



Asset Management Governance

Business Case

The Regional Municipality of Niagara

December 2018

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1. Introduction

1.1 Background

1.1.1 Region of Niagara AM Program: Corporate AM Strategy

The Region of Niagara has embarked on a phased, multi-year Asset Management (AM) Program that is focused on improving the Region's overall efficiencies and effectiveness in delivering sustainable services through the development and implementation of leading AM practices.

The first phase of the Region's AM Program, which was completed in 2017, included the development of an AM Strategy that measured the Region's AM system maturity and outlined an AM Roadmap of initiatives to achieve efficiency and effectiveness in service delivery across the Region. The supporting services recommendations in the AM Strategy included initiative SS1: Develop and Implement an AM Governance Model. A copy of the AM Strategy Implementation Roadmap is provided in Appendix A.

The AM Roadmap shows the estimated resource requirements to implement each of the AM Roadmap initiatives. The resource requirements average \$1.47 million per year as provided at a summary level in the following table, with the majority of the required investments being for additional Regional staff time related to the AM Governance Model.

Table 1.1 Estimated Resource Requirements for AM Roadmap

Requirement	Description	Annual Costs
Region Staff Time	To support development and implementation of the AM Roadmap initiatives *	\$0.85 M
	To sustain each of the AM Roadmap initiatives *	\$0.15 M
Consulting Costs	For external consultants to support development and implementation of the AM Roadmap initiatives **	\$0.47 M
Total		\$1.47 M

* Note: Based on an FTE of 1820 hours of internal staff time at an estimated cost of \$110,000 per annum inclusive of payroll costs

** Note: Annual cost for first six years of implementation

1.1.2 Federal and Provincial Legislation

O. Reg. 588/17: AM Planning for Municipal Infrastructure

On December 13, 2017, the province approved a new municipal AM planning regulation (O. Reg. 588/17) under the Infrastructure for Jobs and Prosperity Act, 2015. Improved AM planning has been a key objective of the province's Municipal Infrastructure Strategy since 2012. Building on this objective, O. Reg. 588/17 will help municipalities take stock of their infrastructure challenges, better understand what important services need to be supported over the long-term, and seek new opportunities to address infrastructure challenges through innovative solutions.

O. Reg. 588/17 comes after a year and a half of consultations with municipalities, stakeholders and the broader public. The new requirements are being phased in over a period six years to provide municipalities adequate time for implementation:

- **January 1, 2018:** Effective date of Regulation (there are no requirements that must be met at this time).
- **July 1, 2019:** Date for municipalities to have a finalized and published strategic AM policy.
- **July 1, 2021:** Date for municipalities to have an approved AM plan for core assets (roads, bridges and culverts, water, wastewater and stormwater management) that discusses current levels of service and the cost of maintaining those services.
- **July 1, 2023:** Date for municipalities to have an approved AM plan for all municipal infrastructure assets that discusses current levels of service and the cost of maintaining those services.
- **July 1, 2024:** Date for municipalities to have an approved AM plan for all municipal infrastructure assets that builds upon the requirements set out in 2023. This includes a discussion of proposed levels of service, what activities will be required to meet proposed levels of service, and a strategy to fund the activities.

Federal Gas Tax Agreement in Ontario

The federal Gas Tax Agreement required Ontario municipalities to develop and implement AM plans by December 31, 2016. Municipalities are now expected to continuously improve and implement their existing AM plans according to the requirements of O. Reg. 588/17.

In addition, provisions of the federal Gas Tax Agreement related to AM planning consider *“investments related to strengthening the ability of Municipalities to develop long-term planning practices”* as eligible expenditures for gas tax funding.

Development Charges Act (DCA)

The recent changes to the DCA in December 2016 (new clause 10(2) (c.2)) requires that a Development Charge Background Study must include an AM plan related to new infrastructure.

Subsection 10 (3) of the DCA provides:

(3) The asset management plan shall,

(a) deal with all assets whose capital costs are proposed to be funded under the development charge by-law;

(b) demonstrate that all the assets mentioned in clause (a) are financially sustainable over their full lifecycle;

(c) contain any other information that is prescribed; and

(d) be prepared in the prescribed manner.

Clean Water and Wastewater Fund (CWWF) Agreement in Ontario

The Canada-Ontario Clean Water and Wastewater Fund (CWWF) agreement is designed to improve the safety and quality of water for Canadian families, while supporting a clean economy. Funding recipients must provide data for performance indicators related to outcomes such as improved reliability, improved efficiency, and improved rehabilitation.

1.1.3 Region of Niagara AM Program: AM Governance Model

In February 2018, the Region issued a request for proposals for consultancy services to develop an AM Governance Model. GHD Limited was awarded the assignment and conducted the kick-off meeting with the Region's project team in May 2018.

The structural configuration of an organizational design is the way work is divided and how it achieves coordination among its various work activities. For AM governance, this includes work activities around the asset lifecycle, from determining needs based on specified performance criteria to planning, acquiring, operating, measuring performance, renewing and disposing of assets.

Through the AM Strategy, the Region was found to have an overall maturity rating reflective of the early stages of "Establishing" – less than half way on an international scale of AM practice competencies from "Innocent" to "Excelling". The current approach to AM governance was identified as a key inhibitor to AM development at the Region and is characterized by:

- A lack of Corporate-wide AM Steering team (with departmental representation) to provide guidance and direction for the AM Program

- A lack of dedicated departmental AM roles to lead implementation and sustain best practices in the department
- A lack of formalized collaboration and coordination across business units with respect to lifecycle analysis and decision making
- A lack of formalized networks or communities of practice for knowledge sharing and enabling continuous improvement.

An effective AM Governance Model can help the Region address its current challenges to AM practice development through improved collaboration and coordination around business processes related to planning, core service delivery, performance management, and the enabling elements of data, technology, people and financial management. With the right AM Governance Model in place, overall AM Program development can be expedited and new ways of working can be quickly integrated into the AM culture at the Region.

An appropriately resourced AM Office, reporting at the right level of influence, can focus on competency development (creating the necessary strategies and frameworks at the corporate level) and provide guidance and support to colleagues in the various departments. Similarly, dedicated AM staff in the various departments can take ownership for AM execution and sustenance of best practices at the departmental level. Networks and communities of practice can encourage coordination around the asset lifecycle and collaboration in the form of knowledge sharing and continuous improvement.

Senior managers and political decision makers would then have the confidence that they are operating a lean organization and have quantified and understand the risks to the business and the optimal cost of asset ownership to meet set service levels.

The first part of the AM Governance initiative has reviewed various AM governance models and identified a clear structure with appropriate authority, roles and responsibilities to support the development and implementation of leading AM practices at the Region. The organizational structure considers the needs for corporate standardization and consistency in AM and also provides the flexibility for implementation unique to the asset class and operating environment.

1.2 Purpose of AM Governance Model Business Case

In this part of the AM Governance initiative, a Business Case has been developed to provide decision makers with tangible and intangible evidence of the benefits and costs of implementing the identified AM Governance Model.

The business case is a vehicle for communicating the evidence-based development of potential options and the rationale for the preferred solution. It provides justification for the proposed solution or recommended initiative, summarising all the work undertaken and results obtained so as to:

- Enable the reader to effectively comprehend and assess the merit of the initiative, and assess this against the criteria stipulated by funding agencies
- Provide certainty to decision-makers that they have been provided with sufficiently detailed information to assure them they are making a fully informed decision on the initiative.

The business case documents the following:

- **The Opportunity:** Identification of the problems that prevent (or opportunities that enable) the achievement of the stated goals and objectives, and assessment of their importance to the Region through provision of evidence of their scale, cost, causes and effects.
- **The Options:** Development of potential initiatives (options) to solve problems or realise opportunities (ideally, this would include at least two options in addition to a “do minimum” base case)
- **The Preferred Solution:** Assessment of the options to select the one with the highest net value to the Regional community (considering intangible benefits and costs, and tangible benefits and costs of the options, expressed as economic criteria: Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period (PBP))
- **Performance of Implemented Solution:** Document how performance will be measured over time to understand whether benefits have been realised as expected, whether costs estimations were accurate, and what lessons can be learned.

2. The Opportunity

This section of the Business Case develops a clear statement of the problems that prevent (or opportunities that enable) the achievement of the Region's stated goals and objectives. This section also assesses the importance of the problem or opportunity to the Region through provision of evidence of their scale, cost, causes and effects.

2.1 Opportunity Identification

The province has approved a new municipal AM planning regulation (O. Reg. 588/17). The timing of the provincial requirements will be phased in over six years, as described in the Introduction, to provide time for implementation.

To meet the requirements of the new regulation, the Region plans to proceed with implementation of the Corporate AM Strategy developed in 2016. One of the first year initiatives is the development and implementation of an AM Governance Model to lead continuous improvement of the Region's overall AM practice maturity and meet the phased requirements of O. Reg. 588/17.

2.1.1 Current AM Governance Model

The current AM organizational design at the Region can be described as a mix of informal AM roles embedded in traditional manager, supervisor and analyst roles, and in some cases formal or dedicated AM roles. Both informal and formal AM roles currently reside at the individual business unit level, with limited collaboration across business units.

An AM Steering Team was established to initiate and guide the design and implementation of the AM Program at the Region. However, at the conclusion of the Phase 1 AM Project, the AM Steering Team was replaced by a Finance led project team for the AM Governance Model initiative.

The current approach to AM governance was identified as a key inhibitor to AM development at the Region.

2.1.2 Recommended AM Governance Model

The first part of the AM Governance initiative has recommended creating a formal AM Governance Model with a clear organizational structure and appropriate authority, roles and responsibilities to support the development and implementation of leading AM practices.

The AM Governance Model recommendations include creation of a Corporate AM Steering Team, a centralized Corporate AM Office to develop and guide AM practices and AM Practice Networks, and formalization of decentralized

Departmental AM responsibilities that implement and sustain AM practices. Implementation is recommended in three steps, as shown below (with timing).

Table 2.1 Recommended AM Governance Model Implementation

Step 1. Corporate (Immediate)	Step 2. Department (Short Term)	Step 3. Department (Medium Term)
1.1 Create a Corporate AM Steering Team 1.2 Create (new) a formal Corporate AM Office (AMO): <ul style="list-style-type: none"> • Director of AMO (1) • AM Manager & Analyst: Strategy & Integrated Planning (2) • AM Manager & Analyst: Asset Integrity & Productivity (2) • AM Manager & Analyst: Asset Performance & Asset Knowledge (2) 	2.1 Create (rebrand and augment) formal Departmental AM Responsibilities: <ul style="list-style-type: none"> • Dept AM Managers 2.2 Establish AM Practice Networks across the Departments: <ul style="list-style-type: none"> • AM Planning Network • AM Productivity Network • Asset Knowledge & Performance Management Network 	3.1 Create (rebrand and augment) formal Departmental AM Responsibilities: <ul style="list-style-type: none"> • Dept Planner Schedulers • Dept Technology Analysts • Dept Reliability Analysts • Dept Process Analysts

The addition of the roles and responsibilities needed for immediate creation of a formal Corporate AM Office will require **seven net new staff at an estimated annual cost of approximately \$0.85 million per year.**

O. Reg. 588/17 Asset Management Planning for Municipal Infrastructure requires that the Region identify a senior executive with responsibility for implementing and managing an AM program. The AM Co-Sponsors are the Commissioners of Enterprise, Resource Management Services / Regional Treasurer and the Commissioner of Public Works.

The organization chart of the recommended AM Governance Model is show in the following figure.

```
graph TD
    CAO[CAO's Office] --> CBURP[Commissioner Business Unit or Regional Partner]
    CAO --> AMS[AM Sponsors Commissioners of ERMS & PW]
    CAO --> CERMS[Commissioner ERMS]
    
    CBURP --> DIBURP[Director Business Unit or Regional Partner]
    AMS --> DAS[Director Asset Management]
    CERMS --> DAS
    
    DIBURP --> PMN[PM Network]
    PMN --> PMO[Project Management Office (PMO)]
    PMN --> PMs[Project Managers]
    
    DAS --> AMPN[AM Practice Networks]
    AMPN --> AMBA[AM Business Analyst]
    AMPN --> AMAN[AM Analysts]
    AMPN --> AMAS[AM Asset Strategy & Integrated Planning]
    AMPN --> AMAI[AM Asset Integrity & Production]
    AMPN --> AMPK[AM Asset Performance & Knowledge Mgmt]
```

2.2 Opportunity Assessment

The preceding step developed a clear statement of the problems that prevent (or opportunities that enable) the achievement of the stated goals and objectives. This step provides evidence of the scale, costs, causes and effects of the problem or opportunity.

2.2.1 Scale and Cost of the Opportunity

The Region's eligibility for federal Gas Tax funding, valued at approximately \$15 million per year, is reliant on the Region's ability to demonstrate compliance of AM planning with O. Reg. 588/17. Other sources of funding also require production of AM Plans, including Development Charge funding (approximately \$60 million per year) and Clean Water & Wastewater funding.

Implementation of the AM Strategy Roadmap, through the recommended AM Governance Model, will greatly increase the likelihood of meeting the new O. Reg. 588/17 requirements over the next five (5) years. Costs to implement the recommended AM Governance Model are estimated at \$0.85 million per year, which are eligible expenditures through federal Gas Tax funding.

2.2.2 Causes and Effects of the Opportunity

Cause of the opportunity

The federal government states that the federal Gas Tax Fund is a permanent source of funding for municipal infrastructure. It is predictable, long-term and stable.

This opportunity is a result of the federal government requirement that a municipality provide O. Reg. 588/17 compliant AM Plans as support for projects to be eligible for federal Gas Tax funding. The Region's AM Program must be expedited for the Region to be assured that it will meet the phased requirements of O. Reg. 588/17.

Effects of the opportunity

The impact of not meeting O. Reg. 588/17 and, therefore, becoming ineligible for federal Gas Tax funding would be loss of all or part of annual Gas Tax funding value of approximately \$15 million for the Region.

3. The Options

This section of the Business Case develops potential initiatives (options) to solve problems or realise opportunities (ideally, this would include at least two options in addition to a “do minimum” base case).

3.1 Options Identification

- **Base Case: Current Decentralized AM Governance Model:** The “Do Minimum” base case is to implement the Corporate AM Strategy through the current decentralized governance model. The costs associated with this option are assumed to be the same for all options, but the benefits for the Base Case will be delayed as it will take longer to implement the AM Roadmap initiatives outlined in the Corporate AM Strategy.
- **Outcome 1: Proposed Hybrid Model: Conservative:** Outcome 1 is to implement the Corporate AM Strategy through the recommended AM Governance Model assuming the same costs as the base case, but being conservative with assumptions for the benefits: both the amount of the benefit and the timing of receipt of the benefits.
- **Outcome 2: Proposed Hybrid Model: Optimistic:** Outcome 2 is to implement the Corporate AM Strategy through the recommended AM Governance Model assuming the same costs as the base case, but being optimistic with assumptions for the benefits: both the amount of the benefit and the timing of receipt of the benefits.

The proposed hybrid model consists of:

- **Corporate AM Steering Team** with designated senior executives with clear responsibility for implementing and managing the AM program.
- An appropriately resourced **Corporate AM Office** that focuses on competency development (creating the necessary strategies and frameworks at the corporate level) and provides guidance and support to colleagues in the various departments.
- **Dedicated AM staff in the departments** who take ownership for execution and sustenance of AM best practices at the departmental level.
- **Networks and communities of practice** that encourage coordination around the asset lifecycle and collaboration in the form of knowledge sharing and continuous improvement.

3.2 Options Development

3.2.1 Tangible Benefits

To enable economic analysis, the anticipated tangible benefits are developed for each option. The following benefits are described for the Base Case: Current Decentralized AM Governance Model, and for the two outcomes of the Proposed Hybrid Model: Outcome 1 – Conservative and Outcome 2 – Optimistic. The following four benefits were considered:

- **Eligibility for Funding:** A key objective of all Ontario municipalities at this point in time is the production of AM plans to meet the new O. Reg. 588/17. Meeting this regulation is a prerequisite to eligibility for funding from other agencies (e.g. federal Gas Tax fund). Although the Region has a greater risk of not meeting O. Reg. 588/17 with the Base Case and therefore not being eligible for funding from other agencies, this risk has not been monetized in the model.
- **Improved Capital Planning:** The primary objective of implementing more advanced AM practices is to improve the efficiency and effectiveness of AM practices at the Region. The benefits include savings from more cost effective lifecycle management: doing the right projects, at the right times, through a formal options development and analysis process based on risk to meeting levels of service. Based on savings reported by similar organizations, the savings from improved capital planning can result in up to 5% reduction in annual Capital Infrastructure Program (CIP) budget in the second year of implementation. The Region's annual CIP budget is assumed to be \$200M based on forecasts from the Region's 2016 AM Plan.
- **Optimized Maintenance Programming:** Based on information reported by similar organizations, a move from reactive to proactive maintenance can lead to up to 20% reduction in O&M costs through savings in maintenance labour (internal and external) and materials, and operations savings through better coordination between maintenance and engineering in optimal system performance. The Region's annual O&M budget is assumed to be \$35M. *Note: The maintenance cost was estimated to be 0.5% of the Region's total \$7 billion asset inventory as maintenance costs are not generally discernable from operating expenses in the Region's 2016 AM Plan.*
- **Utilities Savings:** Based on information reported by similar organizations, potential savings in energy costs through more reliable, energy efficient and better operated assets range from 5% in the second year to 10% per year after the third year of implementing the program. The Region's annual Utilities budget is assumed to be \$5M based on national benchmarking estimates.

The following table outlines anticipated tangible benefits that have been used in developing the AM business case.

Table 3.1 Tangible Benefits, by Option

Benefit	Description	Base Case	Outcome 1: Conservative	Outcome 2: Optimistic
Eligibility for Funding	Producing O. Reg. 588/17 compliant AM Plans to enable funding from other agencies (e.g. federal Gas Tax fund). Although the Region has a greater risk of not meeting O. Reg. 588/17 with the Base Case and therefore not being eligible for funding from other agencies, this risk has not been monetized in the model.	1% reduction in federal Gas Tax funding starting in Year 3 (not included)	Fully eligible (not included)	Fully eligible (not included)
Improved Capital Planning	Savings from more cost effective lifecycle management: doing the right projects, at the right times, through a formal options development and analysis process based on risk to meeting levels of service. Can result in up to 5% reduction in annual Capital Infrastructure Program (CIP) budget in the second year of implementation. The annual CIP budget is assumed to be \$200M.	1% reduction in annual CIP budget starting in Year 5	3% reduction in annual CIP budget starting in Year 3	5% reduction in annual CIP budget starting in Year 2
Optimized Maintenance Programming	A move from reactive to proactive maintenance can lead to a 20% reduction in O&M costs. Savings in maintenance labour (internal and external) and materials, and operations savings through better coordination between maintenance and engineering in optimal system performance. The annual O&M budget is assumed to be \$35M.	10% reduction in annual O&M budget starting in Year 5	25% reduction in annual O&M budget starting in Year 3	40% reduction in annual O&M budget starting in Year 2
Utilities Savings	Potential savings in energy costs through more reliable, energy efficient and better operated assets from 5% in the second year to 10% per year after the third year of implementing the program. The annual Utilities budget is assumed to be \$5M.	2% reduction in annual utilities budget starting in Year 5	5% reduction in annual utilities budget starting in Year 3	10% reduction in annual utilities budget starting in Year 2

3.2.2 Intangible Benefits

Moving from a reactive AM culture to a cost-effective and sustainable program based on the asset lifecycle and a focus on minimal overall cost of ownership provides intangible benefits. Intangible benefits include:

- More confidence that the Region is doing the right work, on the right assets, at the right time, at the right costs, and for the right reasons (i.e. the Region has clearly defined and agreed levels of service, understands and manages the risks to delivery of these levels of services through both asset and non-asset solutions, and measures and addresses performance against the agreed levels of service).
- More satisfied customers and other stakeholders as the assets are managed to provide the capacity, function and reliability required to deliver the agreed level of service at appropriate levels of risk and affordable costs.
- Valid, complete and timely inventory and performance information is available to everyone for day to day decision making around the asset lifecycle and to support continuous improvement initiatives.
- Reduced or zero safety and environmental issues.
- Better trained staff who are prepared to be empowered and take on new roles and responsibilities.
- Better staff motivation, commitment and coordination around the asset lifecycle.
- Corporate knowledge retention necessary to support a succession planning strategy and continuity of the business.
- A work culture that embraces change and smarter ways of working using technology (this makes it easier to make future changes).

3.2.3 Costs

Costs can be broadly classified into two major areas:

- **Region Staff Time for AM Governance Model:** New hires to implement and guide the AM Program, including overhead costs
- **Consulting Costs for AM Improvement Initiative:** Consulting and other costs, excluding people costs

The costs are outlined in the AM Strategy Roadmap, provided in Appendix A. A summary of AM Strategy Roadmap costs are shown in the following table.

Table 3.2 Costs (million), by Year, for all Options

Cost	Description	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Totals
Region Staff Time for AM Governance Model	New hires to support development and implementation of the AM Roadmap initiatives	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$8.50
	To sustain each of the AM Roadmap initiatives	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$2.5
Consulting Costs for AM Improvement Initiative	For external consultants to support development and implementation of the AM Roadmap initiatives	\$0.47	\$0.47	\$0.47	\$0.47	\$0.47	\$0.47	\$0.0	\$0.0	\$0.0	\$0.0	\$2.8
Total		\$1.47	\$1.47	\$1.47	\$1.47	\$1.47	\$1.47	\$1.00	\$1.00	\$1.00	\$1.00	\$12.86

* Note: An FTE denotes 1820 hours of internal staff time and is costed at \$110,000 per annum inclusive of payroll costs

4. The Preferred Solution

This section of the Business Case assesses the options to select the one with the highest net value to the Regional community considering intangible benefits and costs and tangible benefits and costs of the options.

4.1 Economic Criteria

A key consideration in value to the Regional community is the economic assessment of the tangible benefits and costs of the options. The following economic criteria were considered:

- **Net Present Value (NPV) of the funds:** NPV considers the time value of money. The calculation uses an assumed interest rate and calculates what the value of the overall cost and investment money would be in each year of the assessment.
- **Internal Rate of Return (IRR):** IRR is one of the more popular parameters used to evaluate economic feasibility. The internal rate of return calculates the percentage return, on an annualized basis, regardless of the actual investment period.
- **Pay Back Period (PBP):** The payback period is the point where the NPV is equal to zero. At this point the overall expenditure equals the savings. Additional savings represent an overall return on investment. Stated differently, after the PBP the investment in effect earns a profit.

4.2 Economic Assessment

For this business case, the analysis is based on a 10 year project life. This is a reasonable timeframe to implement all of the proposed improvement initiatives, operationalize concepts and practices, and realize benefits.

The following table provides a summary of the economic assessment results for the base case and the two outcomes: conservative and optimistic, for each of the three economic criteria.

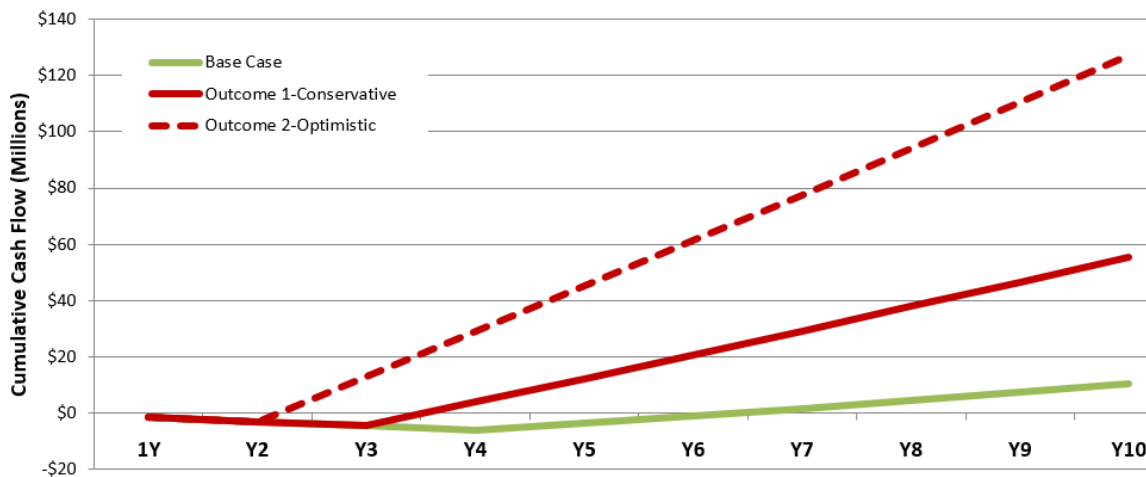
Table 4.1 Economic Assessment, by Option

Option	Description	NPV	IRR	PBP
Base Case	Current Decentralized AM Governance Model, Steering Team	\$6.6 M	23%	9 yrs
1-Conservative	Recommended Hybrid AM Governance Model, 7 new FTEs in Corporate AM Office, Conservative Savings	\$41 M	87%	4 yrs
2-Optimistic	Recommended Hybrid AM Governance Model, 7 new FTEs in Corporate AM Office, Optimistic Savings	\$98 M	245%	3 yrs

4.3 The Preferred Option

All business case options suggest that investing in AM practice improvements is a good investment for the Region. The payback period is estimated at 9 years for the Base Case and between 3 or 4 years for the Recommended Hybrid AM Governance Model, depending on whether one takes a conservative or optimistic view. The Recommended Hybrid AM Governance Model is the preferred option, as outlined in the above table and the following figure.

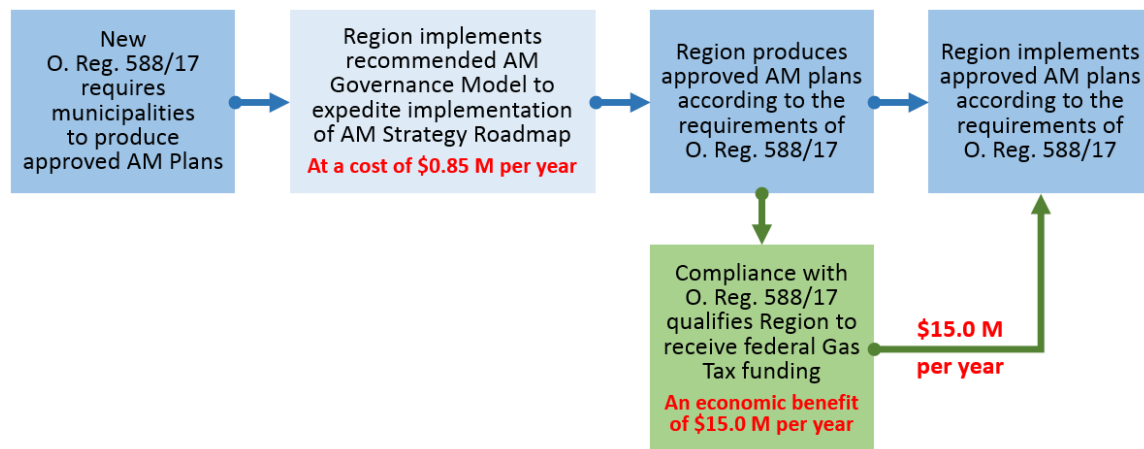
Figure 4.1 Cumulative Cash Flow



4.4 Funding

The Region is proposing to source funding of \$0.85 million per year to implement the recommended Hybrid AM Governance Model from the 2019 operating budget. The recommended AM Governance Model increases the likelihood that the Region will produce O. Reg. 588/17 compliant AM Plans and, therefore, the Region's eligibility for all available federal Gas Tax funding (\$15 million). A small investment in the AM Governance Model will trigger continued supply of federal Gas Tax funding for eligible projects.

Figure 4.2 AM Governance Model Funded from Federal Gas Tax



5. Performance of Implemented Solution

This section of the Business Case outlines how performance will be measured over time to understand whether benefits have been realised as expected, whether costs estimations were accurate, and what lessons can be learned.

5.1 The Opportunity

The opportunity is to implement the recommended hybrid AM Governance Model, at an estimated cost of \$1.0 million, with a corporate AM Steering Team, centralized AM Office to develop and guide AM practices, AM Practice Networks, and decentralized service areas with dedicated AM staff that implement and sustain AM practices:

- To expedite further development of the Region's AM capabilities through the AM Roadmap
- To meet the requirements of O. Reg. 588/17.

Federal Gas Tax funding is reliant upon O. Reg. 588/17 compliance. Federal Gas Tax funding is eligible to fund AM practice development.

5.2 Performance of the Implemented Solution

When the business case of the AM Governance Model is adopted and program implementation is in progress, it is essential to demonstrate the return on the investment. The performance of the implemented solution should be captured and reported over time. Actual costs and benefits can be used to update the business case and show actual economic indicators.

5.2.1 Costs

Costs can be captured and reported in three major areas:

- Costs for new hires for the **Corporate AM Office** that focuses on competency development through corporate strategies and frameworks at the corporate level and provides guidance and support to colleagues in the various departments.
- Costs for new hires for **dedicated AM staff in the departments** who take ownership for execution and sustenance of AM best practices at the departmental level.
- **Other costs related to the AM Improvement Initiative such as consulting and information technology costs.**

5.2.2 Benefits

Benefits can be captured and reported in four major areas:

- **Eligibility for Funding:** Producing O. Reg 588/17 compliant AM Plans to enable funding from other agencies (e.g. federal Gas Tax fund)
- **Improved Capital Planning:** Savings from more cost effective lifecycle management: doing the right projects, at the right times, through a formal options development and analysis process based on risk to meeting levels of service.
- **Optimized Operations and Maintenance Planning:** Savings in maintenance labor (internal and external) and materials, and operations savings through better coordination between maintenance and engineering in optimal system performance.
- **Utilities Savings:** Potential savings in energy costs through more reliable, energy efficient and better operated assets.

Appendix A

Appendix 1 - AM Roadmap

Practice Area	Initiative	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 to 10	TOTALS
PLANNING PROCESSES	P1	Ongoing Improvements						
		FTE Req.	0.050	-	-	-	0.050	0.100
		FTE Cost	\$5,500	-	-	-	\$5,500	\$11,000
		Consulting Cost	\$25,000	-	-	-	-	\$25,000
		Total Cost	\$30,500	-	-	-	\$5,500	\$36,000
CORE SERVICE DELIVERY PROCESSES	P2	Ongoing Improvements						
		FTE Req.	1.636	1.636	1.227	1.125	1.125	12.374
		FTE Cost	\$180,000	\$180,000	\$135,000	\$123,750	\$123,750	\$1,361,250
		Consulting Cost	\$154,545	\$154,545	\$115,909	-	-	\$424,999
CORE SERVICE DELIVERY PROCESSES	CS1	Ongoing Improvements						
		FTE Req.	-	-	2.093	2.093	0.314	10.125
		FTE Cost	-	-	\$230,233	\$230,233	\$34,535	\$1,113,751
		Consulting Cost	-	-	\$139,535	\$139,535	\$20,930	\$300,000
		Total Cost	-	-	\$369,768	\$369,768	\$55,465	\$1,413,751
CORE SERVICE DELIVERY PROCESSES	CS2	Ongoing Improvements						
		FTE Req.	-	0.625	1.250	1.250	1.250	5.000
		FTE Cost	-	\$68,750	\$137,500	\$137,500	\$137,500	\$550,000
		Consulting Cost	-	\$31,250	\$62,500	\$62,500	\$62,500	\$250,000
		Total Cost	-	\$100,000	\$200,000	\$200,000	\$200,000	\$800,000
CORE SERVICE DELIVERY PROCESSES	CS3	Ongoing Improvements						
		FTE Req.	-	1.000	0.250	0.250	0.250	3.000
		FTE Cost	-	\$110,000	\$27,500	\$27,500	\$27,500	\$330,000
		Consulting Cost	-	\$100,000	-	-	-	\$100,000
		Total Cost	-	\$210,000	\$27,500	\$27,500	\$27,500	\$430,000
PERFORMANCE MANAGEMENT PROCESSES	PM1	Ongoing Improvements						
		FTE Req.	1.739	0.261	1.000	1.000	1.000	10.000
		FTE Cost	\$191,304	\$28,696	\$110,000	\$110,000	\$110,000	\$1,100,000
		Consulting Cost	\$108,696	\$16,304	-	-	-	\$125,000
		Total Cost	\$300,000	\$45,000	\$110,000	\$110,000	\$110,000	\$1,225,000
	PM2	Ongoing Improvements						
		FTE Req.	-	-	-	0.917	0.917	2.751
		FTE Cost	-	-	-	\$100,833	\$100,833	\$302,499
	PM3	Ongoing Improvements						
		FTE Req.	-	-	-	4.500	1.125	11.250
		FTE Cost	-	-	-	\$495,000	\$123,750	\$1,237,500
		Consulting Cost	-	-	-	\$375,000	-	\$375,000
		Total Cost	-	-	-	\$870,000	\$123,750	\$1,612,500

Practice Area	Initiative		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 to 10	TOTALS	
ORGANIZATION & PEOPLE	SS1	Review, Endorse & Implement the AM Governance Model	Ongoing Improvements							
		FTE Req.	1.154	0.346	0.375	0.375	0.375	1.875	4.500	
		FTE Cost	\$126,923	\$38,077	\$41,250	\$41,250	\$41,250	\$206,250	\$495,000	
		Consulting Cost	\$57,692	\$17,308	-	-	-	-	\$75,000	
		Total Cost	\$184,615	\$55,385	\$41,250	\$41,250	\$41,250	\$206,250	\$570,000	
	SS2	Develop & Implement the Communications Plan		Ongoing Improvements						
		FTE Req.	-	0.250	0.063	0.063	0.063	0.313	0.752	
		FTE Cost	-	\$27,500	\$6,875	\$6,875	\$6,875	\$34,375	\$82,500	
		Consulting Cost	-	-	-	-	-	-	-	
		Total Cost	-	\$27,500	\$6,875	\$6,875	\$6,875	\$34,375	\$82,500	
	SS3	Develop & Implement the Succession Plan		Ongoing Improvements						
		FTE Req.	-	0.438	0.875	0.438	0.438	2.188	4.377	
		FTE Cost	-	\$48,125	\$96,250	\$48,125	\$48,125	\$240,625	\$481,250	
		Consulting Cost	-	\$31,250	\$62,500	\$31,250	-	-	\$125,000	
		Total Cost	-	\$79,375	\$158,750	\$79,375	\$48,125	\$240,625	\$606,250	
	SS4	Develop & Implement the Knowledge Management Plan				Ongoing Improvements				
		FTE Req.	-	-	-	1.400	1.400	4.200	7.000	
		FTE Cost	-	-	-	\$154,000	\$154,000	\$462,000	\$770,000	
		Consulting Cost	-	-	-	\$60,000	\$60,000	\$30,000	\$150,000	
		Total Cost	-	-	-	\$214,000	\$214,000	\$492,000	\$920,000	
	SS5	Incorporate AM Requirements into Information Systems				Ongoing Improvements				
		FTE Req.	-	-	-	1.375	1.375	3.343	6.093	
		FTE Cost	-	-	-	\$151,250	\$151,250	\$378,125	\$680,625	
		Consulting Cost	-	-	-	\$150,000	\$150,000	-	\$300,000	
		Total Cost	-	-	-	\$301,250	\$301,250	\$378,125	\$980,625	
	SS6	Plan & Implement AM Decision Support System for Lifecycle Asset Planning				Ongoing Improvements				
		FTE Req.	-	-	-	1.395	1.395	3.209	5.999	
		FTE Cost	-	-	-	\$153,488	\$153,488	\$353,023	\$659,999	
		Consulting Cost	-	-	-	\$93,023	\$93,023	\$13,953	\$199,999	
		Total Cost	-	-	-	\$246,511	\$246,511	\$366,976	\$859,998	
SS7	Plan & Implement a Performance Management Systems					Ongoing Improvements				
	FTE Req.	-	-	-	-	3.500	4.375	7.875		
	FTE Cost	-	-	-	-	\$385,000	\$481,250	\$866,250		
	Consulting Cost	-	-	-	-	\$300,000	-	\$300,000		
	Total Cost	-	-	-	-	\$685,000	\$481,250	\$1,166,250		
TOTALS		FTE Req	4.579	4.556	7.133	16.181	14.527	44.220	91.196	
		FTE Cost	\$503,727	\$501,148	\$784,608	\$1,779,804	\$1,597,856	\$4,874,481	\$10,041,624	
		Consulting Cost	\$345,933	\$350,657	\$380,444	\$936,308	\$711,453	\$100,203	\$2,824,998	
		Total Cost	\$849,660	\$851,805	\$1,165,052	\$2,716,112	\$2,309,309	\$4,974,684	\$12,866,622	

