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Information Item No. 2
Audit and Finance Standing Committee
Special Meeting
March 25, 2021

TO: Mayor Savage and Members of Halifax Regional Council

-Original Signed-

SUBMITTED BY:

Jane Fraser, Executive Director Finance, Asset Management ICT, CFO

-Original Signed-

Jacques Dubé, Chief Administrative Officer

DATE: Feb 22, 2021

SUBJECT: Enterprise Risk Management Update – March 2021

INFORMATION REPORT

ORIGIN

At the April 5, 2016 meeting of Regional Council, Council was advised that future consultation and reporting on HRM's Enterprise Risk Management Program will be through the Audit and Finance Standing Committee, as per the Audit and Finance Standing Committee terms of reference.

LEGISLATIVE AUTHORITY

48 (1) The Council shall annually appoint an audit committee.

The Terms of Reference for the Audit and Finance Standing Committee state:

1 (1) The purpose of the Audit and Finance Standing Committee is to provide advice to the Council on matters relating to audit and finance. (2) The other purposes of the Committee are to: (a) fulfill the requirements as outlined in Section 48 of the HRM Charter; and (b) assist the Council in meeting its responsibilities by ensuring the adequacy and effectiveness of financial reporting, risk management and internal controls.

4. The Audit and Finance Standing Committee shall: (d) ensure the adequacy and effectiveness of the systems of internal control in relation to financial controls and risk management as established by Administration; (e) review bi-annually with management the enterprise risk management and financial implications coming from such risk and implication's including: Environmental, Human Resources, Operational and the insurable risks and insurance coverage strategy of the municipality;

BACKGROUND

At the September 16, 2020 update to Audit and Finance Standing Committee https://www.halifax.ca/sites/default/files/documents/city-hall/standing-committees/200916afscinfo2.pdf (press ctrl enter), HRM's Enterprise Risk Management Strategy was replaced by the adoption of an Enterprise Risk Management (ERM) Framework; this document details HRM's ERM practice, governance structure and procedures with respect to the management and oversight of risk for the organization.

Pursuant to the Terms of Reference of the Audit and Finance Committee an update on the status of HRM's ERM program is being provided.

DISCUSSION

HRM's Enterprise Risk Management Program was established using the guiding principles of the ISO 31000 Standard on Enterprise Risk Management (ERM). The provisions of this standard require continuous monitoring of both the internal and external environments so that the framework on which the program is established remains both relative and adaptive to the environment in which it operates.

Updates this period:

Roles and Responsibilities

During the most recent review by the executive team, it was agreed that the governance of risk and oversight of the Risk Management Committee would move from the Finance's Corporate Planning department to Legal Service's Insurance and Risk department. This realignment will provide business units as well as the executive team with the expertise of Certified Risk Managers in the identification, assessment and treatment of risk and provide Legal Services with a fulsome understanding of risk at all levels of the organization so that insurance treatment can be contemplated.

Corporate Planning will continue to ensure that risk plans are incorporated into the business planning process to ensure that the impact and likelihood of risks occurring is reduced for the organization. Corporate planning will also continue to report on the performance of the ERM program.

The revised roles and responsibilities can be found in attachment A.

Governance

The formation of a Risk Management Committee, comprised of subject matter experts from across the organization: Asset Management, Public Safety, Finance, Risk and Insurance, Energy and Environment, Corporate Safety, Corporate Planning and Emergency Preparedness, was deferred until 2021/22 due to operational prioritization of issues related to the Covid-19 pandemic. Commencing in April 2021 Corporate Planning will assist the Legal Service's Risk and Insurance department with the establishment of the Committee as well as the Terms of Reference and procedures under which it will operate.

The role of this committee will be to review strategic and operational risk registries, as well as risk evaluations from the capital process, to ensure that all risks are identified and evaluated correctly. This committee will provide assurance to the senior leadership on risk priorities and requisite treatment plans. The revised governance model is can be found in attachment A.

One of the first duties of the Committee will be the review of operational risk registries from the 2021/22 business planning process.

Operational Context

The operational context was updated by senior leadership October 2020 before the commencement of the strategic/business planning process to ensure that risk plans were incorporated into business plans.

Risk Tolerance was retained at 3/3 (3-Likelihood, 3-Impact) for the 2021/22. Risk tolerance provides guidance to the organization on its overall approach to risk management when making decisions and pursuing objectives. It establishes the boundaries of acceptable risk and the point at which a risk must be managed to bring it within acceptable tolerance. Risks that possess a 4 in likelihood or in impact have been determined to be above acceptable tolerance for this fiscal period. This tolerance was agreed upon due to the large number of relatively new risks as well as older risks that increased in their assessment due to uncertainty caused by the pandemic.

During this period three new risks were added: Emergency Preparedness, Economic Recovery and Affordable Housing, with the first two added in response to COVID-19 pandemic and eventuality of recovery. Affordable housing was viewed by the leadership team as a potential crisis related to social and economic conditions and the critical need for HRM to develop risk plans to reduce the likelihood and impact of a crisis where possible given jurisdictional constraints.

There are currently 22 strategic risks identified; 13 of these risks have active risk plans because they rate above a 3/3 (Likelihood/Impact). The Strategic Risk Summary can be found in Attachment B.

Performance Reporting

The number of strategic risks exceeding the established risk tolerance of 3/3 (Likelihood/Impact) at the end of the 2020/21 business planning cycle was 53% compared 58% for 2019/20. Of the 19 strategic risks reported in the 2020/21 fiscal 4 increased in rating, 8 decreased and 7 remained status quo.

This result should not be cause for concern and is trending in a positive direction. 11 new enterprise risks were added in 2019/20 and have relatively immature risk plans. In addition, the rating for several risks increased due to uncertainly related to the COVID-19 pandemic. The decrease in the rating of 8 risks is encouraging and indicates that the organization is making progress in mitigating the potential of risk occurring or reducing the impact should the risk occur.

Risk plans have been developed for new risks and all risk plans have been updated through the course of the 2021/22 business planning process with mitigating initiatives integrated in business plans.

FINANCIAL IMPLICATION

There are no direct financial implications of this report, however heightened attention to risk is a mitigating factor in the reduction of financial risk for the organization.

COMMUNITY ENGAGEMENT

There was no community engagement required for the preparation of this report.

ATTACHMENTS

Attachment A – Enterprise Risk Framework
Attachment B – 2021/22 Master Enterprise Risk Summary

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Wendy Lines, Manager Corporate Planning 902.210.9992

ATTACHMENT A

Enterprise Risk Management Framework

Prepared by:

Wendy Lines
Corporate Planning

November 1, 2019

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Preface

This Risk Management Framework is the foremost document that provides guidance for the organization in the practice of Enterprise Risk Management (ERM), in support of Halifax Regional Municipality's responsibility for managing risk. It also allows the Municipality to continuously improve and strengthen its approach to risk management, enhancing its ability to deliver corporate objectives successfully.

The Risk Management Framework replaces the Risk Management Strategy (2015); and is the representation of a fully operationalized risk practice. This Framework will continue to be updated as the practice matures and builds on CAN/CSA-ISO 31000-10, Risk Management: Principles and Guidelines.

Version Control

Date	Version Number	Comments
18 11 2019	1.0	Risk Management Framework
22 02 2021	1.1	Update to roles and responsibilities

HALIFAX REGIONAL MUNICIPALITY'S

RISK MANAGEMENT POLICY STATEMENT

HALIFAX REGIONAL MUNICIPALITY (HRM) RECOGNIZES AND ACCEPTS ITS RESPONSIBILITY TO MANAGE RISKS EFFECTIVELY IN A STRUCTURED MANNER IN ORDER TO ACHIEVE ITS OBJECTIVES AND ENHANCE THE VALUE OF SERVICES PROVIDED TO THE COMMUNITY

In pursuit of this policy, HRM has adopted a risk management framework that encompasses the following key objectives:

- Enterprise Risk Management enables corporate, business unit and project/program objectives to be achieved and provides the ability to manage risks and maximize opportunities which may impact on HRM's success;
- Risk are managed utilizing a structured and focused approach that includes risk taking in support of innovation to add value to service delivery;
- Risk management is an integral element of the corporate culture.

These key objectives will be achieved by:

- Establishing clear roles, responsibilities and reporting lines for risk and their controls at all levels;
- Ensuring the communication of risk information to decision-makers up and down and across the organization (as a mechanism for the governance of risk management) as opposed to a prescriptive mechanism for the management of specific risk;
- Ensuring that senior management, Council members, external regulators and the public at large can obtain necessary assurance that the Municipality is managing risks to deliver more value to the community;
- Providing opportunities for shared learning on risk management across the Corporation and its strategic partners;
- Monitoring on an on-going basis.

APPETITE FOR RISK

Halifax Regional Municipality seeks to minimize risk and manage related residual risk to a level commensurate with its status as a public body so that:

i. The risks have been properly identified and assessed;
ii. The risks will be appropriately managed, including the taking of appropriate actions and the regular review of risk(s), and;

iii. Halifax Regional Municipality will also proactively decide to take on risks in pursuit of its strategic objectives where it has sufficient assurances that the potential benefits justify the level of risk to be taken.

GUIDING PRINCIPLES

The following principles shall guide the risk management practices of Halifax Regional Municipality:

Principle 1: Clearly defined purpose, roles and responsibilities

Principle 2: Demonstrate the Municipality’s shared values through our people, performance and conduct

Principle 3: Commit to continually improve and add value in all we do

Principle 4: Comprehensively measure and report on our risk performance

Introduction

Halifax Regional Municipality (HRM) is Nova Scotia's largest and most diverse municipality with more than 43 per cent of the province's population residing within its boundaries. The land area of the municipality – equal to 5,577 square kilometers (2,224 square miles) or slightly smaller than Prince Edward Island - is home to 430,000 [1]residents living in nearly 200 communities. The Halifax region continues to see strong growth with the population forecasted to exceed 470,000 by 2021.[2]

All public sector entities face pressures to innovate and do things differently in order to achieve better outcomes and meet the expectations of governments, stakeholders and citizens. This Framework, together with the Making a Difference handbook and the Regional Council's Strategic Priorities Plan have been developed to empower change and provide guidance on the Municipality's approach to managing both opportunities and threats within the business environment and through adoption, will help to create an environment which leverages emerging trends and their transformative benefits.

HRM is committed to ensuring risk management is a core capability and an integral part of all corporate activities.

What is Risk and Risk Management?

Managing risk at HRM is an integral part of good management practice and is something many managers do already in one form or another by implicitly building it into their programming and decision-making.

The word "risk" is a very common term used in everyday language and will be referred to by many professions from both the public and private sector. It is a concept which has grown from being used to describe a narrow field of risks which are to be avoided, to a wider, more holistic focused word where importance is placed on seizing opportunities and how to manage risk rather than avoiding it.

Risk management is a business discipline that managers employ to achieve objectives in an efficient, effective and timely manner. HRM's risk management definition is:

"The systematic application of principles, approach and processes to the tasks of identifying and assessing risks, and then planning and monitoring risk responses."

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[1] https://novascotia.ca/finance/statistics/news.asp?id=13575
[2] https://www.halifax.ca/sites/default/files/documents/city-hall/regional-council/180522rc1421.pdf

The Enterprise Risk Management (ERM) Program is the name given to the Municipality's organizational-wide approach to risk management and is designed so that potential risks and opportunities are identified, prioritized and managed on an ongoing basis. The ERM framework is based on internationally recognized risk management principles from ISO 31000 to manage change and uncertainty. While all organizations manage risk to some degree, this International Standard establishes a number of principles that need to be satisfied to make risk management effective.

The ERM framework will apply to all Business Units at strategic and operational levels and will assist in achieving HRM's strategic objectives by bringing a leading practice and a systematic approach to identifying, analyzing, mitigating and reporting on risk and control.

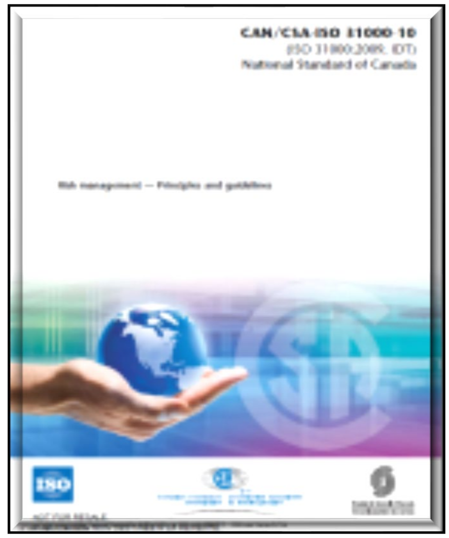

Figure 1 – Halifax Regional Municipality's Enterprise Asset Management Program is based on ISO 31000:2009

Purpose of Framework

Municipalities are, by their very nature, complex public sector entities comprised of a number of business units and associated department with very diverse operations, along with the numerous laws, regulations, policies and agreements that affect their operating environment. By adhering to this strategy, Halifax Regional Municipality will be better placed to meet all its objectives in an efficient, cost effective and timely (focused) manner, in addition to creating a culture of innovation that continually seizes opportunities.

Every strategic risk is linked to a priority outcome and this framework will help enforce a proactive stance to managing these risks, ensuring that less time is spent reacting to situations and more time is spent taking advantage of opportunities.

Listed below are some of the benefits of successfully implementing this strategy:

- Facilitate open communication up, down and across the organization and between the administration and Halifax Regional Council with respect to risk;

- An increased likelihood that strategic objectives will be achieved by understanding critical risks and opportunities impacting them;
- Protecting and enhancing Halifax Regional Municipality’s reputation;
- Greater transparency in decision-making and enhanced ability to justify actions taken;
- Better management and partnership working with HRM partners, improving safeguards against financial loss and reducing chances of organizational failure;
- Increased innovation and improvements in service delivery;
- Common understanding of risk management terminology for consistency and ease of application, and;
- Effective resilience to changing environmental conditions, to protect key services and infrastructure.

Why Manage Risks

Effective risk management is a continuous process with no overall end date as new risks (threats and opportunities) arise all the time. HRM is fully committed to developing a culture where risk is appropriately and effectively managed for which the following benefits will be achieved:

- An increased focus on what needs to be done (and not done) to meet objectives;
- More effective allocation of resources reducing incidences of mistakes and providing greater control of costs – demonstrating value for money;
- Greater transparency in decision-making and enhanced ability to justify actions taken;
- Improved resilience against sudden changes in the environment, including, but not limited to, natural disasters, changes to legislative framework and risks related to supplier failures;
- Minimized losses due to error or fraud across the Administration;
- Ability to proceed without certainty.

Risk-based Governance and Innovation

Innovation by its very nature involves taking risks. This places greater demand on all of us to ensure that those risks are well managed. One of the aims of risk management is to ensure that the process supports innovation, not by preventing it, but rather helping to take well thought through risks that maximize the opportunities of success.

Risk-based governance instills trust and confidence with the community in the decisions we make together. It is the systems, processes, policies and practices developed to deliver efficient and effective decisions, services and facilities so that they meet the municipality's objectives of a sustainable, vibrant, livable, mobile and prosperous community. Important indicators of success also include:

- The Mayor and Councillors providing risk-based governance and leadership to the community while reflecting the community's collective aspirations;
- A "risk aware" culture and principles that are embedded in HRM and are understood across the organization as they are the foundation of the Municipality and affect every aspect of business from decision-making, financial viability to ultimately its long-term sustainability;
- A corporate strategy that ties back to risk management policy principles, so employees understand the importance of a "risk aware" culture and how it contributes to HRM's success;

- A corporate strategy that integrates strategic and operational risk into the business planning process;
- A "risk aware" management and staff culture which supports the effective and consistent management, reporting and escalation of risk;
- Increase opportunities and secure positive outcomes through responsible risk taking such as the provision of services which meet the community's needs sometimes in partnership with other levels of government, business or community organizations using innovative forms of delivery, and;
- Highlight the core values of HRM and publicize what HRM stands for by incorporating employee perspectives on HRM's "risk aware" culture to attract the right type of people and the next generation of leaders while ensuring cultural alignment.

Roles and Responsibilities

The Municipality considers risk management to be an intrinsic part of the organization's system of corporate governance. It is recognized that for this to be effective, it is vital that everyone within the organization understand the role they play in the effective management of risk. This will be achieved by working closely with many business units such as Legal Services, Risk and Insurance, FAM&ICT, Planning and Development and more. The ultimate responsibility for risk management lies with the Chief Administrative Officer, however, it must be stressed that **risk management is the responsibility of everyone working in, for, and with Halifax Regional Municipality.**

Tier	Responsibility
Audit & Finance Committee	Providing assurance to Regional Council on the effectiveness of the risk management framework and its application.
Chief Administrative Officer	Overall accountability for risk management. Oversees the significant risks faced by the organization in delivery of priorities, receiving regular reports from Risk Management Committee and Senior Leadership Team regarding strategic risks and providing assurance that appropriate action has been identified and implemented.
Solicitor	The 'Risk Management Champion', promoting risk management and leading Senior Management engagement.
Senior Leadership Team	Responsible for promoting, steering and monitoring of strategic risks.
Risk and Insurance Department	Responsible for assisting the organization in the identification assessment and treatment of risk

Risk Management Committee	A committee comprised or risk managers (Environment, Finance, Risk and Insurance, Public Safety, Asset Management, Corporate Safety and EMO) from across the organization. The Committee supports business units in the identification, assessment and guidance of risk treatment. The Committee determines if operational or project risk should be escalated to the level of strategic risk for appropriate review and monitoring.
Business Unit Directors	Accountable for effective risk management within their Business Units – this accountability cannot be delegated. Directors will provide assurance as to the effectiveness of the internal control environment.
Business Unit Risk Coordinators	Responsible for promoting, facilitating and championing the implementation of risk management within their Business Units. Provides advice and guidance on the application of the Risk Management Framework to Risk Owners and Control Owners. They are the first point of call for risk related matters for their Business Unit administering governance of operational risk.
Corporate Planning Department	Responsible for the integration of risk treatment into the business planning process.
Service/Project Managers	Accountable for effective management of risk within their areas of responsibility.
Risk Owners	The person that is accountable for the overall management of the risk, including bidding for resources to control the risk.
Control Owner	The person that has accountability for a task to control an aspect of the risk, either the cause or the effect. The role is accountable to the Risk Owner.
Employees	Maintaining an awareness / understanding of key risks and management of these in day-to-day activities. If an employee does not have control over the occurrence of a risk, the employee will implement strategies to reduce the impact of the risk if it does occur.

Table 2 – Halifax Regional Municipality's Enterprise Risk Management Roles and Responsibilities; July 2019

Risk Management Process

Risk management is the process by which risks are identified, evaluated, controlled and monitored at regular intervals. It is about managing resources wisely, evaluating courses of action to support decision-making, protecting clients and employees from harm, safeguarding assets and the environment and protecting the Municipality's public image.

Whenever an activity takes place, there will be an outcome that will either lead to a success or failure. In undertaking the activity, there will be a number of factors which need to be right to determine whether the activity is a success or not, or to put it the other way around, there are a number of risk factors which, if they are not managed properly, will result in failure rather than success.

Risk Management is also a business planning tool designed to provide a methodical way for addressing risks. It is about:

- Identifying the objectives or new opportunities;
- Identifying what can go wrong;
- Acting to avoid it going wrong, to minimize the impact if it does or capitalize on an opportunity to benefit our stakeholders, and;
- Realizing opportunities and reducing threats.

The Evolution of Risk Management

The evolution of risk management from "Traditional Risk Management" (Operational or Insurable Risk) to Enterprise Risk Management reflects the increasing complexity of the internal and external environment in which organizations operate where many more things can go wrong and with more far-reaching consequences. It also enhances an organization to reap the benefits of assuming risks, once mitigated, to provide benefits to the organization and enhance its reputation.

Because strategic issues arising from political, economic, socio-cultural, technology, environmental or legislative considerations affect the whole of an organization, and not just one or more of its parts, strategic risks can potentially carry very high stakes. They can have very high hazards and high returns and are as a consequence, managed at board level forming a key part of strategic management. Strategic risks, therefore, emerge as a great concern in public sector horizon scanning, policy formulation, and implementation than they would for the private sector.

In all cases, whether strategic or operational in nature, public tolerance for ineffective risk management associated with service delivery, particularly where taxpayer dollars are involved, is low.

The Risk Management Hierarchy

A risk management hierarchy exists (Figure 2), where strategic risks are identified on both a business unit and a corporate, collective level. For clarity, when we talk about strategic risk, we refer to corporate risk, as managed by the Chief Administrative Officer.

Strategic risks are those that are identified as likely to have an impact on the achievement of Halifax Regional Municipality's Priority Outcomes. One or more of the following criteria must apply:

- The risk relates directly to one or more of the Priority Outcomes.
- A Business Unit risk that has significant impact on multiple operations if realized.
- The risk has been identified as present for a number of Business Units.
- There are concerns over the adequacy of Business Unit arrangements for managing a specific risk; i.e. financial ability.

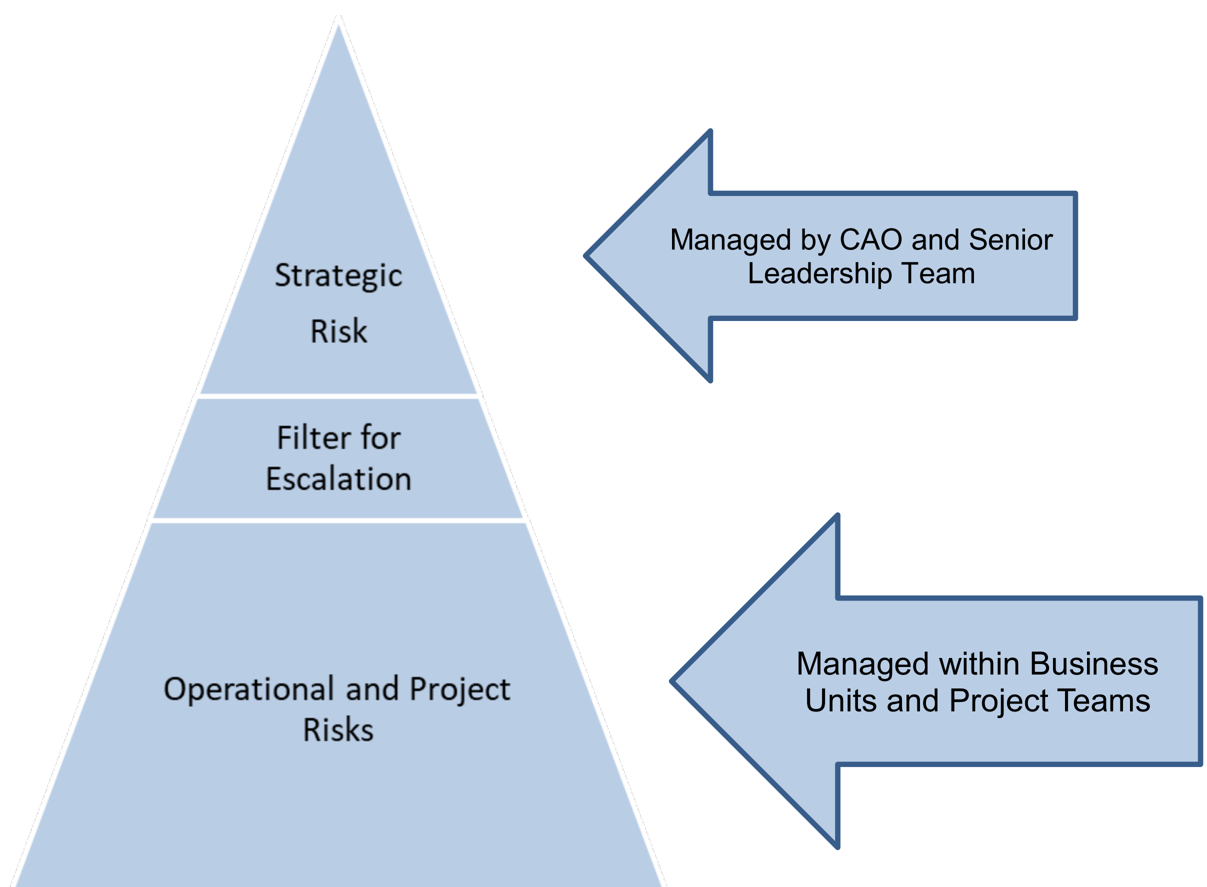

Figure 2 – Halifax Regional Municipality's Risk Hierarchy.

CAN/CSA-ISO 31000-10, Risk Management: Principles and Guidelines

HRM's methodology for risk management is based on the first edition of CAN/CSA-ISO 31000-10, Risk Management – Principles and Guidelines. This document is an adoption without modification of the identically titled ISO (International Organization for Standardization) Standard ISO 310000 (first edition, 2009-11-15).

While all organizations manage risk to some degree, this International Standard establishes a number of principles that need to be satisfied to make risk management effective. This International Standard recommends that organizations develop, implement and continuously improve a framework whose purpose is to integrate the process for managing risk into the organization's overall governance, strategy and planning, management, reporting processes, policies, values and culture.

The generic approach outlined in ISO31000-10, provides the principles and guidelines for managing any form of risk in a systematic, transparent and credible manner and within any scope and context. This approach is (as shown in Figure 3) simply a flow chart expression of the risk management activities. The process is continuous and can be applied at the HRM (enterprise) level or at an individual administrative or business unit level.

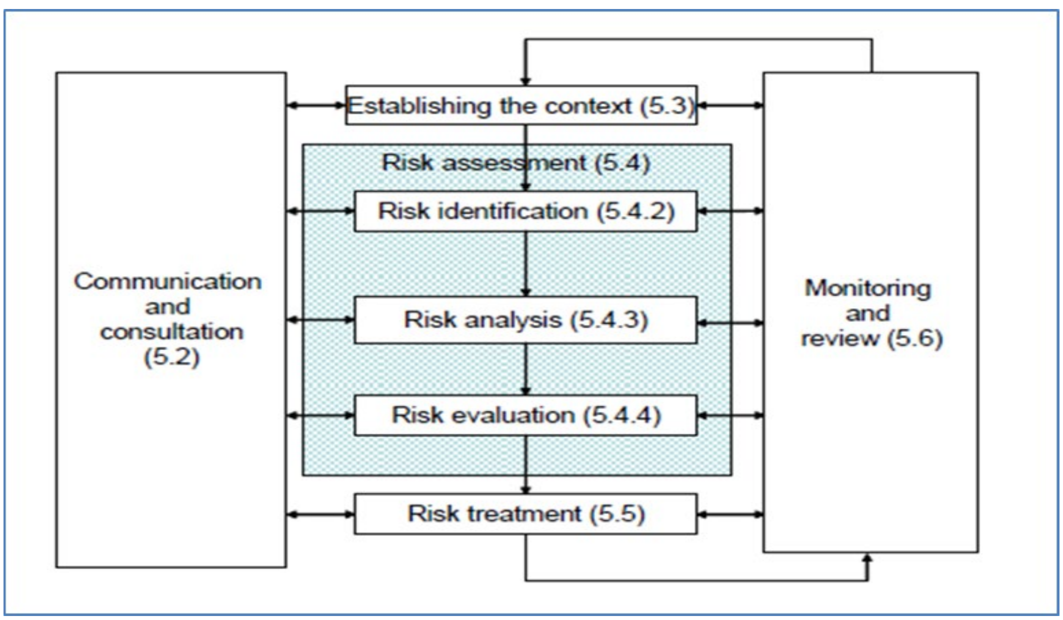

Figure 3 - Risk Management Process: Halifax Regional Municipality's risk management approach is based on CAN/CSA-ISO 31000. Risk management can be applied to an entire organization, at its many areas and levels, at any time, as well as to

specific functions, projects and activities. There is only one ERM framework per organization, but there are perhaps thousands of risk management processes where risks are considered, and controls implemented to achieve the organization's objectives. *(The Journal of Policy Engagement, Vol 2, No.3, June 2010).*

Enterprise Risk Management Framework

Step 1: Understanding the Organization and Its Context

Before starting the design and implementation of the framework for managing risk, it is important to evaluate and understand both the external and internal context of the organization, since these can significantly influence the design of the framework.

External context is comprised of the social and cultural, political, legal, regulatory, financial, technological, economic, natural and competitive environment in which the organization operates whether international, national, regional, or local. Key drivers and trends having impact on the objectives of the organization; as well as relationships, perceptions and values of external stakeholders

Internal context is comprised of the governance, organizational structure, roles and accountabilities; policies, objectives, and the strategies that are in place to achieve them. It also includes capabilities, such as resources and knowledge, information systems, information flows and decision-making processes. Relationships with, and perceptions and values of internal stakeholders; organizational culture as well as standards, guidelines and models adopted by the organization; and form and extent of contractual relationships.

At HRM, the organizational context is captured using the SWOT (Strengths, Weaknesses, Opportunities, Threats) methodology. A SWOT analysis assists in the identification of organization's internal strengths and weaknesses (S, W) as well as potential impacts within the broader external environment that may provide for opportunities or threats (O, T). Developing an awareness of the current business context assists in decision-making by building an awareness of the organizations risks that may impact the success of a strategic goals.

A Corporate SWOT has been developed and is updated annually through the work of cross-functional Strategic Priority Outcome Teams led by Senior Leaders. Operational SWOTS have also been developed and are updated annually by Business Units during the business planning and budget process. Completed SWOT templates are used in the next phase of risk management.

Step 2: Risk Identification

SWOT templates are used by Strategic Priority Outcome Teams as well as business teams to identify sources of risk, areas of impacts, events (including changes in circumstances), their causes and their potential consequences. The aim of this step is to generate a comprehensive list of risks based on those events that might create, enhance, prevent, degrade, accelerate or delay the achievement of strategic or operational objectives. Once the teams have identified all pertinent risks, they must be analyzed for the potential likelihood of occurrence and potential impact if risk remains untreated.

Step 3: Risk Analysis

Risk analysis involves developing an understanding of the risk. It provides an input to risk evaluation and to decisions on whether risks need to be accepted or treated, and on the most appropriate risk treatment strategies. Risk analysis can also provide an input into making decisions where choices must be made, and the options involve different types and levels of risk.

Risk analysis involves consideration of the causes and sources of risk, their positive and negative consequences, and the likelihood that those consequences can occur. Factors that affect consequences and likelihood should be identified. An event can have multiple consequences and can affect multiple objectives. Existing controls and their effectiveness and efficiency should also be considered.

Likelihood is assessed using the Likelihood Scale illustrated in Appendix 1, Table 1; likelihood is determined by the selecting from a range of occurrence between 1 – Rare and 5 – Almost Certain.

Impact is assessed using the Impact Scale illustrated in Appendix 1, Table 2. The Impact Scale is made up of nine impact criteria: Financial (loss or gain), Environmental, Climate Change, Service Delivery, Safety, Culture/Heritage, Reputation, Legal and Compliance and Employees. Normally a risk is assessed using the predominant impact criteria, however there may be times where there more than one applies; under these circumstances the risk may assessed using multiple impact criteria.

The Impact Scale ranges from 1 – Insignificant to 5- Extraordinary; the definition of the impact ranges assist in determination of appropriate Impact. When risks are assessed using multiple impact criteria the impact range is averaged to establish one impact rating.

Once each risk is assigned a likelihood and impact rating the risk can be evaluated and prioritized.

Step 4: Risk Evaluation

The purpose of risk evaluation is to assist in making decisions, about which risks need treatment and the priority they will receive.

At the evaluation stage each untreated risk is assessed using the Risk Priority Matrix (figure 3), to determine the gross likelihood and impact of a risk's occurrence if the risk remains untreated.

Once complete, each risk is then evaluated within the current business context to determine if there are existing controls in place that would reduce the likelihood and impact of the risk occurring. The existing controls are documented and then the risk is re-evaluated within the current business context to determine the net likelihood and impact of risk occurrence.

Net likelihood and impact are used to determine if a risk requires treatment.

		Impact				
		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Extraordinary
Likelihood	5 Almost Certain	Moderate	High	Very High	Very High	Very High
	4 Likely	Moderate	High	High	Very High	Very High
	3 Possible	Low	Moderate	High	High	Very High
	2 Unlikely	Low	Low	Moderate	High	High
	1 Rare	Low	Low	Moderate	Moderate	High

Figure 4 - Halifax Regional Municipality's Risk Matrix: Every risk is assessed to help determine how much attention is given to the event. This is done by ranking the risks with a set of scores determined by their individual likelihood and impact rating.

Step 5: Risk Acceptance

Risk acceptance is the amount of risk an organization is able to live with and how much risk the organization is willing to manage. Risk acceptance is made up of two related components, risk appetite and risk tolerance.

Risk appetite is defined as the level of risk that an organization is willing to accept while pursuing its objectives, and before any action is determined to be necessary in order to reduce the risk, (ISO Guide 73:2009 Risk Management). Risk appetite allows organizations to determine how much risk they are willing to take (including financial and operational impacts) in order to innovate in pursuit of objectives. Risk appetite can vary based on a number of factors, such as: 1) organizational culture, 2) the nature of the objectives pursued (e.g. how aggressive they are), 3) the financial strength and capabilities of the organization (i.e. the more resources an organization has, the more willing it may be to accept risks and the costs associated to them), and, 4) statutory and regulatory obligations that an organization must assume. Risk appetite can change over time as the business context changes and evolves.

Risk tolerance is defined as “an organization’s or stakeholder’s readiness to bear the risk after risk treatment in order to achieve its objectives.” (ISO Guide 73:2009 Risk Management). Risk tolerance is related to the acceptance of the outcomes of a risk should they occur and having the right resources and controls in place to absorb or “tolerate” the given risk.

Risk tolerance for the organization has been established at 3/3 (Likelihood/Impact) for the 2020/21 budget and business planning cycle. This means any strategic risk that possesses a 4 in likelihood/impact must receive treatment to bring it into acceptable tolerance. Risk appetite originally defined in 2012 has not been incorporated into risk assessment criteria at this time because the business context in which risk appetite was originally cast is no longer relevant. Risk appetite will be defined by the Administration in 2021/22 and incorporated into risk acceptance criteria.

There may be circumstances when operational risk registries are first developed that too many new risks over tolerance are identified and may not be able to be resourced in the current year. Under these circumstances risk prioritization is necessary. Prioritization should be placed on limiting threats to human health and safety; impact on the environment, financial loss, legal issues and damage to reputation. HRM has a diverse operating environment, therefore each risk will have to be assessed individually. The rationale for not proceeding to risk treatment should be detailed in operational risk registries.

All risks with a rating of 3 in likelihood or impact should be entered into the Risk Summary Page (Attachment 2) of the Risk Registry. Risk statements must be written in a prescribed manner so that the cause and effect of the untreated risk is apparent, and that the language used is common across the organization. The cause and effect are important for establishment of the next phase of the process, risk treatment.

Step 6: Risk Treatment

Risk treatment involves selecting one or more options for reducing the impact of risks and implementing those options. Addressing risk involves taking practical and focused steps to manage and control it, noting that all risks need to be dealt with but not in the same way or with the same treatments. The common risk treatments, outlined below, assist in the development of responses by HRM. Importantly, when agreeing to actions to control risk, consideration is required as to whether the actions themselves introduce new risks.

Responses

When managing risks, the controls that are put in place should help to effectively reduce the risk to an acceptable level. There are four approaches that can be taken when deciding on how to manage risks.

- **Reduce**: A selective application of management actions, by applying internal control to reduce either the likelihood, impact, or both of a risk. This response is designed to contain risk to acceptable levels, i.e., internal controls, contingency planning, etc. The actions taken to reduce a risk should be established in risk detail sheets (Attachment 2) and incorporated into business plans.

- **Transfer:** Shifting part of the responsibility or burden for the loss to another party i.e., through outsourcing. The transference of risk usually comes with consultation with another internal stakeholder such as procurement.

- **Avoid:** An informed decision not to become involved in an activity or service. This can be challenging as Halifax Regional Municipality may not be able to avoid risks associated with its statutory functions or obligations.

- **Accept:** An informed decision to accept the likelihood and impact of a particular risk. For example, the ability to do anything about a risk may be limited, or the cost of taking any action may be disproportionate to the potential benefit. It is important to note that any risk that is not identified or mitigated is assumed by the organization.

Selecting the most appropriate risk treatment option involves balancing the costs and efforts of implementation against the benefits that will be derived. A number of treatment options can be considered and applied either individually or in combination. The organization can normally benefit from the adoption of a combination of options.

Project Risk Treatment

Each year during the capital planning process, project risk is evaluated using the Capital Prioritization Framework, (Attachment 3). Risk ranking is one of the criteria used in the assessment of project readiness, high risk projects may not move forward unless certain risk factors are mitigated.

Project risk treatment is the responsibility of project managers; project managers are responsible for identifying, evaluating and treating risk throughout the project lifecycle so that the project is delivered on schedule, within budget and delivers on intended outcomes and benefits.

Project risk evaluations are consolidated into a project risk register by FAM&ICT's Asset Management Office.

Operational Risk Treatment

Operational risks registries are reviewed annually by business units as a part the business planning and budget process. All operational risks rating over a 4 in likelihood and impact should have a Risk Detail Sheet, prepared for each risk, (Attachment 2). The risk detail includes the risk statement; description of the risk, existing controls if any, as well as the initiatives or actions that will be undertaken to reduce the risk and bring it into acceptable tolerance. These initiatives, depending on the treatment plan, are incorporated into business plans. Business units are responsible for risk treatment plans.

Strategic Risk Treatment

Strategic risk is also reviewed annually as part of the business planning and budget process. Strategic Priority Teams, comprised of cross-functional managers, work to advance Regional Council's Priority Outcomes through the development of strategic initiatives that are incorporated into the annual Strategic Priorities Plan: https://www.halifax.ca/city-hall/budget-finances/budget/strategic-priorities-plan as well as business plans. This work includes the identification of new risks through updates to the business context; review of risk management progress for risks assigned to the Strategic Priority team as well as development and update of treatment plans.

All strategic risks should have a risk detail sheet completed as part of the Strategic Risk Registry; risks with a risk tolerance of over 3/3 will have mitigating initiatives incorporated into business plans.

Risk mitigation initiatives are assigned to business units; business units are responsible for the completion in order to reduce the risk and bring into acceptable tolerance.

Ownership of Risk and Controls

Once risks are identified and defined it is essential that someone "owns" them (i.e. the Risk Owner). This is not the same as being responsible for carrying out the tasks or actions for the risk (i.e., the Control Owner). This is a critical part of the step as without a named individual, it is unlikely that the risk will be managed. It is important that the risk owner, where possible, be:

- A person who has the ability to influence the outcome of the event, one way or another;
- A person who can be accountable for the delivery in the area where the risk would have an effect;
- A person who can take charge and lead nominated control owners.

From an operational perspective the risk owner should be a member of the Business Unit's management team. The role of Risk Owner may also be delegated through contractual arrangement. Contracting involves transference of risk to an entity outside the organization and therefore delegated risk must be well articulated.

Control Owner

Control owners are responsible for carrying out the tasks or actions for the risk, as assigned by the risk owner. It is important to note that:

- Control owners can be different from the Risk owner;
- Control owners can be from a different Business Unit to the Risk owner;
- A risk may contain many controls, therefore, many control owners, however only on an exceptional basis would one control be assigned to multiple risks.

Control owners can be any employee within the organization but must have the appropriate reporting line to the Risk owner. They may also be contract personnel who are delegated through contractual arrangement control for a particular task.

Project Control

The Risk Owner, in the project context, is the business unit responsible for carrying out the project. The risk owner is responsible for overseeing risk treatment plans and the provision of assistance in decisions that may impact project success. The risk owner delegates most of the tasks related to mitigation of risk to the Project Manager who acts as the control owner. The project manager may in turn delegate some tasks to individuals outside the business unit or to contracted resources.

Operational Control

Operational risks are delegated during the business planning process to a Risk Owner; the Risk Owner is typically a departmental manager within the business unit, but it may be assigned to a manager of another business unit as long as they are aware and have accepted the role. Risk Owners may assign the risk or initiatives pertaining to the risk to a Control Owner. Control owners, like Risk Owners, should be identified early in the process.

Strategic Control

Strategic risk is often a shared responsibility because more than one business unit is either impacted by the risk or has a responsibility to control the risk. Therefore, there maybe more than one Risk Owner assigned to manage the risk within their business unit. As with operational risk, departmental managers within business units are typically assigned as Risk Owners; delegation of this duty outside the business unit is rare. Risk Owners may assign the risk or initiatives pertaining to the risk to a Control Owner. Control Owners, like Risk Owners, should be identified early in the process.

Step 7: Monitor and Review

Once risks have been identified and appropriate controls and action plans put in place to manage them, it is essential to routinely monitor their status. Risks change due to many factors, and it is essential that they are periodically reviewed to capture any new events which may affect the delivery of organizational objectives.

Risk Type	Standard Review	Projects and Partnerships
Very High Threats	1-3 months	Monthly
High Threats	3 months	Monthly
Moderate Threats	6 months	Quarterly
Low Threats	12 months	Quarterly

Figure 5 – Sample Risk Review Schedule

Monitoring Project Risk

The Project Manager is responsible for meeting with the Risk Owner on a monthly basis to review risk management plans. Unforeseen risks or risks that move from one status to another must be reported by the Risk Owner and to the Finance's Asset Management Office.

Monitoring Operational Risk

Directors are responsible for risk management within their business unit, this responsibility cannot be delegated. Directors should review risk registries at monthly management meetings and request updates from Risk Owners based on the aforementioned guideline. New risks and status changes should be documented; frequent check-in's and updates will build risk competency within the business unit, ensure that risk is reviewed, and corrective action taken. It will also greatly reduce the administrative burden of updates during the annual review associated with business and budget planning.

Monitoring Strategic Risk

The Senior Leadership Team (SLT) is responsible for strategic risk management, this responsibility cannot be delegated. The SLT dedicates two sessions to the review of the Strategic Risk Registry, once at the beginning of the business planning cycle in August/September and again in March/April for review of the following:

- Risk Performance - Risk performance is measured by the percentage of risks exceeding a risk tolerance above 3/3;
- Progress to Plan - Progress is reviewed progress against, and deviation from the risk management plan, and;
- Enterprise Risk Management Policy and Framework – Periodic review of framework, policy and plan and alignment to organizations' current external and internal context.

Reporting Risks

Reporting Framework

It is essential that risk management is used as a tool to assist good management and to provide assurances to senior management and Regional Council that adequate measures have been taken to manage risk.

Escalation of risks ensures that managers have a clearer picture on risks or potential issues facing service areas. This helps in the overall decision-making process by allowing senior staff to allocate resources or review areas of concern. An illustration of the reviewing and reporting framework to support this escalation and assurance process is featured on the following page.

Role of Audit and Finance Committee

As set in its formal Terms of Reference, the Audit and Finance Committee is responsible for monitoring and overseeing the adequacy and effectiveness of the Municipality's Risk Management Framework and Risk Management Plans. It is through this Committee that Regional Council discharges its responsibility for obtaining assurance that those risks faced by the Municipality are being appropriately managed.

The Audit and Finance Committee oversight is confined to that of strategic risk; strategic risks are determined to have the most significant impact in the furtherance of Regional Council's Strategic Priority Plan.

Role of Business Units and Committees

It is the role of each business unit and project manager to maintain and act on its own risks. However, to provide support and ensure that risks are identified and appropriately assessed strategic and operational risk registries as well as project evaluations and risk management plans, are reviewed annually by the Risk Review Committee. The Committee is comprised of subject matter experts (Environment, Finance, Risk and Insurance, Public Safety, Asset Management, Corporate Safety, EMO) from across the organization. The Committee carries out two duties; it aids business unit Directors and business unit risk coordinators in identification and assessment of risk by applying professional lenses in development of a unique risk profile i.e., employee safety risks. They also provide the filter between what risks should be escalated from operational and project risk due to scope and scale of the risk.

Risk Review Process

The Municipality’s Risk Review Process is illustrated below.

Figure 6 – HRM’s Risk Review Process – this illustration depicts the role of the Risk Committee in the review and challenge of Operational/Project Risk.

Project Risk Review

Figure 7 – HRM's Project Risk Review Process

Operational Risk Review

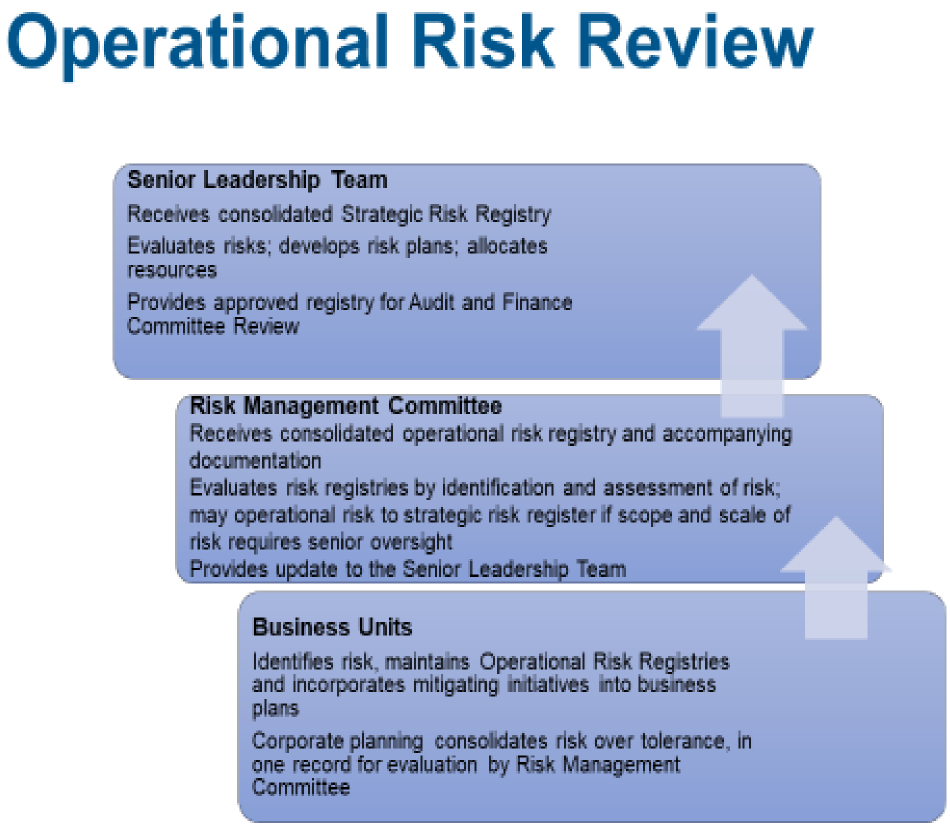

Figure 8 – HRM's Operational Risk Review Process

Strategic Risk Review

Figure 9 – HRM's Strategic Review Process

Risk Registers

Key risk registers are listed below.

Strategic and Operational Risk Registers	The Strategic Risk Register is used to highlight and assure Regional Council that key risks are being effectively managed. Operational Risk Registers are developed and maintained by business units.
Program and Project Risk Registers	Where it is considered appropriate, major partnerships, programs and projects will produce and maintain their own risk registers.

Challenge Environment

There is strong support framework in the Municipality to challenge risks and to help business units. Listed below are some of the key groups which assist with this:

Audit and Finance Committee	The Audit and Finance Committee meets to review the Strategic Register in advance of the business planning process. This gives the Committee as well as Regional Council the ability to challenge ask questions related to the risk management plans and activities.
Senior Leadership Team (SLT)	Annually and as necessary the SLT reviews all the top risks for the Municipality and challenge and moderate as necessary. Operational risks are escalated by the operational teams through the Risk Management Committee and upon approval are escalated to the Audit and Finance Committee.
Risk Management Committee	Annually and as necessary the Risk Management Committee meets to review the Strategic, Operational and Project Risk registers. The committee challenges the identification of risks as well as their assessments. This Committee provides assurance that potential high-level

	risks are identified and that all risks are rated appropriately to the Senior Leadership Team.
Business Unit Risk Coordinators	The Risk Coordinators provide advice and guidance on the application the Risk Management Framework. They are the first point of call for risk related matters for their Business Unit providing operational support. Risk Coordinators meet with the Risk Committee annually during the risk registry evaluation process to support their business and provide context to decision-making. They also act as the liaison for decisions stemming from Committee review

Risk Consideration in Reports to Regional Council and Standing Committees

Similar to the current practice of identifying Legislative Authority and Financial Implications in Staff Reports, Risk Consideration was added Regional Council and Standing Committee Recommendation report in 2016.

Adding a risk consideration section to staff reports:

- Further integrated risk into organizational processes (ISO 31000 4.3.4);
- Formally advises Audit and Finance Committee, as well as Regional Council, of risks associated with the subject in question (transparency);
- Heightens staff attention to risks associated with recommendations (culture), and;
- Provide assurance to the public that HRM is proactively considering risks (credibility).

Key Risk Management Definitions

HRM has adopted internationally recognized definitions from CAN/CSA- ISO 31000-10, the internationally accepted risk management standard (International Standard ISO 31000; 2009 Risk Management Principles and Guidelines).

Communication and Consultation: Continual and iterative processes that an organization conducts to provide, share or obtain information and to engage in dialogue with stakeholders regarding the management of risk.

Consequence: Outcome of an event affecting objectives

Controls: Measure that is modifying risk. Measures taken to control the impact or likelihood of risks to an acceptable level.

Control Owner: The person that has accountability for a particular task to control an aspect of the risk, either the Cause or the Effect. The role is accountable to the Risk Owner.

Effect: Unplanned variations from objectives, either positive or negative, which would arise as a result of risks occurring. Effects are contingent events, unplanned potential future variations which will not occur unless risks happen.

Establishing the Context: Defining the external and internal parameters to be considered when managing risk, and setting the scope and risk criteria for the risk management policy;

Event: Occurrence or change of a particular set of circumstances.

External Context: External Environment in which the organization seeks to achieve its objectives.

Gross Risk: The assessed level of risk on the basis that no mitigating controls are in place.

Internal Context: Internal environment in which the organization seeks to achieve its objectives.

Level of Risk: Magnitude of a risk or combination of risks, expressed in terms of the combination of consequences and their likelihood.

Likelihood: Chance of something happening.

Monitoring: Continual checking, supervising, critically observing or determining the status in order to identify change from the performance level required or expected.

Operational Risk: Risks arising from or relating to the execution of day-to-day operations and service delivery.

Residual Risk: Risk remaining after risk treatment

Review: Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives.

Risk: Effect of uncertainty on business objectives.

Risk Analysis: Process to comprehend the nature of risk and to determine the level of risk.

Risk Assessment: Overall process of risk identification, risk analysis, and risk evaluation.

Risk Attitude: Organization's approach to assess and eventually pursue, retain, take or turn away from risk.

Risk Criteria: Terms of reference against which the significance of a risk is evaluated.

Risk Evaluation: Process of comparing the results of risk analysis with risk criteria to determine whether the risk and/or its magnitude is acceptable or tolerable.

Risk Identification: Process of finding, recognizing and describing risks.

Risk Management: Coordinated activities to direct and control an organization with regard to risk.

Risk Management Framework: Set of components that provide the foundations and organizational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management throughout the organization.

Risk Management Plan: Scheme within the risk management framework specifying the approach, the management components and resources to be applied to the management of risk.

Risk Management Policy: Statement of the overall intentions and direction of an organization related to risk management

Risk Management Process: Systematic application of management policies, procedures and practices to the activities of communicating, consulting, establishing the context, and identifying, analyzing, evaluating, treating, monitoring and reviewing risk.

Risk Owner: Person or entity with the accountability and authority to manage a risk.

Risk Profile: Description of any set of risks.

Risk Source: Element which alone or in combination has the intrinsic potential to give rise to risk.

Risk Treatment: Process to modify risk.

Risk Tolerance: Or sometimes known as risk appetite is described as the level of risk HRM is willing to accept in relation to a threat that may cause loss or an opportunity in the day-to-day activities. The risk tolerance of an organization may be different for different events. HRM's risk tolerance and the alignment between its risk appetite and its objectives will form part of the overall HRM corporate strategy.

Risk Register: Official recording of the identified risks facing HRM. A catalogue of the full spectrum of risks (with impact and likelihood assessed) will form HRM's risk register.

Stakeholder: Person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity.

Strategic Risk: Strategic risks are those arising from or rated to long term strategic priorities. Strategic risks must one or more of the following criteria must apply: 1-The risk relates directly to one or more of the Priority Outcomes; 2-A risk that has significant impact on multiple operations if realized; 3- There are concerns over the adequacy of Business Unit arrangements for managing a specific risk. Strategic risks are reported to Audit and Finance annually with updates provided on a semi-annual basis.

Appendix 1 – Risk Likelihood Scale / Risk Impact Scale

Table 1 – Risk Likelihood Scale

Likelihood Scale	
Likelihood	**Description**
5-Almost Certain	· 99% chance of occurrence within the next year · Impact is occurring now · Could occur within 'days to weeks'
4-Likely	· Greater than 50% chance of occurrence within the next year · Balance of probability will occur · Could occur within 'weeks to months'
3-Possible	· Between a 10 -50% chance of occurrence within the next year · May occur shortly but a distinct probability it won't · Could occur within 'months to years'
2-Unlikely	· Between 1 and 10% chance of occurrence within the next year · May occur but not anticipated · Could occur in 'years to decades'
1-Rare	· Less than 1% chance of occurrence within the next year · Occurrence requires exceptional circumstances · Exceptionally unlikely, even in the long-term future · Only occur as a '100-year event'

Table 2 – Risk Impact Scale

Impact Scale									
Level	**Financial (loss or gain)**	**Climate Change Hazards (e.g., extreme weather, coastal or inland flooding, sea-level rise, storm surges & coastal erosion, drought, forest fire, ecological impacts)**	**Environmental**	**Service Delivery/Infrastructure**	**Health and Safety**	**Culture/Heritage**	**Reputation**	**Legal & Compliance**	**Employees**
5		Permanent environmental impact(s) affecting >1000 properties in a broad geographic area	Long term harm	Critical service/infrastructure loss for more than one month	Large scale casualties	Irreparable damage to highly valued items of cultural or heritage significance	Long term effect on brand and reputation	Major litigation	Inability to recruit or attract talent across organization
Extraordinary	Unable to accommodate within budget	Unprecedented event resulting in critical impact(s) on public safety and/or public health (multiple fatalities) in mulitple areas, requiring ongoing attention/care for months to years	Broad community impact	Public outrage at inefficiencies/level of service demonstrated with city	Loss of life	Public outrage demonstrated	Adverse/negative view of City (council and staff) is community-wide	Investigation by regulatory body resulting in interruption to operations	Work stoppage
		Critical event with permanent economic impact(s) >$50mil in damages/insurance payments over time; major municipal liability for damages (refer to column B)							Widespread human rights complaints
		Catastrophic impact(s) resulting in long-term failure of municipal services or infrastructure; failure of critical services or infrastructure for months to years	Major opposition to the use of sustainable resource (energy, waste, water, etc.) which is sustainable long term.		Catastrophic infrastructure failure; months to years to replace		Widespread prolonged public or media attention (international or national coverage)	Possibility of custodial sentence	Widespread degradation in performance/morale
4	Able to accommodate within existing budget but only with service cuts and/or reserve funds	Long-term environmental impact(s) affecting 250-1000 properties for months to years	Significant medium term harm	Critical service/infrastructure loss for up to one month	Multiple (more than one fatality) or combination with sever injuries	Significant damage to structures or items of cultural or heritage significance	Significant media, public or Government attention regionally	Major breach of regulation with punitive fine or legal action/injunction	Inability to recruit or attract talent across multiple business units
Major		Major event resulting in impact(s) on public safety and/or public health (severe injury, severe illness, fatality) in mulitple areas, requiring ongoing attention/care for weeks to months	5 to 20 properties impacted	Customer service levels are at such a poor standard that most customers are aware of them	Multiple severe injuries	Volume of complaints exceeds ability to respond to citizen/media complaints	Adverse/negative view of City (council and staff) spans district boundaries/ majority of community groups	Litigation involving many weeks of senior management time	Performance/morale issues found across departments
		Major event with significant, long-term economic impact(s) $5mil-$50mil in damages/insurance payments; moderate municipal liability for damages (refer to column B)		Infrastructure does not meet customer requirements/purpose for which it is used	Imminent infrastructure failure anticipated; closure required			Major infrastructure deficiencies will result in legal action if left unaddressed	High rates absenteeism, conflict and/or turnover
		Major impact(s) resulting in long-term loss of municipal services or infrastructure; loss of critical services or infrastructure for up to one month	No significant improvement in the use of sustainable resource	Volume of complaints on inefficiencies/level of service exceeds ability to respond	Permanent disability or widespread illness			Legislative breech	Departmental human rights complaints

Level	Financial (loss or gain)	Climate Change Hazards (e.g., extreme weather, coastal or inland flooding, sea-level rise, storm surges & coastal erosion, drought, forest fire, ecological impacts)	Environmental	Service Delivery/Infrastructure	Health and Safety	Culture/Heritage	Reputation	Legal & Compliance	Employees
3 **Moderate**	$1mil - $10mil (Able to accommodate within corporate budget)	Short-term, reparable environmental impact(s) affecting 20-250 properties Short-term event resulting in temporary impact(s) on public safety and/or public health (injury, illness) in a local area Short-term event with minor temporary economic impact(s) $250k-$5mil in damages/insurance payments; minor municipal liability for damages (refer to column B) Short-term impact(s) on municipal service delivery or infrastructure; loss of services or infrastructure for 72hrs to 1wk	Moderate short term harm No noticeable effect on sustainability Broader geographic impact	Critical service/infrastructure is not available for several days Steady level of complaints on inefficiencies/level of service from citizens/community groups	Moderate Health and Safety Event; illness of injury impacting several departments Infrastructure deficiency results in closure to avoid serious injury	Damage to items of cultural or heritage significance Steady level of complaints from citizens/community groups	Attention from media or heightened stakeholder interest Adverse/negative view of City (council and staff) is held by neighbourhoods/ multiple community groups. Absorbs management attention for weeks	Breach of regulation with investigation or report to authority with prosecution or moderate fine Moderate infrastructure deficiencies that may result in legal action reported by public Moderate issues noted on inspection	Inability to recruit or attract talent within department Localized performance issues found within department (absenteeism/conflict) Localized staff turnover Isolated human rights complaints
2 **Minor**	$100k-$1mil (Able to accommodate within department budget)	Localized event with short-term, reparable environmental impact(s) on <20 properties Localized event resulting in short-term, remediable impact(s) on public health and/or safety Localized event with minor temporary economic impact(s) $5k-$250k (i.e., up to avg home value in HRM); minimal municipal liability for damages (refer to column B) Localized impact(s) on municipal service delivery or infrastructure; loss of services or infrastructure for <72hrs	Localized minor affect, short term impact	Localized service/infrastructure loss for a few days Intermittent complaints on inefficiencies/level of service from citizens/community groups	Hospital visit required Medium term, largely reversible disability to one or more people (localized) or/ one individual with serious long term injury Non life- threatening deficiencies related to infrastructure; infrastructure may remain open with restrictions, warnings or modifications Severe illness within one dept	Mostly repairable damage to culture or heritage item Intermittent complaints from citizens/community groups	Minor local public or media attention No perceivable impact on performance Adverse/negative view of City (council and staff) is limited to a small area/community group.	Minor legal issues, non-compliance and/or breaches of regulation Minor issues noted on inspections Minor infrastructure deficiencies that may result in legal action reported by public	Isolated performance/morale issues (absenteeism)

Level	Financial (loss or gain)	Climate Change Hazards (e.g., extreme weather, coastal or inland flooding, sea-level rise, storm surges & coastal erosion, drought, forest fire, ecological impacts)	Environmental	Service Delivery/Infrastructure	Health and Safety	Culture/Heritage	Reputation	Legal & Compliance	Employees
1 **Insignificant**	<$100k (Little or no impact on budget)	Single event on one property with no permanent or irreparable environmental impact(s) Isolated event resulting in negligible impact(s) on public health and/or safety Isolated event with minor temporary economic impact(s) <$10k; negligible municipal liability for damages (refer to column B) Negligible impact(s) on municipal service delivery or infrastructure; brief loss of service	Negligible event, non-permanent impact One property affected with low significance	Negligible service/infrastructure impact, brief loss of service Few or no complaints from citizens/community groups	Reversible disability requiring hospital treatment Single or multiple injuries requiring first aid Visible minor infrastructure deficiencies which may lead to injury	Low-level repairable damage to culture or heritage item Few or no complaints from citizens/community groups	Little or no impact on level of trust in City (council and staff) Public reaction minimal - no effect on City's profile	No identified compliance issues Inspections highlight no issues	Little or no impact on staff's performance and morale

Appendix 2 – Operational Risk Template

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Purpose / Who /Action / What</td></tr>
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Appendix 3 – Capital Prioritization Framework

Capital Prioritization Framework – Evaluation Guidelines

Prepared by:

Holly Power-Garrett
Asset Management Office
Updated September 12, 2019

Table of Contents

Introduction

Project Managers currently prioritize projects within their own business groups based on a combination of experience, inspections, and formal tools. Senior leadership does not share this same detailed level of familiarity with projects, particularly when it is examining all the projects proposed to receive funding in the capital budget. The Capital Project Evaluation Framework will help Senior Leadership understand how strategic priorities and service levels should integrate with infrastructure decision-making. This evaluation framework establishes an initial methodology to prioritize projects. As the Municipality evolves its approach to asset management and is able to leverage more data, the evaluation framework will evolve.

The benefits to adopting a formal evaluation framework include:

- Consistency in evaluation
- Ability to plan longer term
- Better transparency with Council on impacts and risks
- Ability to better prioritize resources and services
- Ability to achieve strategic goals

The ratings produced from using the evaluation framework and the asset lifecycle data produced from the EAM systems do not replace the practitioner as the decision maker. The evaluation framework and the data are intended only to provide better focus, objectivity and consistency to improve the practitioner's wisdom.

Projects will be evaluated under three different lenses:

- Risk
- Strategic Alignment
- Impact to Service

After each project is evaluated, it is assessed under a fourth category – Capacity to Deliver. This assessment is used to help determine when a project should be scheduled within the capital budget based on readiness to proceed.

Evaluation Categories

Risk

Halifax's capital project risk evaluation is meant to grow and evolve, maintaining consistency with Enterprise Risk Management. This year the evaluation is comprised of eight categories:

1. Financial (loss or gain)
2. Climate Change Hazards
3. Environmental
4. Service Delivery/Infrastructure
5. Health and Safety
6. Culture/Heritage
7. Reputation
8. Legal & Compliance

The Risk Impact Scale is shown below for each of the categories.

This year, Project Managers are also being asked to identify whether the asset(s) impacted by the capital projects are critical assets. Asset Criticality should be kept in mind when selecting the appropriate risk impact. Asset Criticality is defined as:

A critical asset is an asset for which the financial, business or service level consequences are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets. What makes assets critical is the severity of the impact on the municipality if use of the asset were lost.

Examples of critical assets may include:

- Arterial roads
- Recreation / Community Centres that are also designated as Comfort Centres
- A fire tanker truck in an area without ready access to hydrants

The rating should be evaluated as the risk occurring if the project does NOT proceed.

Category	Financial (loss or gain)	Climate Change Hazards	Environmental	Service Delivery/ Infrastructure
5 Extraordinary	• Unable to accommodate within budget	• Permanent environmental impact(s) affecting > 1000 properties in a broad geographic area • Unprecedented event resulting in critical impact(s) on public safety, public health and/or infrastructure in multiple areas, requiring ongoing attention for months to years	• Long term harm • Broad community impact • Major opposition to the use of sustainable resource (energy, waste, water, etc.) which is sustainable long term.	• Critical service/ infrastructure loss for more than one month • Public outrage at inefficiencies/level of service demonstrated with city • Catastrophic infrastructure failure; months to years to replace
4 Major	• Able to accommodate within existing budget but only with service cuts and/or reserve funds	• Long-term environmental impact(s) affecting 250-1000 properties for months to years • Impact(s) on public safety, public health in multiple areas, requiring ongoing attention/care for weeks to months • \$5M-\$50M in damages/ insurance; moderate municipal liability for damages • Loss of municipal services or infrastructure; loss of critical services or infra up to one month	• Significant medium term hard • 5-20 properties impacted • No significant improvement in the use of sustainable resource	• Critical service/ infrastructure loss for up to one month • Customer service levels are at such a poor standard that most customers are aware of them • Infrastructure does not meet customer requirements/purpose for which it is used • Volume of complaints on inefficiencies/level of service exceeds ability to respond • Imminent infrastructure failure anticipated; closure required

3 Moderate	• $1M - $10M (Able to accommodate within corporate budget)	• Short-term, reparable environmental impacts affecting 20-250 properties • Short-term event resulting in temporary impacts on public safety and/or public health in a local area • Temporary economic impacts ($250K-$5M); minor municipal liability for damages • Loss of services or infrastructure for 72 hours - 1 week	• Moderate short-term harm • No noticeable effect on sustainability • Broader geographic impact	• Critical service/ infrastructure is not available for several days • Steady level of complaints on inefficiencies/level of service from citizens/ community groups • Infrastructure deficiency results in closure to avoid serious injury
2 Minor	• 100K - $1M (Able to accommodate within department budget)	• Localized event with short-term, reparable environmental impacts on < 20 properties • Short-term, remediable impacts on public health and/or safety • $5K-$250K; minimal municipal liability for damages • Loss of services or infrastructure for < 72 hours	• Localized minor effect, short term impact	• Localized service/ infrastructure loss for a few days • Intermittent complaints on inefficiencies/level of service from citizens/ community groups
1 Insignificant	• <$100K (Little or no impact on budget)	• Single event on one property with no permanent or irreparable environmental impacts • Negligible impacts on public health and/or safety • <$10K; negligible municipal liability for damages • Brief interruption of municipal service delivery or infrastructure	• Negligible event, non-permanent impact • One property affected with low significance	• Negligible service/ infrastructure impact, brief loss of service • Few or no complaints from citizens/community groups

The rating should be evaluated as the risk occurring if the project does NOT proceed.

Category	Health & Safety	Culture/Heritage	Reputation	Legal & Compliance
5 Extraordinary	• Large scale casualties • Loss of life	• Irreparable damage to highly valued items of cultural or heritage significance	• Long term effect on brand and reputation • Adverse/negative view of City (council and staff) is community-wide • Widespread prolonged public or media attention (international or national coverage)	• Major litigation • Investigation by regulatory body resulting in interruption to operations • Possibility of custodial sentence
4 Major	• Multiple (more than one fatality) or combination with severe injuries • Multiple severe injuries • Permanent disability or widespread illness	• Significant damage to structures or items of cultural or heritage significance	• Significant media, public or Government attention regionally • Adverse/negative view of City (council and staff) spans district boundaries/ majority of community groups	• Major breach of regulation with punitive fine or legal action/injunction • Litigation involving many weeks of senior management time • Legislative breach • Major infrastructure deficiencies will result in legal action if left unaddressed
3 Moderate	• Moderate Health and Safety Event • Severe illness or injury impacting larger community or several departments	• Damage to items of cultural or heritage significance	• Attention from media or heightened stakeholder interest • Adverse/negative view of City (council and staff) is held by neighbourhoods/ multiple community groups. • Absorbs management attention for weeks	• Breach of regulation with investigation or report to authority with prosecution or moderate fine • Moderate infrastructure deficiencies that may result in legal action reported by public • Moderate issues noted on inspection

2 Minor	• Hospital visit required • Medium term, largely reversible disability to one of more people (localized) or one individual with serious long-term injury • Severe illness within small, localized area or one department • Non-life-threatening deficiencies related to infrastructure; infrastructure may remain open with restrictions, warnings or modifications	• Mostly reparable damage to culture or heritage item	• Minor local public or media attention • No perceivable impact on performance • Adverse/negative view of City (council and staff) is limited to a small area/community group.	• Minor legal issues, non-compliance and/or breaches of regulation • Minor issues noted on inspections • Minor infrastructure deficiencies that may result in legal action reported by public
1 Insignificant	• Reversible disability requiring hospital treatment • Single or multiple injuries requiring first aid • Visible minor infrastructure deficiencies which may lead to injury	• Low-level reparable damage to culture or heritage item	• Little or no impact on level of trust in City (council and staff) • Public reaction minimal - no effect on City's profile	• No identified compliance issues • Inspections highlight no issues

RISK LIKELIHOOD SCALE	
Likelihood	**Description**
5 Almost Certain	• 99% chance of occurrence within the next year • Impact is occurring now • Could occur within 'days to weeks'
4 Likely	• Greater than 50% chance of occurrence within the next year • Balance of probability will occur • Could occur within 'weeks to months'
3 Possible	• Between a 10 - 50% chance of occurrence within the next year • May occur shortly but a distinct probability it will not • Could occur within 'months to years'
2 Unlikely	• Between a 1 - 10% chance of occurrence within the next year • May occur but not anticipated • Could occur in 'years to decades'
1 Rare	• Less than 1% chance of occurrence within the next year • Occurrence requires exceptional circumstances • Exceptionally unlikely, even in the long term • Only occurs as a '100-year event'

The Risk Impact and Risk Likelihood scales are multiplied to derive a score of 1-25 in a given risk category. Risks may impact one or more categories and action should be contemplated or initiated when the risk in one or more categories exceeds the Municipality's tolerance. This threshold differs by municipality and should correspond with the definitions of Risk Impact. Definitions chosen for the Risk Impacts in this document were taken from Halifax's Draft Risk Management Strategy (2015). The corresponding Risk Priority Matrix (Impact x Likelihood) is shown below:

		Impact				
		1 Insignificant	**2 Minor**	**3 Moderate**	**4 Major**	**5 Extraordinary**
Likelihood	**5 Almost Certain**	Moderate	High	Very High	Very High	Very High
	4 Likely	Moderate	High	High	Very High	Very High
	3 Possible	Low	Moderate	High	High	Very High
	2 Unlikely	Low	Low	Moderate	High	High
	1 Rare	Low	Low	Moderate	Moderate	High

Strategic Alignment

Each project is evaluated based on alignment to community values and principles. For Halifax, these are represented by Council Priority Areas. Through a Strategic Capital Planning Workshop held with the Directors in June 2018, preliminary weighting was established for each of the Council Priority Areas. Council confirmed the weights for each priority area at Budget Committee on July 19, 2019. The next review of Council Priority Areas and Outcomes is planned for Fall 2020, following the municipal election.

Each project will be evaluated on how strongly it contributes to achieving the outcomes for each Council Priority Area. Scoring under each Priority Area is as follows:

Score	Description
3	The project has as its primary objective to support/promote one or more of the Priority Area outcomes
2	The project is one of several factors that contributes toward achieving one or more of the Priority Area outcomes, but they are not the primary reason for carrying out the project
1	The project indirectly supports one or more of the Priority Area outcomes as a side benefit
0	The project does not relate to any of the Priority Area outcomes

Council Priority Areas, their weights, and their associated outcomes are outlined below:

Priority Area: Economic Development	**Weight:** 19%
Outcomes: • Halifax is a welcoming community where the world's talent can find great opportunities. • Halifax promotes a business climate that drives and sustains growth by improving competitiveness, minimizing barriers and leveraging our strengths. • The economic viability of rural communities is included as an integral aim of regional economic growth strategies and their implementation. • Halifax has a vibrant, animated and economically healthy Regional Centre that is a cultural, business and education hub with a growing population. • Ensure that there are sufficient industrial, commercial and institutional lands available to provide economic opportunities. • Recognize and support heritage, cultural activities, and arts to bolster the creative economy and the vitality of the region.	

Priority Area: Service Delivery	**Weight:** 17%
Outcomes: • HRM simplifies processes and delivers service to promote and encourage a vibrant business environment. • HRM understands the needs and perspectives of the people they serve and provides quality service through a person focused approach. • Halifax will foster a corporate culture that values innovation and bold ideas and supports the rapid deployment of experimental pilot projects and civic innovation project teams.	

Priority Area: Healthy, Liveable Communities	**Weight:** 22%
Outcomes: • Halifax citizens and visitors are safe where they live, work, and play. • Halifax builds resiliency by providing leadership in energy management, sustainability and environmental risk management both as an organization and in the community, we serve. • Halifax citizens have access to facilities and natural assets that enable a range of choices for structured and unstructured leisure and recreation activities. • Halifax shall be an active partner in supporting community health programs such as food security initiatives.	

Priority Area: Social Development	**Weight:** 17%
Outcomes: • HRM communities, families, youth and seniors have access to social infrastructure that enables them to participate fully in their community. • Halifax is a leader in building an accessible community where everyone can participate fully in life, including persons with disabilities and seniors. • Halifax is a leader in fostering partnerships that provide access to a full range of quality, affordable housing options in safe and vibrant neighborhoods. • Halifax is a diverse and inclusive community that supports everybody.	

Priority Area: Governance and Engagement	**Weight:** 3%
Outcomes: • Halifax citizens have confidence in the governance structures of the municipality. • Halifax citizens and communities participate in open and transparent communication with the municipality. • Halifax citizens and communities are engaged in the development of public policy and plans. • HRM manages municipal resources with integrity and considers the impact on taxpayers when making decisions.	

Priority Area: Transportation	**Weight:** 22%
Outcomes: • Halifax will implement an integrated mobility strategy that supports growth, development and the transportation of goods and people of all ages and abilities, using all modes including walking, cycling, transit, and motor vehicles, consistent with the Regional Plan. • The Halifax Transportation Network is comprised of well-maintained assets. • The Halifax Transportation Network is designed to be operated to be safe, accessible and supportive of enhanced user experience and focused on service improvements. • Drivers, cyclists and pedestrians all share responsibility for travelling safely together. Through education, enforcement, and improved infrastructure (engineering), engagement and evaluation, pedestrians in Halifax are provided with a safe environment in which to walk.	

Impact to Service

Workshops were held last summer in which Directors and their management teams explored concepts related to service delivery. They worked through identifying their stakeholders, what is important to them, how to measure success, and what factors they weigh when making choices. This information was then assembled into project evaluation criteria and tested with several examples. The criteria to evaluate impact to service varies among service areas, just as the nature of the services delivered varies.

Criteria	Fire	Police	Library	Parks & Rec	Integrated Transportation	ICT
Accessibility *A measure of the ease with which users can make use of the service.* *Examples: provision of sufficient facilities, adequate hours, barrier-free*	**0%**	**10%**	**30%**	**10%**	**20%**	**0%**
Functional Performance *Describes the standard to which the service is provided. The network and associated facilities are up-to-date, in good condition, and "fit for purpose".*	**10%**	**10%**	**25%**	**15%**	**20%**	**35%**
Sustainability *Relates to the management of the service for the future. Assets are managed*	**10%**	**5%**	**25%**	**30%**	**40%**	**0%**

with respect to current and future generations and adverse effects are managed effectively.						
Compliance/Service Reliability *Relates to the risks created by provision of the service and the degree to which these are mitigated.* *Example: services are delivered without risk to public health*	**80%**	**75%**	**20%**	**45%**	**20%**	**35%**
ICT Technical *Addresses ICT-specific considerations: Existing Solution Contract and Project Impact*						**30%**

Projects are scored as follows:

3 The project **strongly contributes** to achieving the level of service performance criteria

2 The project **contributes** to achieving the level of service performance criteria

1 The project **weakly contributes** to achieving the level of service performance criteria

0 The project **does not contribute** to achieving the level of service performance criteria

Business areas, through a workshop this summer, defined additional criteria and specified what those scores mean for each of the criteria so that they may be consistently applied. They are attached as **Appendix A**.

Capacity to Deliver

Capacity to deliver the projects within the Municipality's capital budget was raised as an area of concern during recent workshops. The senior leadership team recognized that some of the projects that make their way into the budget have either long lead time or barriers to even commencing work owing to factors such as land acquisition or funding concerns. The idea was raised to include Capacity to Deliver as one of the criteria used to evaluate projects this year.

That idea was amended to apply Capacity to Deliver to serve as a tool to determine project timing.

The criteria selected to evaluate Capacity to Deliver are: Land, Public Consultation, Resource Expertise/Availability, Procurement Phase, and Funding Sources. Uncertainty or difficulties with any of these areas has the potential to significantly impact a project timeline. Definitions are included in the table on the next page.

Scoring:

This evaluation is meant to be used for projects that senior management and Council have selected to include in the capital budget. It is a screening tool to determine when a project should be scheduled, based on readiness to proceed. It is a guideline and political pressure, or risk tolerances may dictate proceeding more quickly than the scoring would recommend. Timing is approximate and capacity to deliver should be re-evaluated every year to reflect updated information. Scoring should be interpreted by referring to the highest scoring category as that is where the most barriers to executing a project quickly will exist.

Readiness Category	Land	Public Consultation	Resource Expertise/ Availability	Procurement Phase	External Partnerships
3 Ready to Proceed	• No land acquisition is required • Necessary land has been acquired	• Public consultation is not required • Public consultation is complete	• Expertise is available in-house or may be readily procured • Resources are available to carry out the work	•Tender process is planned or underway • Request for proposal has been issued or recently closed and contract negotiations are expected to be STRAIGHTFORWARD	• Cost sharing or grants have been confirmed – OR – No external funding is required.
2 Preparation Underway	• Negotiations to acquire land have started	• Public consultation is underway • Public consultation will be completed within 6 months	• Efforts are underway to resolve expertise/ availability gaps	• Request for proposal process is planned or underway • Request for proposal has recently closed but contract negotiations are expected to be COMPLEX	• Cost sharing or grants are planned, and confirmation is expected within 6 months •Sale of land/asset to fund the project is underway
1 Further Preparation Required	• Preferred site has been identified	• Public consultation program is in planning phase	• Staff training program required • Recruitment campaign is planned	• Request for qualifications process is planned or underway	• Planned cost sharing is at the application stage • Sale of land or another asset to fund the project is planned
0 Conceptual	• Preferred site has yet to be determined	• Extent of public consultation has not yet been determined	• Required skill sets/number of resources have yet to be determined	• Further research and/or defined requirements are needed before proceeding with procurement	• External funding program details or requirements are not yet available

Appendix A – Impact to Service Defined by Service Area

Fire & Emergency Service

Criteria	Sub-Criteria		Weight
Accessibility			**0%**
Functional Performance			**10%**
	Number of Calls/Type	*10%*	
Sustainability			**10%**
	Life Cycle Cost	*10%*	
Compliance/Service Reliability: Service reliability, consistency of service and ability to provide it during an emergency anywhere in HRM (urban, rural, remote). Ability to get the right service to the right call at the right time. Ability to achieve service standards set by Council or legislation.			**80%**
	Response Time	*20%*	
	Safety	*60%*	

Scoring

3	2	1	0
Must Do: • Revenue • Legislation • Council Mandated • Critical Investments	**Should Do:** • Potential Growth • Cost Avoidance/ Payback/Legal • Responsive to community needs/ corporate needs for new services	**Nice to Do** • Not Critical • Community Enhancement • Added Value • Responsive to Narrow Needs	**Other** • Item recommended through alternative funding • Efficiency Matters – Less than one year to pay back

Halifax Regional Police

Criteria	Sub-Criteria		Weight
Accessibility: Equitable access to all communities. Response times may differ, but service needs to be consistent.			**10%**
	Accessibility/Efficiency	*10%*	
Functional Performance: Risk of infrastructure or equipment failure (age, capacity, and reliability of equipment) not available to respond.			**10%**
	Functionality	*10%*	
Sustainability: Social impacts include employee wellness & safety. Environmental includes reduction of overall GHG, response to emergency (e.g. floods plains, mitigation services). Economic includes efficiency gains, ability to respond to increases in economic drivers (bang for buck).			**5%**
	Life Cycle Cost	*5%*	
Compliance/Service Reliability: Consistency of service and ability to provide it during an emergency (urban, rural, remote). Ability to get the right resource to the right call at the right time. Ability to achieve service standards set by Council/Legislation.			**75%**
	Response Time	*25%*	
	Life Safety	*50%*	

Scoring

3	2	1	0
High Impact	**Medium Impact**	**Low Impact**	**No Impact**

Parks & Recreation

Criteria	Sub-Criteria		Weight
Accessibility			**10%**
	Distribution Appropriateness	*10%*	
Functional Performance			**15%**
	Functional Performance	*15%*	
Sustainability			**45%**
	Life Cycle / Financial	*20%*	
	Social Sustainability	*15%*	
	Environmental Sustainability	*10%*	
Compliance/Service Reliability			**30%**
	Service Reliability	*30%*	

Scoring

Criteria	3-High Impact	2-Med. Impact	1-Low Impact	0-No Impact
Distribution Appropriateness	• Large population served/large catchment area • Important regional hub • No other options	• Moderate population served • Important community hub	• Low population served • Other options available	
Functional Performance	• High demand for recreation programming • Heavily used	• Valued by community • High functional performance of asset		
Life Cycle / Financial	• Project significantly supported by lower OC's & revenue opportunities • Reduces environmental footprint (zero emission)	• Project moderately impacts financial/ lifecycle cost • Lowers emissions	• Project impact on lifecycle cost and/or revenue is minimal • Little to no environmental change	

Social Sustainability	• Project driven by wilderness protection • Emissions eliminated or significantly reduced	• Some wilderness protected • Some reductions in GHG	• No new protection of wilderness • No or low reduction in GHG	
Environmental Sustainability	• Project largely drive to provide opportunity for social interaction, especially for marginalized communities	• Project slightly driven by social sustainability, therefore moderately improved, especially for marginalized communities	• Project not driven by social sustainability but slightly improved	
Service Reliability	• Greatly improves reliability/condition	• Improves reliability	• Minor improvement to asset remaining life	

Halifax Public Libraries

Criteria	Sub-Criteria		Weight
Accessibility: Open hours, available programs and space, IT access and performance. Barrier-free access.			**30%**
	Community Access to Service	*20%*	
	Barrier Free	*10%*	
Functional Performance: Suitable layout, good experience for library visitors, ability to keep libraries open as physical condition is suitable for public use.			**25%**
	Layout / Experience	*5%*	
	Ability to Stay Open	*10%*	
	Condition	*10%*	
Sustainability: Environmental sustainability - reduction in carbon footprint and/or energy usage. Presence of green features. Social sustainability – Program delivery, literacy, support for newcomers and vulnerable adults, non-profits, public health, and IT access.			**25%**
	Environmental	*5%*	
	Social	*20%*	
Compliance/Service Reliability: Locations are in compliance with building code (fire alarms, hazardous materials, structurally sound) and are safe for librsary visitors.			**20%**
	Compliance – Building Code	*20%*	

Scoring

3	2	1	0
High Impact	**Medium Impact**	**Low Impact**	**No Impact**

Integrated Mobility

Criteria	Sub-Criteria		Weight
Accessibility			**20%**
	Scale of Impact	*20%*	
Functional Performance			**20%**
	Customer Experience	*20%*	
	Condition Assessment	*0%*	
Sustainability			**40%**
	Life Cycle Cost	*20%*	
	GHG Reduction	*20%*	
Compliance/Service Reliability			**20%**
	Integration	*20%*	

Scoring

Criteria	3-High Impact	2-Med. Impact	1-Low Impact	0-No Impact
Scale of Impact	• Arterial • Population affected > 30% • Addresses mobility issue (shorten pedestrian distance, AT, tactile strips)	• Collector • Population affected: 1-30% • Small impact on minority users	• Local • Population affected < 1%	• No one impacted if project is not done
Customer Experience	• Strongly enhance user experience (e.g. large improvement in condition) • Service delivery will fail • Service not performing: failed or below target	• Failure is imminent	• Failure is not considered imminent	• Asset is performing as expected
Life Cycle Cost	• Large reduction in life cycle cost or • right intervention, right time, right place	• Medium reduction in life cycle cost • Sub-optimal intervention	• Small reduction in life cycle cost • Sub-optimal intervention • Reactive	• No reduction in life cycle cost
GHG Reduction	• Significant reduction of GHG • Large fleet conversion to reduce GHG • GHG emissions reduction is main driver of project	• Medium reduction in GHG • Large reduction in vehicle idling or delay	• Minimal reduction in GHG • Slight reduction in vehicle delay/idling • Recycled material	• Increase in GHG or status quo
Integration	• Highly integrated • Multiple partners • Benefits to multiple service areas • Multiple funding partners	• 2-3 partners or 1 funding partner	• Limited benefit – 1 stakeholder • Multiple assets in corridor • No funding partner	• Internal project • 1 asset

ICT

Criteria	Sub-Criteria		Weight
Functional Performance			**35%**
	Technical Impacts	*35%*	
Compliance/Service Reliability			**35%**
	Timeline Impacts	*15%*	
	Business Impacts	*20%*	
ICT Specific			**30%**
	Existing Solution Contract	*20%*	
	Project Impacts	*10%*	

Scoring

Technical Impacts – 35%

Current Solution Stability		**20%**	**Downstream**		**25%**
Fails Rarely	2	0.4	0	0	0.0
Fails Occasionally	7	1.4	1	3	0.8
Fails Frequently	10	2.0	2-4	8	2.0
N/A	0	0.0	5+	10	2.5
Upstream		**5%**	**Technical Rework**		**50%**
0	0	0.0	No Rework	2	1.0
1	3	0.2	Minimal Rework	4	2.0
2-4	8	0.4	Moderate Rework	7	3.5
5+	10	0.5	Significant Rework	10	5.0

Timeline Impacts – 15%

Policy or Timeline Constraints		15%
Legislative or Critical Date Constraint	10	10.0
Council or AG	5	5.0
Some Timeline Considerations	6	6.0
Significant Date Constraint	8	8.0
N/A	0	0.0

Business Impacts – 20%

Business Benefits		70%	Project Duration (Years)		30%
Minimal Performance Improvements	3	2.1	0-1	2	0.6
Moderate Performance Improvements	6	4.2	1-2	4	1.2
Significant Performance Improvements	10	7.0	2-3	8	2.4
No Performance Improvements	0	0.0	3+	10	3.0

Existing Solution Contract – 20%

Existing Contract Expiry (yrs.)		60%	Current Solution Type		40%
Expired	10	6.0	Custom	10	4.0
< 1 year	8	4.8	Internally Hosted COTS	8	3.2
< 1 year with renewal option	7	4.2	Externally Hosted/Managed	6	2.4
1 – 2 years	6	3.6	SaaS	7	2.8
3 – 5 years	3	1.8	Manual	4	1.6
5 – 7 years	2	1.2	N/A	0	0.0
7 – 10 years	1	0.6			
N/A	0	0.0			

Project Impacts – 10%

Phases		20%	Resourcing		30%
Yes	5	1.0	In-flight	10	3.0
No	10	2.0	Planned	2	0.6
Contract (New Solution)		**45%**	Skill Constraints	6	1.8
No	0	0.0	TBD	0	0.0
Strategic Inter-Agency Partner Solution	1	0.5	**Contract (Services)**		**5%**
RFP Evaluated	3	1.4	Yes	10	0.5
In Negotiation	5	2.3	No	0	0.0
Signed Contract	8	3.6	N/A	0	0.0
Signed Contract – In Deliver	10	4.5			

Master Enterprise Risk Register Mar 1st 2021 v4
Statement Summary

ATTACHMENT B

Enterprise Risks

Risk No.	Enterprise Risk Name	Enterprise Risk Statement	Greatest Risk Impact Category	Assigned Priority Outcome Area	Net Like-lihood	Net Impact
ER01	Mandate and Expectations	The risk that Halifax is unable to define expectations, mandate, and scope of issues resulting in poor decisions and sub-optimal resource allocation.	Reputation	Responsible Administration	2	3
ER02	Commuter Mobility Choices	The risk that commuters do not choose transportation options that minimize the use of single occupant vehicles resulting in an escalation in traffic congestion, demand for road network expansion, and increased carbon emissions.	Service Delivery / Infrastructure	Integrated Mobility	3	2
ER03	Pedestrian Safety	The risk that pedestrians and motorists do not change their behaviours resulting in vehicle-pedestrian collisions continuing to occur at unacceptable rates.	Health and Safety	Integrated Mobility	4	4
ER04	ABCs - Service Delivery Accountability	The risk that HRM does not implement proper controls over the agencies, boards, and commissions to which it has delegated service delivery responsibilities resulting in exposure financially, politically, and potentially legally for deficiencies in service. (applicable to Recreation, Storm Water, Environment, etc.)	Reputation	Responsible Administration	3	3
ER05	Strategic Alignment	The risk that HRM's political and administrative structure is not strategically aligned and lacks horizontal connection needed to integrate efforts resulting in the failure to deliver on corporate initiatives and meet strategic outcomes.	Reputation	Responsible Administration	2	3
ER06	Responsive Regulatory and Service Culture	The risk that HRM's regulatory environment and service delivery is not responsive to needs and expectations of the business community and regulatory measures are not aligned with public policy outcomes resulting in reduced ability to attract new and retain businesses in Halifax, failure to implement public policy effectively and maximise innovation service solutions, and increased service delivery costs for HRM without measureable results.	Reputation	Prosperous Economy	2	3
ER07	Supply of Lands for Service Growth	The risk that there will not be sufficient land in the right locations to support HRM's continued growth resulting in failed community service expectations	Service Delivery / Infrastructure	Prosperous Economy	3	3
ER08	Lack of Integrated Long-Term Planning	The risk that HRM's strategic plans and financial forecasts are not focused on long-term objectives and outcomes resulting in plans that are based on short-term considerations and reactive decisions, causing increased pressures on the tax system, competing priorities, the misallocation of resources, and unsustainable service delivery	Financial (loss or gain)	Responsible Administration	3	4
ER09	Ability to Deliver - Talent	The risk that HRM does not have effective staffing (people, skills, cost) due to ineffective or inadequate talent management and workforce planning resulting in substandard service delivery and higher cost for services delivered.	Service Delivery / Infrastructure	Our People	3	3

Enterprise Risks

Risk No.	Enterprise Risk Name	Enterprise Risk Statement	Greatest Risk Impact Category	Assigned Priority Outcome Area	Net Like-lihood	Net Impact
ER10	Severe weather Impacts	The risk that HRM does not pro-actively manage severe weather impacts related to climate change resulting in economic impacts, increased service delivery costs, inability to provide services, and diminished public safety in our communities.	Climate Change Hazards*	Environment	3	4
ER11	Labour-force Demographic Challenge	The risk that our economy does not have a readily available, appropriately skilled labour supply due to an aging population and marginal increases in Halifax's labour force that results in loss of economic opportunities for the municipality.	Financial (loss or gain)	Prosperous Economy	3	3
ER12	Cyber Security	The risk that HRM's cyber security framework is not sufficient for the purpose of maintaining the confidentiality, integrity, and availability of information, applications and networks resulting in exposure reputationally, financially, politically, and potentially legally for deficiencies in service and/or breach of privacy across all services.	Reputation	Service Excellence	4	4
ER13	HRM Facility / Infrastructure Condition	The risk that HRM's facilities and infrastructure, including technology infrastructure, do not receive sufficient funding for repair or replacement to maintain them in useable condition resulting in deterioration, decommissioning, or other safety risks rendering them unuseable and thus impacting the municipality's ability to deliver service or potentially cause public harm.	Service Delivery / Infrastructure	Responsible Administration	3	4
ER14	Meeting NS Accessibility Act Requirements	The risk that increased requirements to meet the updated NS Accessibility Act requirements will not be achievable due to lack of resources (funding and people) and potential scope of changes required, resulting in failure to meet legislated requirements and service expectations for our communities	Service Delivery / Infrastructure	Communities	4	3
ER15	Reduced Volunteerism	The risk that HRM is not able to attract sufficient volunteers to support service delivery, events, boards and commissions due to lack of people, interest or desire , resulting in the inability to meet service standards or service obligations and increased cost resulting from having to employ resources to undertake work on a temporary of permanent basis.	Service Delivery / Infrastructure	Service Excellence	4	4
ER16	Insufficient resourcing / insufficient commitment to ICT foundational systems	The risk that the implementation of new ICT foundational systems are ineffective, due to the capacity and capabilities of HRM to manage and successfully implement them, and integrate behaviours to leverage these new technologies resulting in ineffective and inefficient service delivery and financial benefits not being realized.	Financial (loss or gain)	Service Excellence	4	4
ER17	Commercial Assessment	The risk that revenues from commercial assessment will decline due to economic pressure or that, even in a time of favourable economic conditions and demand for services, commercial assessment will remain subdued, resulting in difficulty in establishing the commercial tax rate, hence placing pressure on the operating budget including residential tax rates.	Financial (loss or gain)	Prosperous Economy	4	4

Master Enterprise Risk Register Mar 1st 2021 v4
Statement Summary

Enterprise Risks						
Risk No.	**Enterprise Risk Name**	**Enterprise Risk Statement**	**Greatest Risk Impact Category**	**Assigned Priority Outcome Area**	**Net Like-lihood**	**Net Impact**
ER18	Diverse and Inclusive Environment	The risk that HRM does not have the capacity to respond effectively to increasing needs from HRM's diverse communities and workforce (e.g. inclusion) resulting in decreased engagement, high turnover/loss of diverse candidates, ineffective/inefficient service delivery, as well as significant reputation harm.	Reputation	Our People	3	3
ER19	Environmental Stewardship	The risk that HRM does not sufficiently mitigate against environmental impacts related to the way we deliver our services and establish polices due to a lack of adaptive practice, financial resources and community acceptance resulting in increased environmental degradation	Environmental	Environment	3	4
ER20	Emergency Management	The risk that the municipality is not sufficiently prepared to deal with emergencies due to insufficient resources to effectively develop emergency plans and implement community preparedness education and programs, resulting in the inability to deliver services, harm to residents, and loss of revenues and assets.	Health and Safety	Communities	2	4
ER21	Lack of Affordable Housing	The risk the municipality does not have adequate affordable housing stock, thereby exacerbating the economic insecurity of low-income individuals and families, and hampering Halifax's ability to attract and retain the workers needed to grow the economy.	Health and Safety	Prosperous Economy	3	4
ER22	Economic Recovery	The risk that HRM does not have an adequate economic recovery response to mitigate revenue losses due to the COVID-19 Pandemic, resulting in revenues shortfalls and liquidity issues, the inability to deliver its services to current standards and/or fully deliver on Regional Council's Strategic Mandate and Capital Program. This represents a serious financial issue as well as a risk to service delivery.	Financial (loss or gain)	Prosperous Economy	4	4