to the municipality than the first. If the municipality adopts the second strategy, it is buying into the make-up of that strategy, notably intervening earlier in an assets’ lifecycle and focusing more on maintenance. Comparing the two asset management strategies is a practical way of shifting the focus of asset management activities because retaining status quo maintenance levels, for instance, is effectively choosing the more expensive and risky option. The asset management [plan](#) also indicates that the current maintenance budget will not allow the Township to meet its level of service targets. Recommendations that bridge the ‘As is’ and ‘To be’ scenarios include budgeting for “one additional maintenance staff person and additional maintenance activities” (p. v), specifically, increasing the annual maintenance budget by \$5,000. Billings currently provides water services and one of the priorities in Billings’ Sustainability Plan is to undertake a cost benefit analysis for providing limited sanitary sewer services. (Another priority is to develop a five year plan for road upgrades and maintenance.) The short (5 years), mid- (25 years) and long (100 years) term planning horizons considered in the asset plan reinforce the necessity of forward planning in areas with minimal assessment. Feasibility is also woven into the reserve adequacy target: “[A]nnual contributions to the respective capital reserves [should be made]... to maintain a minimum balance... of approximately 1% of the asset value” (p. 17).

Also noteworthy: ♦ The plan pinpoints critical asset needs, such as a membrane filter for the water treatment plant and a garbage truck, which helps make the recommendations tangible and the plan relatable. ♦ Billings’ infrastructure condition scorecard contains columns that give information about the percentage of assets and the replacement value of assets in different conditions. This gives readers a sense of the magnitude of technical and financial needs the Township will experience in future. ♦ Billings’ financial strategy for managing its assets is prepared in view of projected changes in funding, including the phase-down of the Ontario Municipal Partnership Fund. ♦ The procurement section of the plan notes that a group buying strategy is in place and one of the asset management policy statements suggests delving deeper into shared services.

Village of Burk's Falls

Asset snapshot

	28 lane kms
	2 structures
	3 kms of mains
	11 kms of mains
	1.5 kms of mains



"It is recommended that ...[the municipality adopt] the insurance valuations as replacement values as these represent a higher (more detailed) level of estimation and should better reflect the true replacement cost [than PSAB replacement estimates]" (p. 15).

INNOVATIVE FUNDING AND DELIVERY








Burk's Falls' employs many creative infrastructure funding and service delivery strategies, including joint service agreements with neighbouring municipalities for fire, landfill and recreation services and providing water and wastewater services through the Ontario Clean Water Agency. The Village is currently considering operating its parabus through a volunteer group and [the plan](#) notes renting as a possible way to acquire new building space for the municipal administration. Asset disposal options are considered and greater exploration of shared services is ongoing with the strongest prospects in joint use of infrequently used vehicles, joint tendering, shared road line painting and gravel/salt purchase. Cost comparisons for various maintenance activities, including road brushing and ditching, are conducted to determine the most cost-effective service provider: internal staff or external contractors. Comparisons confirm that the current provider - staff - is the less expensive option. Cost consciousness is also evident in Burk's Falls' revenue strategies, which forecast an increased focus on user fees and debt in the years ahead, as well as a balanced approach to increasing investment for tax supported assets: The recommendation is to increase road expenditures 10% per year over the life of the plan to reach the required annual level of funding in year 10.

Also noteworthy: ♦ Service level measures are based on the financial need for assets to exceed their useful lives, i.e. "Vehicles shall be maintained and operated to ensure they are available for use beyond their expected service life" (p. 20). ♦ The combination of (1) a clear breakdown of the phases to develop the plan, (2) directive language, ("the Village will...") (3) phasing plan review along same timelines of condition assessment (4) highlighting Council's endorsement of the plan, and (5) noting non-commitment by council/staff to the asset management strategy as a risk to the plan, stake out the path forward and instill the kind of commitment needed for long term implementation of the plan. ♦ New information from roads needs studies every 5 years, Ontario's Structure Inspection Manual inspections every 2 years and video work on the sanitary sewers every 5 years, as well as other condition information, is the basis for prioritizing expenditures.

Township of Ignace

Asset snapshot



	52 lane kms
	3 structures
	24 kms of mains
	15 kms of mains

“The Township plans to conduct a major review of the asset management plan every four years. ...A less comprehensive interim review will take place every two years.... Every year in which there is a review a two year work plan will be generated” (p. 14).




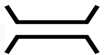


COST MANAGEMENT

Prior to 1971, Ignace had no paved roads. In 2013, the Township reported the value of its asset base at \$78.7 million. Implicitly recognizing the need to reduce costs, the Township has undertaken measures such as developing its [asset management plan](#) internally with the help of a temporary employee, purchasing used equipment and considering load restrictions on roads to preserve their condition. The community was designed for 3,000-3,500 people. With a current population of 1,202, it follows that one purpose of the Official Plan is “to ensure development will not generate future requirements for public services that are premature or beyond the capability of the community to support” (p. 10). Locating new development so that it uses existing infrastructure and infilling fully serviced parts of the municipality are other cost management strategies related to built form. Fine-tuning broad financial projections based on local knowledge and research also ensures the Township is collecting appropriately. Replacement cost determinations are based on actual recent construction costs, contacting companies for pricing information or finding it online, as well as environmental factors, such as the low-lying swampy land in the municipality. Moderate levels of infrastructure use, (i.e. low traffic) the gravel and sand bed of the municipality and annual investment in maintenance are three factors that help explain current asset condition and can be used to project investment need going forward. The estimated useful life of a road has also been updated in Ignace’s tangible capital asset policy, building on industry standards about estimated life with the local knowledge that roads last longer than 15 years.

Also noteworthy: ♦ The Township’s asset management function is centralized, which can lend itself to a consistent, synergistic approach to taking care of assets, all of which are included in Ignace’s asset management plan. ♦ The service level analysis is contextualized by economic and demographic factors, including the reopening of a sawmill, mining opportunities on Bending Lake and inflows of First Nations people and retirees, which helps the Township scale infrastructure investment accordingly. In terms of revenue, the Township receives income from participation in a nuclear waste site selection process and plans to reap the benefits of investment income through its sinking fund financial strategy.

Township of Stirling-Rawdon

Asset snapshot

	540 lane kms
	471 structures
	13 kms of mains
	13 kms of mains



“We have a wish to grow the municipality to a more sustainable level ... To enable growth to happen changes and improvements need to be made to the way the township deals with its infrastructure” (p. 3).








MARSHALLING RESOURCES

Stirling-Rawdon’s [plan](#) was created in-house by the Chief Administrative Officer/Public Works Manager and Capital Asset Manager. To create the plan, staff drew on training provided by municipal sector associations and used several service level performance measures as well as a breakdown of asset needs at major lifecycle phases from publically available asset management reference guides. The plan suggests that ongoing condition assessments can be performed by public works staff through “windshield surveys” as part of routine patrols and indicates that pavement evaluations are based on Ontario Good Roads Associations resources and examples of surface distress. Stirling-Rawdon pools resources with abutting municipalities through an inter-municipal maintenance agreement for 34 km of road. Having the CAO as plan co-author implies a level of understanding of the technical concepts, commitment to the plan and senior staff buy-in that is required for the plan to be useful in changing behaviour once it has been approved by Council. Municipal staff, aware of any differences between the contents of the *Guide* and internal practices, can use the asset management plan as an opportunity to explore convergence:

“If the financial plan component of an AMP results in a funding shortfall, the Province requires the inclusion of a specific plan as to how the impact of the shortfall will be managed. In determining the validity of a funding shortfall, the Province may evaluate a municipality’s approach to the following: ...use of debt... increased user fees ...consideration ... to revising service levels” (p. 36).

Also noteworthy: ♦ The goal of Stirling-Rawdon’s asset management work is to fully fund their asset base and the plan maps out 5 and 10 year scenarios to reach full funding, settling on annual 2.2% tax increases, 2.3% water rate increases and 4.5% sewer rate increases over 10 years. ♦ Many graphs, charts, tables and matrices add to the accessibility of the Township’s plan.

Town of Perth

Asset snapshot	
	91 lane kms
	12 structures
	44 kms of mains
	44 kms of mains
	29 kms of mains



“The Town currently tracks specific performance measures as part of the Municipal Performance Measurement Program.... relating to capital asset effectiveness...[that can be used to support service level analysis]” (p. 3-3).








FINANCIAL PLANNING

[Perth's plan](#) analyzed two asset replacement scenarios in terms of cost and timing, one based on Public Sector Accounting Board 3150 asset data and one based on asset condition and risk. The comparison demonstrates the distortions that can result from relying on PSAB estimates of useful life to forecast costs or make investment decisions: There were \$49.7 million of immediate needs according to PSAB data and \$0 of immediate needs according to asset condition and risk. Significant detail about the cost of all maintenance, rehabilitation, replacement and expansion work for new and replacement assets, including a list of projects that will be undertaken to reach the target level of service, is forecasted over the 20 year planning horizon. Whereas decreasing service levels is often cited as a cost reduction strategy, this plan suggests that the reverse can also be true; increasing levels of service to improve asset condition reduces risk and overall cost (p. 6-1). To arrive at a fully funded plan, the annual infrastructure deficit is calculated and translated into annual rate increases: 2.98% for tax, 3.58% for water and 2.59% for wastewater. Annual sinking fund contributions for tax, water and wastewater rate supported assets are provided. Financial forecasts assume that the tax and user fee room created from reduced policing costs and paying off debt will be dedicated to capital funding. A risk-based asset prioritization chart suggests that whatever other criteria the Town includes in future rankings, a handful of streets and the water filtration system need attention in the short term.

Also noteworthy: ♦ Frequent references to ‘discussions with staff’ suggest a knowledge exchange took place and that staff were engaged in the process of plan development, which is important if the plan will be implemented by people other than the author. ♦ A diagram on page 5-2 lists lifecycle phases for new and replacement assets and lines up the revenue sources available at each phase beside them. Knowing that only taxes and user fees can be used to operate, maintain, monitor, decommission and dispose of assets, municipalities may wish to preserve room in tax and user fee rates for these later-in-life activities and take advantage of development charges and debt to cover purchase and installation costs.

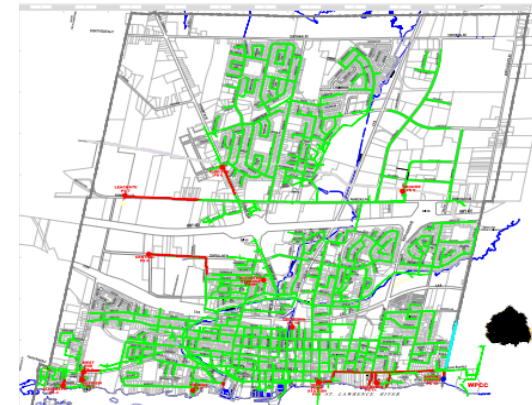
City of Brockville

Asset snapshot

	310 lane kms
	21 structures
	138 kms of mains
	113 kms of mains
	102 kms of mains



WASTEWATER SYSTEM




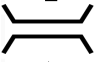



INTEGRATED LONG TERM PLANNING

To minimize the probability of unplanned spending needs triggering sharp increases in Brockville's user fees and taxes, the City's [asset plan](#) recommends that subsequent versions include parks and recreation, fleet, buildings and facility assets. That way, the asset plan and the Capital Plan would house the same assets and use the same 10 year planning horizon. Since the Capital Plan is already updated annually based on approved funding, there is a greater likelihood that the asset plan will be a living document alongside it. It also means that there are good records of past operating, maintenance, rehabilitation and replacement funding amounts. The City's colour-coded, condition-based infrastructure report card calls on this information in a column about "Average Annual Maintenance Budget" to help visually establish the connection between technical performance of assets and the level of ongoing investment. The asset plan also spells out the various ways that it, in principle and substance, helps deliver on the financial and environmental priorities in Brockville's Community Strategic Plan. Amenities are one of the focal points of the Strategic Plan, specifically, "providing amenities that are second to none" (p. 7). A cautionary flag about affordability is raised in the service level section of the asset plan, noting that "it is essential that the public not only be consulted, but also be educated and ultimately make choices with respect to the service levels that they wish to pay for" (p. 31).

Also noteworthy: ♦ Knowledge management is cited as a non-infrastructure solution and the plan was used as an opportunity to document current practices, make recommendations and identify gaps as part of a succession planning and continuous improvement exercise. ♦ The municipality's risk appetite is woven into the plan. For example, seeking conservative condition estimates, Brockville adopted the lower band of what they called the "ideal service life" for each asset as part of the asset inventory data. ♦ The 'Procurement' section of the plan includes a recommendation about regular evaluation of contractor performance and using past performance as a predictor of future performance.

City of Guelph

Asset snapshot

	1094 lane kms
	18 structures
	537 kms of mains
	503 kms of mains
	457 kms of mains

Revision Log

Revision #	Revised By	Date	Issue / Revision Description
1	GLI	Nov 3, 2011	Update of O&M rates and LCC calculations
2	GLI	Nov 22, 2011	Update of unit rates and assumptions based on draft 1 comments
3	SS/GLI	Feb 17, 2012	Update based on comments from City
4	DE/GLI	Mar 28, 2012	Update bridge component of the report based on new replacement values
5	DE	May 29, 2012	Update based on comments from City
6	DE / AP	June 22, 2012	Update based on comments from City
7	AP	July 24, 2012	Update based on comments from City
8	AP	August 10, 2012	Update based on comments from City
9	AP	September 21, 2012	Update based on comments from City

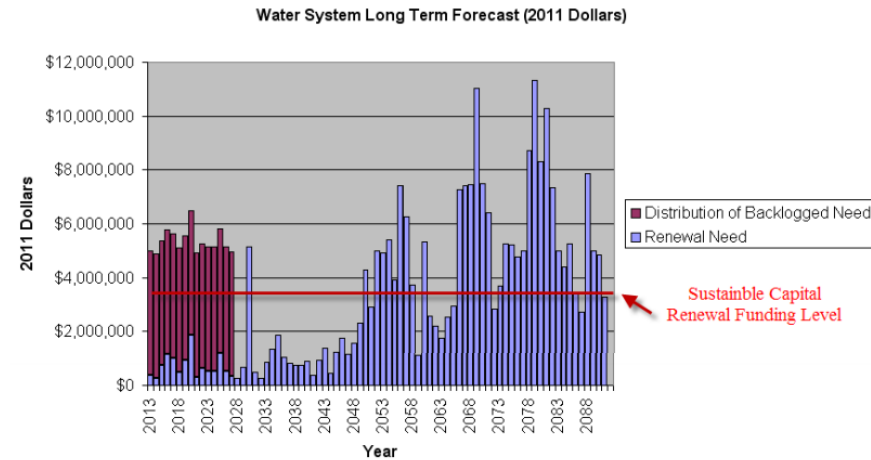
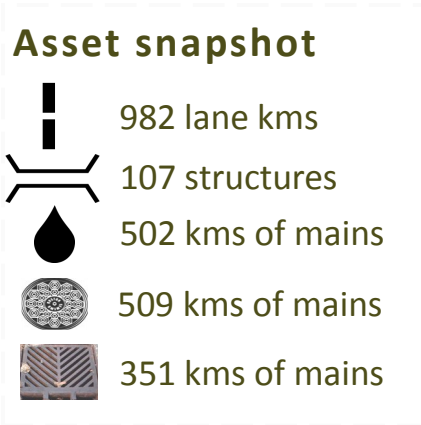


FORECASTING

Guelph's [Sustainable Infrastructure Report](#), spanning 100 years and including operating costs in addition to maintenance and capital costs, breaks assets down into major structural, mechanical and electrical components. The Infrastructure Report, including water, wastewater, storm water and transportation assets, was prepared externally and is the predecessor to the City's [asset management policy](#) (p. 10-14). The Report makes reference to new asset management techniques, such as Weibull distributions for forecasting deterioration and shape parameter to describe the mean time between asset failures, and analyzes assets made of the same material together in order to build an understanding of how different materials fare in local environmental conditions. A sensitivity analysis, which was conducted for each asset class to determine the impact of changing the service life, engenders confidence in estimates of useful life over the century-long planning horizon. Knowing how much operating and maintenance investment levels impact overall cost forecasts, the City's historic operating and maintenance costs were compared to industry benchmarks to validate cost projections in the Report. The Report's authors also cross-referenced the asset inventory provided by staff with a 2003 report, "Cost of Sustainable Services," to ensure the inventory used in the Report was consistent with previous studies. The City began examining its infrastructure in 2011, roughly a year before the *Guide* was released, and the Report clearly presents its limitations, (i.e. it suggests how several assumptions could impact the backlog figure) which helps staff formulate an action plan for improving asset management documents.

Also noteworthy: ♦ The City's infrastructure scorecard on funding performance conveys both the letter grade (C) and the specific percent that produced it (79%), which adds a valuable layer of detail with which to evaluate performance given the grade ranges embedded in scorecards can be considerable. ♦ The study shows the annual infrastructure funding deficit in both 2011 and 2012 as \$29.4 million and \$25 million respectively. Comparing the two figures is instrumental to demonstrating progress on a long term endeavor.

City of Cambridge



IT SOLUTIONS

Cambridge's technical advancements complement its business process re-engineering and knowledge management initiatives. A snapshot of some of its information technology tools includes:






- ◇ A recording system for service requests and complaints that produces pre-set issue-specific responses (p. 5)
- ◇ A Road Allowance Permit system that tracks activities within the right-of-way, uploads them to the City website and automatically notifies emergency services of closures (p. 5)
- ◇ A maintenance management system that ensures workorders are completed on a timely basis, records trends and updates the resource levels required accordingly (p. 5)

The City is also moving to a mobile method of uploading condition inspection reports. Many of the IT tools were created in partnership with the University of Waterloo, IBM, other municipalities and sector associations, and [the plan](#) notes that good service provider relations are critical to technological innovation. Whereas the backbone of the asset management practice is automated, computer-based non-infrastructure solutions, the internally developed plan is structured to highlight progress to date on various projects, including planned completion times, targets and wins, such as, with new technology and better data capture, the City has decreased infiltration and water loss rates and increased fee rates for water and wastewater to more sustainable levels. One target is to eliminate maintenance deficits by moving from historic financial based budgeting to work based budgets that include reactive and proactive maintenance, inspection and repair.

Also noteworthy: ◇ Cambridge performs a collective needs assessment whereby the “needs of assets that share the same physical space are combined and through analytics and logistics, the process identifies the best value interventions that...that align life cycles of all assets in each location” (p. 27). The Official Plan and growth planning models complement the City's geographic approach to asset management. ◇ The plan re-structures the internal division of asset management labour with the Asset Management Division's new responsibilities listed in the plan.

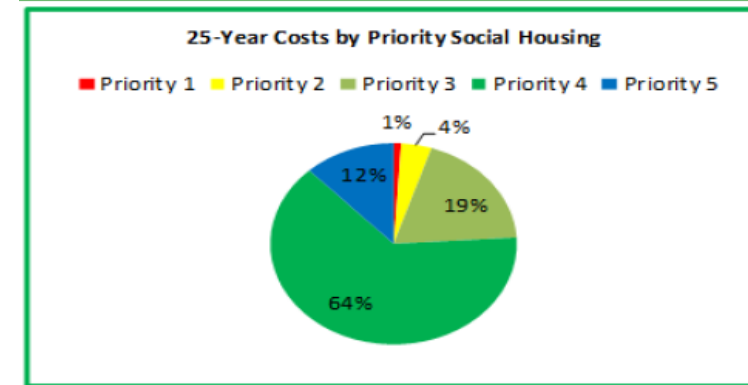
Regional Municipality of Halton

Asset snapshot

	980 lane kms
	219 structures
	32 communities
	2058 kms of mains
	1803 kms of mains



Distribution of 25-year Costs by Priority



BUDGETING



Before purchasing new housing assets, Halton considers the full lifecycle costs, including “[p]roject cost details, ‘what if’ scenarios, actual cost comparisons [of similar projects for the last few years], cost associated with maintenance of the assets, energy usage, and sustainability assumptions” (p. 20). Once the costs are known, projects are slotted into one of five categories in the project prioritization framework and automatically fall into a schedule: 1. Essential—Currently Critical (Immediate), 2. Necessary High—Potentially Critical (Year 1 or 2), 3. Necessary Medium—Not Yet Critical (Year 3-5), 4. Necessary Low—Recommended Improvements, and 5. Desirable. The gradation is based on safety hazards, deterioration prevention and operating performance. From 2014 onwards, the classifications in the Region’s Capital Budgets and Business Plans will mirror the *Guide’s* asset management categories, (non-infrastructure solutions, rehabilitation, replacement, disposal and expansion) to track the impact of investing at different lifecycle phases over time. Halton cites investment interest as a revenue source in the financial strategy section of its [asset management plan](#), allocates operating surpluses to capital reserves and engages in shared services. The purchasing policy notes that contracts are consolidated among internal divisions and with lower tier municipalities and that participation in a cooperative purchasing group enables bulk buying in the region.

Also noteworthy: ♦ Halton has made significant advances in non-infrastructure solutions, including waste diversion programs, annually flushing problem sections of wastewater mains, water conservation programs, a Basement Flooding Prevention Subsidy and load restrictions on secondary roads. ♦ Many efforts have been made to communicate asset management information accessibly: The plan includes a glossary of terms upfront, a phased roadmap to complete a comprehensive asset management plan and the communications strategy for infrastructure improvement, “Building a Better Halton,” is intended to encourage two-way communication between the community and the Region. ♦ In addition to the disposal costs, Halton’s lifecycle cost analysis takes into account opportunities for resale and salvaging older assets.

Next Steps

1. Municipal asset management plans could benefit from:

- ◇ Hyperlinking to the plans and policies referenced in the asset plan (Official plans, investment policy, etc.) to facilitate cross-referencing.
- ◇ Including the distribution of assets at various age ranges to develop a higher level perspective on the general state of the municipality's asset base, inform condition assessment priorities and budget projections.
- ◇ Highlighting the results of public consultation around service levels and willingness to pay given many plans broach level of service in technical, risk mitigation terms.
- ◇ Adding timeframes for service level adjustments and considering external trends affecting service levels. The cost of moving to target service levels should be articulated in plans.
- ◇ Tying levels of service to maintenance activities and other measures that minimize lifecycle costs. In some places, the level of service is to perform maintenance, rehabilitation, etc. to extend the life of the asset by 10 years.
- ◇ Exploring non-infrastructure solutions, maintenance, rehabilitation, replacement, disposal and expansion activities in detail. It is particularly important to look into activities that have figured less prominently in past, such as non-infrastructure strategies and disposal procedures. Recycling and salvaging parts of older assets are other opportunities to reduce capital costs.
- ◇ Presenting the basis for prioritizing rehabilitation and replacement investments (i.e. risk, condition, Council priorities, etc.).
- ◇ Addressing how new acquisitions, including donated assets, will impact the maintenance budget.
- ◇ Establishing benchmarks and strategies for increasing revenue (i.e. dedicated capital levy), meeting sinking fund requirements (i.e. using tax and user fee room after a debt retires for capital purposes) and maintaining healthy reserve fund levels (i.e. converting 'reserves' to 'reserve funds' to take advantage of interest and directing the annual operating surplus to reserve funds).
- ◇ Looking into shared services and alternative financing and procurement as part of the next plan update. Other revenue tools and cost recovery vehicles to consider include creating municipal services corporations, inter-municipal contracting and stormwater management fees. Selling recyclables to processing mills is another option for municipalities that provide recycling services.
- ◇ Spelling out the cost, risks and risk management strategies associated with different asset management activities.
- ◇ Considering debt and excluding unconfirmed grants in the long term financial strategy.
- ◇ Discussing alternative scenarios to the financial strategy, quantifying financial shortfalls (if any) and how they will be managed.
- ◇ Extending the coverage of plans to match the life of the longest lived asset owned by the municipality and to all asset classes to ensure decisions are made knowing the full range of future needs.

2. Municipal asset management practices could benefit from:

- ◇ Recasting the limitations listed in the municipality's current asset plan as a work plan for updating the plan. Timelines can be added to each focus area and coordinated with other initiatives the municipality has planned, i.e. if the auditor is involved with the tangible capital asset database, updating replacement cost information with insurance values can be paired with the next audit.
- ◇ Documenting the actual service lives of infrastructure, actual maintenance and rehabilitation spending and condition changes over time.
- ◇ Highlighting increasing cost pressures, (an evolving legislative and regulatory regime, service demands, growth, shrinking assessment base, etc.) when presenting condition information using general estimates of useful life or age as a proxy for condition given these approaches overstate funding needs and may justify a departure from the budget practices recommended in the plan.
- ◇ Monitoring the quality of installations and material closely, investing in efforts to minimize soil movement and performing regular maintenance.
- ◇ Multi-year contracts for condition work, collaborating with engineering departments of colleges and universities and sharing assessment contracts with other municipalities.
- ◇ Prioritizing renewals based on underground assets and managing assets with the same material or in the same geographic area together.
- ◇ Reviewing municipal policies in lieu of the new information gathered to complete asset management plans, for example extending the estimated useful lives of assets in asset management policies and reviewing procurement policies and practices.
- ◇ Conducting a mini asset plan review before each budget cycle begins. Maintaining a revision log at the front end of a plan is a good way to confirm practices are consistent with the update cycle recommended in the plan.

Good News

- ◇ Most plans articulate a clear action plan, including recommendations about data cleaning, staggered condition assessments, increasing reserve contributions, pavement crack filling and proactive rehabilitation.
- ◇ Municipalities have invested time into explaining the context for greater attention to asset management, most outlining links to economic development, other long term municipal plans, when asset plans will be updated, who developed them and using which resources. Tangible capital asset registries have been called on to provide information about asset types and quantities, historic and replacement costs and age as a proportion of useful life in plans.
- ◇ Municipal Performance Management Program data has been imported to establish service levels.
- ◇ Plans reflect new technical norms, including lining pipe, using zoom cameras for assessing sewer condition, fibre reinforced surface treatments for roads, LED lights and smart metering for water and wastewater. Some plans also advise municipalities to keep a backup supply of chemicals and spare parts to expedite maintenance and small scale repairs.
- ◇ Plans touch on the importance of maintaining road shoulders, ditching and ditch clearing to prevent water from pooling, weakening the road base and leading to edge cracking, as well as replacing expansion joints in bridges as soon as they are damaged or worn.
- ◇ Previous years' budget data has been pulled into plans to examine past funding levels for different asset management activities (maintenance amounts, replacement allocations, etc.). Most plans include a projection of yearly revenues by source for the duration of the plan, discuss assumptions embedded in the financial strategy and quantify the funding shortfall.
- ◇ Some plans indicate that capital budget language will mirror the components of the *Guide's* "Asset management strategy" section — non-infrastructure solutions, maintenance, rehabilitation, replacement, disposal and expansion - which increases the likelihood that there will be a shift in planning and paying for assets.
- ◇ Many plans calculated the infrastructure deficit and imparted 5, 10, 15 and 20 year strategies, with accompanying rate and service adjustments, to reach a fully funded position.