Corporate Project Management Framework

FRAMEWORK

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This framework provides the basic requirements for how all City projects and contractual arrangements for project work identified and delivered by City staff, or on behalf of the City (including consultants, contractors and subcontractors) will be managed. It provides a consistent approach to establishing, managing and delivering projects across the organization. While departmental templates may differ, the mandatory elements remain the same.

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1. BACKGROUND & PURPOSE

The City is committed to the successful completion of projects and related contractual arrangements for all project work identified and delivered by City staff or by contractors on behalf of the City. The project management framework works with the [Business Case and Project Management Policy](#) (the Policy) to ensure that the appropriate systems, processes and controls for managing projects are in place to support the successful achievement of project and program outcomes, while limiting any potential project risks to stakeholders and the public.

The Policy applies to all City projects and contractual arrangements for project work and ensures that common project management principles and practices are applied consistently. Its principles are meant to be applied, as appropriate, according to project size, level of complexity, and associated risk. Staff or managers that have delegated authority can make decisions and/or approvals regarding the project.

The international project management standard recognized by many organizations is the Project Management Institute's Project Management Body of Knowledge (PMBOK®). The PMBOK Guide provides terminology, concepts, processes, skills, tools and techniques that are recognized as good project management practice, meaning that the application of methodologies based on these guidelines increases the likelihood of a project's success.

Essential elements of project management, as outlined in the Policy include:

a) A clear, approved and documented justification for the need (business case), and confirmation of funding
b) The establishment of appropriate governance and controls at the project outset
c) Identification of key deliverables with expected timeframes for completion (project charter)
d) Appropriate authorization and acceptance at specified milestones or gates prior to progressing to the next step or phase of the project
e) Assurance that projects are effectively resourced and managed within the limitations of scope, cost, time and quality
f) Changes to the project or its outcomes are identified, documented and approved prior to implementation
g) The content and level of detail provided in mandatory documents (i.e. business case, project charter, project management plan, project status reports, tracking of change requests, lessons learned and project close-out report) is appropriate to the size, complexity and profile of the project
h) Accessible and inclusive stakeholder engagement and communication

The practice of Project Management is constantly evolving and the PMBOK Guide along with it. The Policy and Framework will be updated every 4 years to consider changes, such as new agile methodologies, within the world of project management.

2. INTRODUCTION

A robust project management framework encompasses all aspects of the management of a project through its lifecycle in that it:

a) Establishes expectations regarding the application of the methodology and supporting tools

b) Utilizes established practices based on recognized industry standards from the Project Management Institute (PMI)

c) Ensures the project is properly documented from initial justification (business case/project charter) through to completion (final reports, client acceptance, and turnover to operations), as Official Business Records.

d) Requires that lessons be learned from other projects and applied

e) Manages and monitors the project scope, schedule, and budget, including the documentation and approval of changes

f) Provides oversight of decision making via structured and informed means, including escalation when oversight at the current level is not appropriate

g) Integrates with the existing Corporate Planning Framework and Enterprise Risk Management Framework, to ensure alignment with key strategic initiatives and promotes risk-based decision making

3. OBJECTIVES

The objectives of the Project Management (PM) Framework are to:

- Embed sound project management principles and practices into the culture of the organization
- Increase awareness surrounding good project management practices
- Establish a common language and methodology that is clear and well-defined
- Clarify roles and responsibilities
- Encourage open and honest communication throughout the project's life cycle so issues are raised early and corrective action can be taken as quickly as possible

4. DUTY OF A PROJECT MANAGER

Staff who manage projects are expected to follow the City's Employee Code of Conduct along with the Business Case and Project Management Policy and the Corporate Project Management Framework when managing their projects. The Policy and Framework set standards for project management here at the City, and they set expectations of the staff who practice project management, regardless of the frequency they manage projects or the field they work in.

Duty of a Project Manager:
1. Accountable for, and take ownership of, the decisions and actions you make or fail to make and the consequences that result.
2. Make decisions and take actions based on the best interests of the organization, Council decisions and priorities, residents, public safety, and the environment.

3. Make sure the project's goals and priorities are always top of mind for yourself and your team members through all stages of the project and that the evaluation criteria used to assess the project accurately reflects all the priorities set for the project.
4. Review and apply Lessons Learned from previous projects you have completed, as well as others. Even if the current project is not the exact same, similar projects, or similar parts of projects, can contain ideas and activities that went well, as well as those that didn't go so well.
5. Be aware of cognitive biases, such as optimism and uniqueness, when building a business case, and during planning and executing your projects. These biases can impair the project manager's ability to identify risks for the project:
   - Optimism Bias is a result of the project managers' tendency to be too optimistic when calculating the benefits of projects and downplaying the costs. To help identify any optimism biases, it is recommended that lessons learned of similar projects be reviewed or by using established approaches (such as reference class forecasting).
   - Uniqueness Bias is the tendency to see one's project as more singular than it actually is. To help identify uniqueness bias, it is recommended that similarities to established projects be identified and learn from the outcomes of those projects.
6. Ensure that any expertise that will be required throughout the life project has been clearly identified and will be available for the duration of the project.
7. Avoid introducing unnecessary complexity into your projects – look to standardize plans and designs where feasible.
8. When discussing the budget of the project, avoid setting the budget too early and if it must be communicated, (to any stakeholders as appropriate) clearly indicate any restrictions, caveats, or limitations applicable to cost estimates developed during the planning of the projects. Clearly communicate that such estimates are subject to change as the project planning progresses.
9. Demonstrate transparency in your decision-making process and constantly reexamine your impartiality and objectivity, taking corrective action as appropriate.
10. When planning a project, always consider the outcomes of the project and what it means for the operations on a go-forward basis. Where applicable, consider the Concept of Operations during the planning process.
11. Ensure recordkeeping is done, documenting the work, decisions, approvals, and reporting. Keep in mind that routine and active disclosure is possible at any point in the project's lifecycle.

5. PROJECT GOVERNANCE
Practicing good project management is a shared responsibility at all City levels and especially when it comes to project decisions and approvals. Governance ensures that project team members have specific roles and responsibilities for the delivery of project tasks, which are detailed in a Project Charter, or subsequent Project Management Plans. Not all of these levels are required for every project – it is up to the project manager to determine which ones should be included in their project.

5.1. Executive Sponsor

This could be a Department Head, Director or Service Area Leader. Use of an executive sponsor is dependent on the size (cost), scope (complexity), schedule, level of risk, stakeholder impact, etc.

- Ensures compliance with the Policy and the overall project management framework
- Monitors the performance of the project(s)
- Reviews, approves or rejects requests for deliverables and project changes (including budget) if escalated from the Project Sponsor
- Approves the use of an external advisor or reviewer on a project

5.2. Steering Committee

Depending on the type of project and/or if multiple departments are involved, a Steering Committee might be setup to oversee the project, generally made up of more than one project sponsor from the areas impacted by the outcomes of the project. This group:

- Approves the business requirements
- Monitors the performance of the project(s)
- Accepts the final project result/solution
- Recommends the use of an external advisor or reviewer on a project
- May review and approve or reject requests for deliverables and project changes

5.3. Project Sponsor

This could be a Service Area Director or Manager:

- Owns and accountable for the effective management of projects within their area of authority
- Responsible for the application of approved methodologies and relevant tools during the implementation of all project-related activities
- Establishes mandatory requirements for projects
- Monitors the performance of the project(s)
- Approves the business requirements
- Reviews and approves all project deliverables and project documentation
- Reviews, approves or rejects requests for deliverables and project changes
- Recommends if an independent advisor or reviewer should be used on a project
- May escalate project decisions to the Executive Sponsor (or Steering Committee)
- Accepts the final project result/solution
- Responsible for accepting the project deliverables/outcomes

5.4. Business Lead

This could be a Manager or Supervisor:
- Looks after the business side of the project (defining objectives, etc.)
- Be aware of cognitive biases, such as optimism and uniqueness, when planning and executing your projects.
- Documents the appropriate purpose and justification for the project (such as a Business Case)
- Establishes clear expectations and provides direction to the Project Manager
- Reviews and/or approves project documents
- Monitors the performance of the project(s)
- Accepts all project documentation (throughout the project and upon closing of the project) and ensures that record management principles are followed
- Reviews, approves or rejects requests for deliverables and project changes as per the governance structure and escalation requirements
- Responsible for the ongoing operation of the project outcomes
- If part of the project, will support independent review by providing requested information and answering questions

5.5. Project Manager

The Project Manager (or Lead, or Project/Team Leader, etc.) regardless of the title, supports and promotes compliance with the City's Business Case and Project Management Policy, this Framework and the project management methodology and manages projects within their spheres of responsibility, consistent with the City's approved approach. A Project Manager:
- Reviews lessons learned from previous projects or similar projects for insight and guidance
- Ensures a proper change control process is established and adhered to, including escalation requirements
- Strives to meet established project objectives, including successful completion of the project within the approved time frames and budget requirements
- Ensure contractual change orders are completed in writing and signed by both the project manager, or designated approval authority, and the contractor
- Recommends if an independent advisor or reviewer should be used on a project
- Ensures the project is properly documented and that record management principles are followed, for example, by establishing a records management plan and ensuring that it is adhered to
- Provides leadership, guidance, control and mentoring to the project team charged with all aspects of project delivery
- If part of the project, will support independent review by providing requested information and answering questions

5.6. Project Team Members

- Ensure policy, procedures and frameworks are adhered to
- Understand the objectives of the project and expectations of the Project Manager, and seeks clarification as needed
- Ensure the project is properly documented and that record management principles are followed
- Raise issues or concerns to the Project Manager for consideration and decision where appropriate
- If part of the project, will support independent review by providing requested information and answering questions

5.7. Consultants/Contractors

- Provide acceptable documented evidence that their company's project management framework is similar to the City's and how they will address any gaps between their approach and the City's requirements; OR
- Follow the City's framework, including the use of required tools and templates, specifically as it relates to the change management process
- Ensure the project is properly documented and provides the City with those documents upon request (and upon closing of the project) and is made aware that the documents could be subject to the Routine Disclosure and Active Dissemination Policy.
- Ensure all changes that impact the agreed to scope (including cost, schedule, quality) are identified, documented and approved prior to commencing with the change

5.8 Independent Reviewer

- A third-party who has no stake in the ongoing project and cannot be influenced by the parties involved in delivering the project
- Remains unbiased and objective
- Participates in project activities including presentations and demonstrations that may facilitate the review process
- Reviews project documentation, conducts interviews/workshops, assesses and validates findings
- Analyzes, develops, and integrates conclusions and recommendations
- Performs quality assurance of review deliverables

- Provides the review sponsor with status updates, and resolving any review issues with the review sponsor
- Develops a comprehensive report of review findings and recommendations

6. TWELVE FUNDAMENTAL ELEMENTS OF PROJECT MANAGEMENT

The specific processes applied during each of these groups of activities may differ slightly based on the nature of the business, but the fundamental elements are consistent and must be considered and addressed as appropriate, even if a determination is made that it is not required on a specific project.

Integration Management: The project manager's role is to incorporate and balance all of the pieces (knowledge areas) of the project into a cohesive whole. This process involves the development of the Project Charter and project management plan, directing and managing project work, monitoring and controlling project work, performing integrated change control and closing the project or phase.

Scope Management: processes necessary to identify and manage the work required to successfully complete the project. This includes establishing clear expectations of what is in scope vs. what is out of scope through the development of a Project Charter, and then controlling the work within those boundaries to ensure changes are minimized, utilizing a formal change management process.

Cost Management: process of estimating, budgeting, and controlling costs so that the project can be completed within the approved budget parameters. This is managed through the development and maintenance of project budgets, forecasts, and monitoring of actual costs.

Time (Schedule) Management: process of developing a timeline for a project. Entails defining activities, applying duration, resources, sequencing, requirements, and optimizing the logic to obtain a realistic and achievable schedule. This is generally accomplished using project schedules, or Gantt charts.

Quality Management: processes and activities required to ensure quality related policies, procedures, objectives and responsibilities are adhered to in order to ensure the project satisfies the needs of both the client and the organization. As required, the process, equipment and/or product is assessed against defined criteria to measure compliance and achievement of expectations.

Risk Management: processes for conducting risk management planning, identification, analysis, response planning and risk monitoring on a project. Project risk registers, and mitigation plans where necessary will be developed and maintained. More information on how to identify and rank the severity of risks can be found on the City's Enterprise Risk Management SharePoint site.

Procurement Management: processes required to purchase goods or services needed to successfully complete the project. This also includes contract management and administration as well as change control for purchase orders

and contracts.

Communications Management: processes required to ensure how and when appropriate project information is generated, collected, distributed, stored, retrieved, and disposed of during the life of the project. From capturing minutes of meetings to communicating with stakeholders, how information is created, identified and transmitted is critical to any project, providing an effective means for decision making and auditing..

Resource Management: processes that organize, manage and lead the project team and other resources supporting the project. How team members are selected, onboarded, trained (if necessary) and interact with others will determine how successful the project will be in achieving its goals. Also includes offboarding of resources at the end of the project.

Stakeholder Management: identification of the people, groups or organizations that may impact or be impacted by the project. This should be completed as early as possible in the initiation process. Once a list of stakeholders is established a determination can be made on how best to engage them, for what purpose and when, how and what to communicate to them. A clear understanding of stakeholder expectations and objectives is critical to the success of the project.

Records Management: processes that identify and facilitate the capture and retention of Official Business Records. Managing information produced during the project is critical. Please see section 8.5 Recordkeeping below for more information.

Change/Outcome Management: Projects may contain an aspect of changing systems, behaviours, activities and tasks as part of their execution. Project managers need to think about what the project is changing, how it will impact stakeholders, (both internal and external), and what the outcomes could be (both positive and negative). How stakeholders cope with change, and how you can get buy-in for the change is critical for the project to achieve the desired outcomes. Project managers can review the information on the [Change Management Centre of Excellence](#) to get assistance managing change.

Depending on the size of the project, each of these elements may warrant its very own plan to manage those processes. It is up to the project manager to determine which elements require their own management plans.

7. PROJECT MANAGEMENT LIFECYCLE

Projects, regardless of size and complexity, move through a typical lifecycle, or a series of phases, from starting the project, organizing and preparing to do work, carrying out the work, and then closing the project so it can be turned over for its intended use.
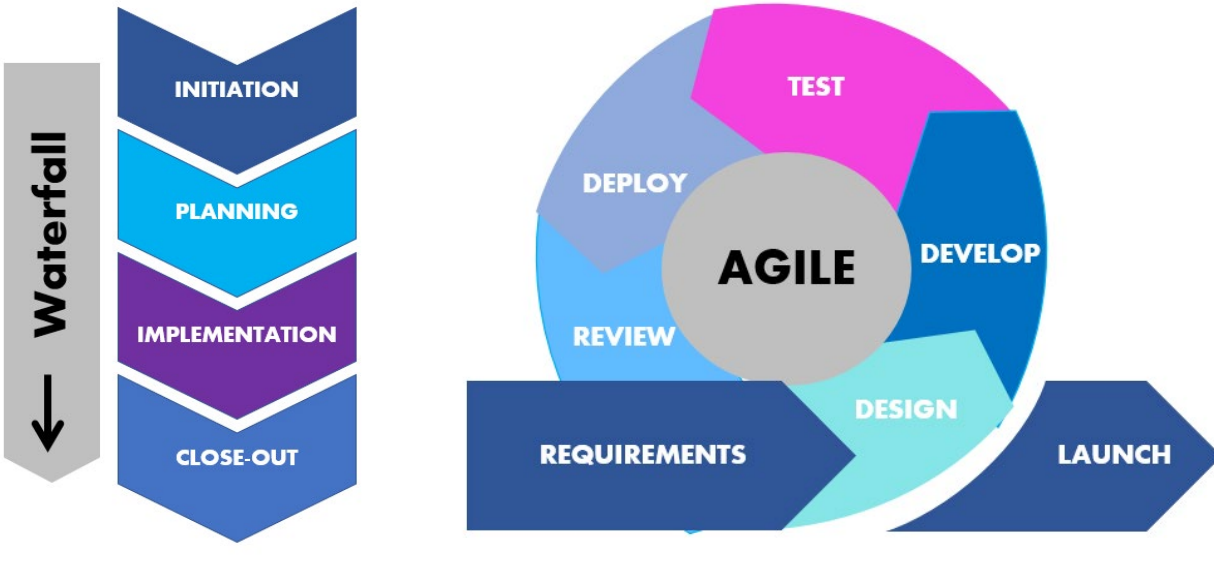
Project management is always evolving as the industry develops new and better ways of working. The lifecycle that has been around the longest, and is the standard for the City, is the Predictive lifecycle, or more commonly referred to as Waterfall. The

Waterfall lifecycle is a sequential process that requires that the bulk of the planning occurs upfront, with the project being executed in a single pass.

Early in the 21st century, a new type of lifecycle was developed, known as Adaptive, or more commonly referred to as Agile. The Agile lifecycle was designed based on the Agile Manifesto to be both iterative and incremental to refine work items and deliver frequently.

Figure 1: Comparing project lifecycles

Predictive (Waterfall) vs Adaptive (Agile)

The two lifecycles in Figure 1 have very different shapes. Managing a project using the Waterfall or Agile lifecycles largely depends on the type of project you are managing. Each has pros and cons, and each has project types that they are best suited for. Both strive to reduce risk and costly re-work. Both lifecycles contain the same 12 fundamental elements and allow for the development of the same project documents the City requires.

Projects managed using Waterfall are typically linear, sequential, and structured. Project teams move through the five project management processes in order – Initiating, Planning, Executing, and Closing while Monitoring and Controlling the entire time. This means the project delivers it's outcome once, at the end of the project. Construction projects typically use the Waterfall approach, as building a road or structure requires significant planning and looks to avoid risk as the cost of re-work would be very high.

Projects managed using Agile are typically incremental, iterative, and flexible.

Project teams work in iterations of planning through to executing until they reach their objectives. This means that each iteration delivers part of the outcome and allows for customer feedback and implementation of that feedback during the next iteration. Software development typically uses the Agile approach, as waiting until the end to demonstrate your software to the client could result in costly re-work if it doesn't perform as the client expects.

There is also a Hybrid lifecycle that combines aspects of both Waterfall and Agile. Practitioners can adopt a Hybrid lifecycle, so long as it meets the requirements of the project and the requirements of the Policy. However, hybrid lifecycles will not be described in depth in the Policy or Framework at this time.

It is important for the project manager to determine which lifecycle they will use at the beginning of the project, as it will guide the planning and execution of the project.

8. PROJECT MANAGEMENT PROCESSES

The project methodology is managed by executing a series of five project management processes. Each process is a logical grouping of project management activities undertaken to achieve specific project objectives. These processes can also be called project phases, however with the growth of Agile and Hybrid methodologies, the term "phase" has come to mean something more related to the industry the project is working in, rather than the order that all activities must be done in.

Initiating Process: Establish the overall objective and the primary stakeholders, identifying the broad guiding parameters to reach the expected outcome and authorizing the project or phase to begin.

Planning Process: Develop a comprehensive plan for the project with defined sub-objectives, detailed work activities, estimated task durations, sequences and costs, identified resources, applicable practices, methods, standards and technologies.

Executing/Implementing Process: Coordinate resources, perform work activities and manage the outputs in accordance with the scope, schedule, budget, and quality specifications.

Monitor and Controlling Process: Monitor and measure the results of execution for alignment with the plan, investigating variances, gathering feedback, improving processes, and applying corrective action and lessons learned.

Closing Process: Formally secure acceptance for the project outcome with Clients and Stakeholders and wind down the project or phase infrastructure and team.

These processes may be carried out through each portion of the project's lifecycle. Projects may be divided up into phases that mirror the project management processes - but they don't have to be. Phases are unique to the type of project, but their high-level nature makes them an element of the project life cycle.

8.1. Gating

Regardless of the lifecycle used, the project manager must consider where they put mandatory stops, or gates, during the life of their project. Gates allow for the project team to stop and assess progress against the plan with the sponsor or governing authority in order to determine if the project should proceed to the next phase.

Different types of projects will have different gates and utilize gates at different times. Departments are able to set their own standard gates for their projects, however if they have not, it is up to the project manager to determine during the development of the workplan where the gates will be, who is to be informed (i.e., sponsor(s), clients, stakeholders, Council), who is authorized to approve the required decision, and what will be their responsibilities.

Some examples of outcomes of the gates include but are not limited to:
- Continue to the next phase (a "go" decision)
- Continue to the next phase with modifications
- End the project (a "no-go" decision)
- Remain in the same phase, or
- Repeat the phase or parts of it.

8.2. Process Activities, Tools and Deliverables

Within each project management process are a series of basic activities, tools and deliverables that are expected from every project. The generic tools and templates relevant to each phase of a typical life cycle are provided in the following sections. **Mandatory documents are noted with an asterisk**. Where different departmental templates have been approved, they may be used.

8.2.1. Initiating a Project or Phase of a Project

Primary Objective: Create a Business Case to outline an issue or opportunity to be addressed. If proceeding with a project, establish the overall objective and the primary stakeholders to:

- Confirm project scope
- Identify broad guiding parameters required to reach the expected outcome
- Provide authorization for the project, or phase to begin

Create a Business Case (if applicable)	Initiate the Project
Activities & Supporting Tools*	
a) Define the need - Needs assessment - Corporate standard intake tools - Department-specific intake forms b) Analyze options - Corporate standard analysis tools c) Complete financial analysis - Corporate financial analysis tools d) Assess the risks - Risk heat map - Risk probability and likelihood chart - Risk register **e) Document the justification*** - Complete corporate standard or department specific business case templates **f) Obtain approval*** - Delegation of authority / approval criteria	a) Develop Project Overview - Background and Description - Develop scope - Define scope - Identify key success measures b) Identify Deliverables - Key milestones & deliverables chart - Milestones and Gates - Project schedule c) Identify Risks, Assumptions and Constraints - Risk register - Assumptions - Constraints - Change/Outcome Management - Identify stakeholders - Stakeholder matrix d) Project Organization - Determine project governance - Responsibility matrix - Facilities and resources - Escalation & reporting chart e) Determine Project Costs estimates and funding sources - Project Budget - Operational Budget f) Records Management **g) Document the project scope agreement*** - Complete corporate standard or department specific project charter templates **h) Obtain approval*** - Delegation of Authority / Approval Criteria

DELIVERABLES	
Business Case Approved*	**Project Charter Approved***
	Product Backlog (Agile)
GATE	

* Indicates a mandatory requirement
** Supporting tools are provided as examples.

8.2.2. Planning a Project or Phase of a Project

Primary Objective: Determine the best course of action required to successfully achieve the project's scope. Obtain the necessary resources and develop a comprehensive plan for implementing the project.

Before beginning a project, it is necessary to review any applicable lessons learned from previous projects.

Assemble Project Resources	**Develop Detailed Scope**	**Plan Project Implementation**
Activities & Supporting Tools**		
a) Conduct Project Start-Up Activities b) Review Lessons Learned from previous projects c) Confirm requirements in Project Charter/Business Plan • Corporate standard project charter template • Department-specific project charter templates d) Assemble Project Team • Responsibility matrix • Stakeholder matrix e) Create Budget Plan • Sample spending plan	a) Create Work Breakdown Structure b) Create Project workplan c) Standard work plan template d) Identify Deliverables e) Communicate Roles & Responsibilities f) Conduct Detailed Issues and Risk Analysis • Risk Register g) Create Detailed Design Documents h) Determine if a Concept of Operations is required	a) Craft Communications Plan b) Determine Reporting Requirements c) Complete Project Management Plan* d) Create Risk Mitigation Plan e) Create Records Management Plan f) Create Procurement Plan g) Create Change/Outcome Management Plan h) Create Change Management Plan i) Document Project Plan j) Create Test Plans k) Create Construction Plans

DELIVERABLES		
Project Kick-Off Meeting	**Detailed Project Schedule* and/or Work Plan*** Sprint Backlog (Agile)	**Project Management Plan***
GATE(s)***		
* Indicates a mandatory requirement ** Supporting tools are provided as examples *** There is the potential for more than one gate in this process		
Monitoring and Control Activities: During this process the various tools required to document, manage and monitor the project will be confirmed or established and the baseline work plan will be created. The approach for managing change will be determined, including governance and escalation requirements. Project update meetings will begin, and project status will be reported.		

8.2.3. Executing a Project or Phase of a Project

Primary Objective: Physically complete the activities required to satisfy the scope of the project. This includes all procurement, construction, administrative, development, testing etc. tasks. May also include training. All work within the boundaries of the approved scoping, taking into consideration any approved changes.

Perform the Project Tasks	**Monitor & Control Project Progress**	**Prepare for Turn-Over to Client**
Activities & Supporting Tools**		
Assign & perform the work • Project Meetings • Project Change Orders • Procurement Activities • Contract Management • Prepare Required Deliverables	Continual monitoring of scope, schedule, cost, performance, etc. • Site Inspections • Project Schedule Reviews • Review Costs • Change Order Log • Issues Log • Status Reports • Quality Assurance	Commissioning & confirmation need has been met before turn-over • Client Acceptance • Client Satisfaction • Substantial completion • Warranties

DELIVERABLES		
Milestone Deliverables Completed* Risks Mitigated	**Project Status Reports Completed*** **Change Orders Completed***	**Client Acceptance Received*** Feedback Loop (Agile)
GATE(s)***		
* Indicates a mandatory requirement ** Supporting tools are provided as examples *** There is the potential for more than one gate in this process		
Monitoring and Control Activities: During this process, through activities such as site inspections, regular project meetings and frequent communication, progress is assessed and compared to baseline (i.e. scope, cost, and schedule). Changes are documented, discussed, and approved. As appropriate, the baseline is adjusted. Project status is reported.		

8.2.4. Close-Out of a Project or Phase of a Project

Primary Objective: Ensure all activities have been completed as required, documented where necessary, and turned over to the client as appropriate. Administrative measures may be required to formally close the project or phase. Document and archive Lessons Learned.	
Deliverables Finalized	**Administrative Close-Out**
Activities & Supporting Tools**	
a) Wrap up outstanding deliverables b) Issue final deliverables • Project Close-Out Report • Project Variance Template • Client Acceptance Template	a) Project Close-out Activities • Close Purchase Orders • Final Invoicing to Contractors • Official Records Filed • Customer Satisfaction Surveys • Obtain as-builds • Team offboarding • Project evaluation • Hand-off to dept client, including end users training, resources plan, budget, implementation plan, etc.

DELIVERABLES	
Lessons Learned included in Close-Out Report* Feedback Loop (Agile) **Close-Out Report*** **Client Acceptance***	Purchase Orders Closed **Official Records Filed*** As-Builds Received Satisfaction Surveys Received
GATE*** (for a project with phases)	

* Indicates a mandatory requirement
** Supporting tools are provided as examples
*** Each phase of a project would have a gate

Monitoring and Control Activities: During this process, variance against baseline is assessed and documented in a final report, indicating achievement of scope, schedule, budget and performance metrics. Outstanding invoices are paid, and all monitoring tools are updated with final results. Lessons learned, both positive and negative, must be documented and archived for future reference by other projects. Where required, outstanding documentation is obtained as appropriate (i.e. as-builds, manufacturing or operating manuals, training manuals, etc.)

> **Project Complete or Phase Complete**

8.2.4.1 Lessons Learned (feedback loops)

The lessons learned (or feedback loops in Agile) during the execution of a project are an invaluable resource for both the project manager who executed the project, and for other project managers. But other project managers can only benefit from these lessons if they are documented and stored in a location that is accessible to them. The Framework recommends that departments build a Lessons Learned Repository (either individually or as a corporate-wide initiative) so that all project managers can benefit from the lessons learned from others.

8.2.5. Tailoring and Tiering Projects

The Business Case and Project Management Policy acknowledges that the City has over 100 lines of business, which means that projects will vary in size from very small and effecting a small number of staff, to extremely large and impacting the entire city. Because of this wide range of project sizes and the wide range of types of projects the City may undertake, it is important that the project manager is able to adjust their approach to the project because not every element and process requires extensive scrutiny on every project.

Tailoring is the deliberate adaptation of the project management lifecycle, governance, and processes to make them more suitable for the given environment and the work at hand. Tailoring allows the project manager to choose the appropriate project lifecycle, the detail to be covered in the 12 fundamental elements, the governance details, which documents (other than the minimum project deliverables) are required in each of the project management processes and where project gates are established.

Tiering is the development of specific levels, or tiers, that projects can be grouped into based on their attributes such as project type, size (cost), scope (complexity), schedule, level of risk, stakeholder impact, etc. Different tiers would have different requirements for the type of project documents developed (aside from the minimum project deliverables) and level of detail of those documents.

Departments are able to set their own standards for how projects can be tailored, and what tiers are created to help guide project managers. Any standards developed by departments must consider the various City policies and procedures in place (i.e. Records Management Policy) and must be documented, approved by the General Manager, and made available for all project managers in those departments to access. However, if departments have not set standards, project managers must determine the level of effort required to properly manage their projects, keeping in mind the fundamental elements, the lifecycles, the processes and the minimum project deliverables.

8.3. MONITORING AND CONTROL

Monitoring and control activities occur throughout the life of the project, during every stage, phase, or iteration. To ensure that a project's objectives, client's needs, and scope are being met, it is crucial to:

- Assess progress against the plan or baseline
- Compare actual to planned or budgeted costs
- Manage changes to project scope
- Confirm the integrity of data or that the product meets performance expectations.

It is important to distinguish the difference between percent of budget spent vs. percent of actual work completed. This ensures progress is being made as anticipated or, if not, that problems are identified early enough to address proactively rather than reactively.

The project manager is responsible for assessing the project's status of implementation and completion through regular meetings, check-ins, site inspections and the like. The project manager is required to establish evaluation criteria to ensure the project is meeting its objectives. The project manager also regularly reports back to the required stakeholders and provides the appropriate information to ensure they are informed and engaged.

It is important to note that much of the City's municipal operations are governed by the Delegation of Authority By-law. While Council has delegated project authority to staff, when it comes to projects that are considered high-profile or deal with sensitive matters (as defined by the City's [Delegation of Powers Policy](#)) there is an expectation of additional reporting to Council to meet accountability and transparency requirements. The project manager should determine whether or not their project falls into the criteria set out in the Delegation of Powers Policy and act accordingly.

8.3.1. Independent Review

Certain projects, like those that fall into the Escalation section of the Policy, may benefit from having an independent review conducted during the life of the project. An independent review can assess documents (designs, contracts, etc) to ensure that best practices are used, and that no scope gaps exist. An independent review can provide unbiased assessments of the projects progress in meeting its objectives at any point in the life of the project.

The project team (such as steering committee, sponsor, etc.) may consider having an independent review as a potential support to a project. Having an independent review would have to be planned and budgeted for in order to bring someone in from outside the organization. Criteria for determining when to bring in an independent reviewer can be found in the *Criteria for Independent Project Review.*

Departments are able to set their own standards for when they determine an independent review should be brought onto a project.   Any standards developed by departments must be documented, approved by the General Manager, and made available for all project managers in those departments to access. However, if departments have not set standards, project managers must determine if an independent review is warranted for their project.

8.3.2. Performance Management and Reporting

Performance management can take on multiple meanings. It can refer to the progress against strategic initiatives, or metrics contained in a balanced

scorecard. From a quality perspective it can refer to technical, functional or performance standards being tested and assessed. It can also refer to reporting on how the project is doing, for example, monthly project status reports.

Regardless of the reason, monitoring of performance and reporting determines how the project is performing against the original objectives, taking into consideration approved scope amendments.   Performance measurement keeps stakeholders engaged in the project and provides them with the information they require to make decisions.

How performance is measured should be outlined in the project plan, noting the:
- Mechanism(s)
- Expected frequency of reporting and to whom
- Who carries the responsibility for providing the updates

8.4. PROJECT CHANGE MANAGEMENT

Planned and unplanned events occur during the life of a project. Change to a project's scope, time, cost or quality is part of scope management. Where a change is required, documentation should show **why**. It should also show approval to proceed with the change prior to implementation, any cost implications and where any funds are coming from. As per the governance outlined in the Project Charter, changes must be tracked through change orders as identified in the Change Management plan to ensure proper decisions making based on known and detailed information.

8.5. RECORDKEEPING

All City staff have a duty to document the work that they do, in order to be transparent and accountable to Council and the public. Project managers should have a records management plan which answers the following questions: What records are being captured? Where are they being captured? Who is responsible for capturing the records? Records management needs to be considered at the start of, during, and at the close of projects.

Large projects, such as Stage 1 of the Ottawa Light Rail Transit (OLRT) or Lansdowne Park, can generate more than one million records. They are also more likely to result in access to information and privacy (ATIP) requests, audits, and litigation. Staff will be in a better position to respond to such events if they document the work, capturing the documentation as records, and have a well-ordered and planned recordkeeping system.

There are additional recordkeeping requirements for large-scale infrastructure projects. Large-scale infrastructure projects can generate hundreds of thousands of Official Business Records. In order to meet the information management challenges,

additional recordkeeping requirements are necessary and were identified in the Update on the Ottawa Light Rail Transit Public Inquiry and Recommended Next Steps, ACS2022-CMR-OCM-0001 Council report, dated November 9, 2022. Please consult this recordkeeping checklist for large-scale infrastructure projects. This checklist also supports other aspects of project management such as decision-making, business continuity, Duty to Document obligations, audit and litigation response, communication management and lessons learned. Users of this checklist should consult relevant policies and procedures, such as the Records Management Policy and Routine Disclosure and Active Dissemination (RD/AD) SharePoint page. The Information Management Branch will provide support and guidance for this work.

Further details on the records management obligations of all staff can be found in the Records Management Policy. Official Business Records generated as a result of the execution of this Policy must be declared as such in the appropriate SharePoint site, RMS (Records Management System) or approved business system.

9. CONTINUOUS IMPROVEMENT

On a regular basis, the Corporate Project Management framework will be reviewed to ensure its application is effective, identify opportunities for improvement and alignment to project management leading practices.

Training and communication will be required to close any knowledge gaps that exist.

A review can be done at any level and will confirm if:

a. Awareness of the business case and project management policy and corporate project management framework requirements and mandatory processes have been embedded into leading project management practices (such as existing methodologies or updates to the PMBOK © Guide)

b. Projects have been appropriately justified and documented (business case, project charter, project management plan, change orders, and the like)

c. Projects have been completed on time, on budget and within scope and achieved the desired outcomes.

d. Tools are readily available, being used and are being reviewed/improved for efficiency and effectiveness as required

e. Appropriate qualitative and quantitative metrics have been defined, measured, and reported to all key stakeholders for their decision-making action.

10. REFERENCES

The following sources of information and tools are available on SharePoint.

[Business Case and Project Management Policy](#)

[Employee Code of Conduct](#)

[Delegation of Power Policy](#)

[Corporate Business Case Development Guidelines](#)

[Enterprise Risk Management Framework](#)

[Records Management Policy](#)

[Routine Disclosure and Active Dissemination Policy](#)

[Corporate Planning](#)

Criteria for Independent Project Review