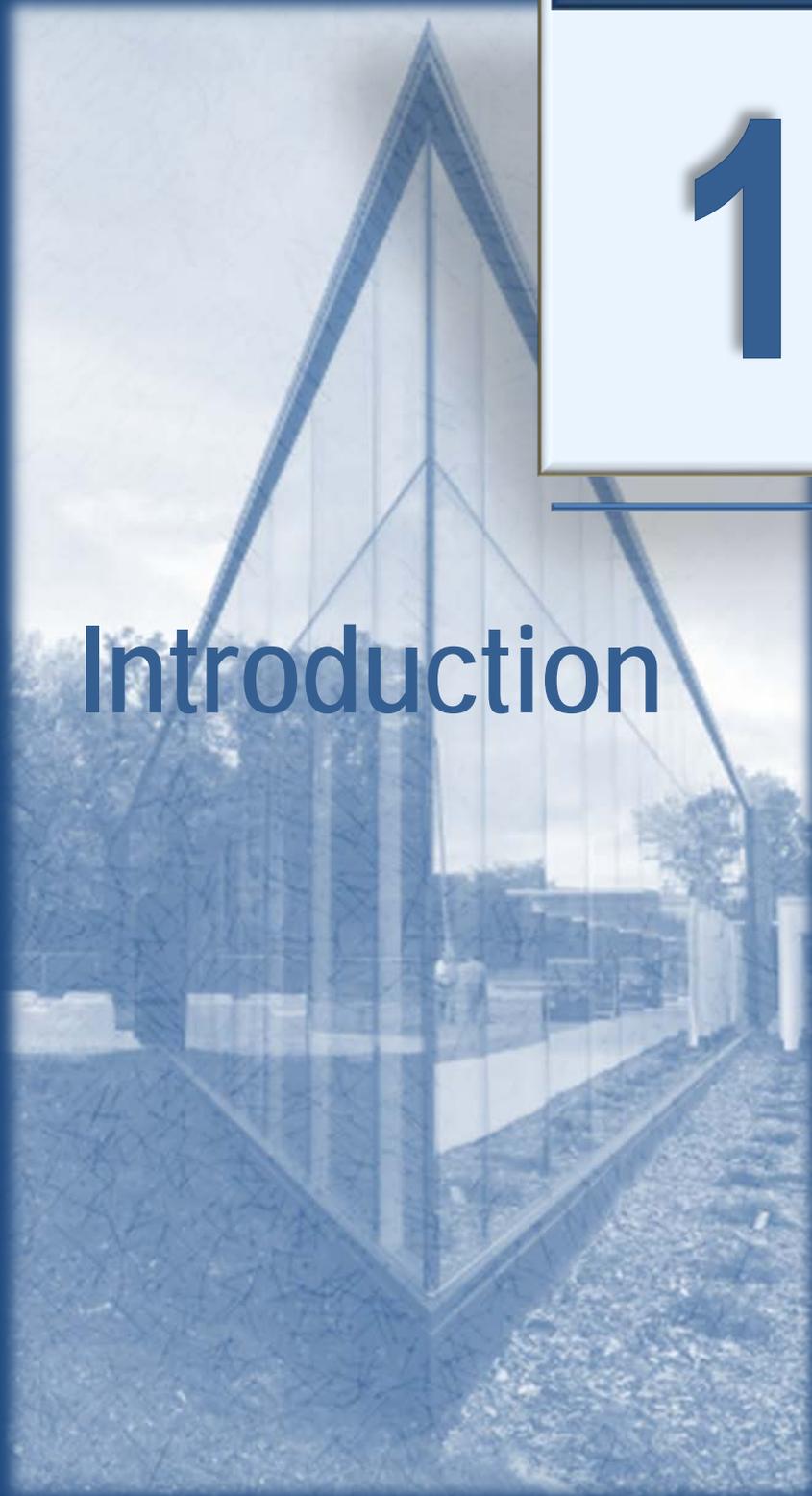


Section

1

Introduction





Project Management Manual Sections



Section 1: Introduction

Section 2: Project Management Governance

Section 3: Project Delivery Framework

Section 4: Initiating Process Group

Section 5: Planning Process Group

Section 6: Executing Process Group

Section 7: Monitoring and Controlling Process Group

Section 8: Closing Process Group

Section 9: Contract Administration

1 Introduction

1.1 Background

This manual has been developed based on the Project Management Book of Knowledge (PMBOK), which is generally regarded to be North American best practices in project management. The manual has also been developed to be consistent with existing Council-adopted policies, accompanying Administrative Directives and internal training programs.

It is recommended that all capital projects be executed using the principals and guidelines outlined in this manual regardless of the project scope, complexity or cost. In some cases, where certain processes are not applicable, they may be omitted with justification.

This manual is meant to be a living document and as such, will be updated on a periodic basis by the Corporate Asset Management Office. Updates will typically be triggered when substantial changes in industry practices have occurred, the City Auditor identifies improvement areas or feedback from internal/external users warrants a change. This manual has taken considerable time and effort to develop, both on the part of City employees and our Consultant partners. We wish to thank City employees, project delivery departments and our Consultant partners for the considerable time, effort and support that went into the development of this manual.

1.2 Purpose of the Project Management Manual

The Project Management Manual (PMM) has been developed and is continually being updated to provide consistency and quality in how the City delivers capital projects. It is to be used by all business units in all departments for delivery of capital projects for the City.

The PMM is largely based on *A Guide to the Project Management Book of Knowledge*¹, which is generally considered to be best practices for project management in North America. Following project management best practices, is intended to improve the quality of projects being delivered by the City. By following a defined methodology, the PMM will guide the Project Manager through the process of properly initiating, planning, executing, monitoring/controlling and closing the project. This is meant to aid the Project Manager and will not replace the experience and professional judgement required to deliver quality projects that meet customer expectations for cost, quality/scope and schedule.

The City of Winnipeg approves a large capital program every year to expand, upgrade, and renewing its infrastructure and providing services to support its operations. New construction, repair and/or replacement of streets, bridges, sewer systems, community infrastructure, IT systems and amenities accounts for most of the Capital Budget. With aging infrastructure, city growth, and environmental regulations, expenditures will likely continue to be greatest in these areas.

The traditional method of project delivery for large projects has been through a design-bid-build (DBB) process. In DBB project delivery, City Project Managers (PMs) engage Consultants to design and prepare bid documents for the work, which is then awarded to Contractors for construction. The DBB process will continue to be the main delivery method for project delivery in the City; however for major capital projects where significant risks exist, the City will consider other delivery methods, including Design-Build (DB) and Public, Private, Partnerships (P3).

¹ Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge*, Sixth Edition.

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1. The PMM is a “How-to” document for both City and Consultant Project Managers to use for delivery of projects. Initially prepared in response to a need for use on large and complex capital construction projects, the PMM now applies to all capital projects. It is important to emphasize that, while the PMM prescribes a standard methodology, it is not intended to be applied on a one-size-fits-all basis, however; it is a flexible method that can be tailored to the size and context of a specific project.
2. The PMM is intended to assist Project Managers to be proactive. A desired outcome of a more proactive approach is increasing the confidence of stakeholders and the credibility of the project management discipline at the City. Defining processes and procedures more clearly facilitates communication and understanding of expectations for all project stakeholders.

For the Project Manager, the PMM addresses the following questions about project delivery:

- What steps are involved?
- What processes are applied?
- How are the processes applied?
- What are the Project Manager’s roles and responsibilities?
- What tools and templates are available?

The PMM is a living dynamic document that is continually being reviewed and updated by the Corporate Asset Management Office within the Infrastructure Planning Office, under the direction of the Chief Project and Asset Management Officer. Update sources may include an internal lessons-learned process, observations from quality assurance reviews, internal or external audit recommendations, any new changes in City policies and administrative standards and new information or updates published in *A Guide to the Project Management Body of Knowledge*², and other relevant industry sources.

² Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge*, Sixth Edition.

1.3 Using the Project Management Manual

The Project Management Manual (PMM) is designed for ease-of-use, and organized for finding information readily. Presented are suggested tools and methods for using or enhancing your search for the material in the PMM.



Table of Contents (TOC)

Sequential listing of the main sections, sub-sections, tables, figures, process charts, and appendices. The TOC reflects how the PMM has been written – from introduction of the City’s project management methodology and initiating processes and from the Planning Phase through to Close-out of a project.



Process Charts

Pertains to all of the City’s project management processes to map out, explain and communicate processes to improve project quality, consistency and productivity. These charts show role responsibilities for specific actions and are the primary reference to use to determine the sequence of operations.



Templates

Documents that provide a standardized and methodological approach for managing and delivering projects. Some are critical for Phase Outputs. In the PMM, existing templates are denoted by the icon within the associated section, and are downloaded from the City’s website.

A complete list of templates is found in *PMM Appendix B: Project Management Templates*.



Glossary

Contains terms and acronyms used in the Project Management Manual, and relating to the City’s project management and contract management processes.



Index *(for future development)*

An alphabetically sorted list of words or phrases showing the page number(s) to help quickly direct users to the location of the item in the Project Management Manual.



Note:

- *The hyperlinks are not active at this time. These hyperlinks will be activated once the content becomes more stable.*
- *Not all the referenced material and documents are completed and integrated into this manual. That is, not all the templates have been developed and finalized, and only the DBB Project delivery process is included.*
- *Additional content will be included in subsequent revisions and versions of this manual.*

1.4 Structure of the Project Management Manual

The Project Management Manual (PMM) project delivery methodology was developed by applying *Project Management Book of Knowledge* (PMBOK) project management standards to the City of Winnipeg's specific situation. Alignment with PMBOK leverages the investment in corporate and institutional training programs and reinforces use of a common project management language and structure throughout the organization.

The PMM is structured according to PMBOK's five process groups Figure 1-1, rather than using a project lifecycle phase approach. This structure allows a single description of the processes that are repeated in each phase; deliverables for each phase are identified in the Project Delivery Framework component integration in *PMM Section 3.8*.

The Project Management Manual contains the following sections:

Section	Title	Description
1.0	Introduction	Introduces the PMM and explains its use.
2.0	Governance	Provides the governance associated with project management and interactions with other City programs and models.
3.0	Project Delivery Framework	Describes how all the project management components are integrated into a single unified approach.
4.0 – 8.0	Project Management Process Groups	These sections detail what is to be done, how to do it, and what is expected in terms of processes, outcomes or deliverables.
9.0	Contract Administration	Provides the governance required to negotiate, support and manage effective contracts and ensure they are administered in a consistent and transparent manner.
Appendix A	Design-Bid-Build (DBB) Project Delivery Process Charts	These process charts show role responsibilities for specific actions and are the primary reference to use to determine the sequence of operations. Processes in the charts can be matched with detailed descriptions of <i>what</i> to do.
Appendix B	Project Management Templates	These templates and forms facilitate presenting information consistently and coherently across the organization.
Appendix C	Alternative Project Delivery Methodology Analysis	This technical memo provides information of alternative project delivery options.
Appendix D	Organizational Change Management	Provides guidance on how to ensure organizational change is managed in a consistent manner on all projects.
Appendix E	Records Management	Provides guidance on how to ensure consistent governance, processes and procedures to manage project records.
Appendix F	Claims Management Process	Provides guidance on the prevention, mitigation, identification and quantification, and resolution of consultant and construction contract claims.
Appendix G	Gating Process	Provides guidance on the decision points in an Assets lifecycle, where senior leaders carefully consider the asset status and make effective and timely decisions before proceeding on.
Appendix H	Glossary	The glossary defines the terms, acronyms, and abbreviations used in this PMM.

Figure 1-1. Standard PMM Project Phases and PMBOK Process Groups

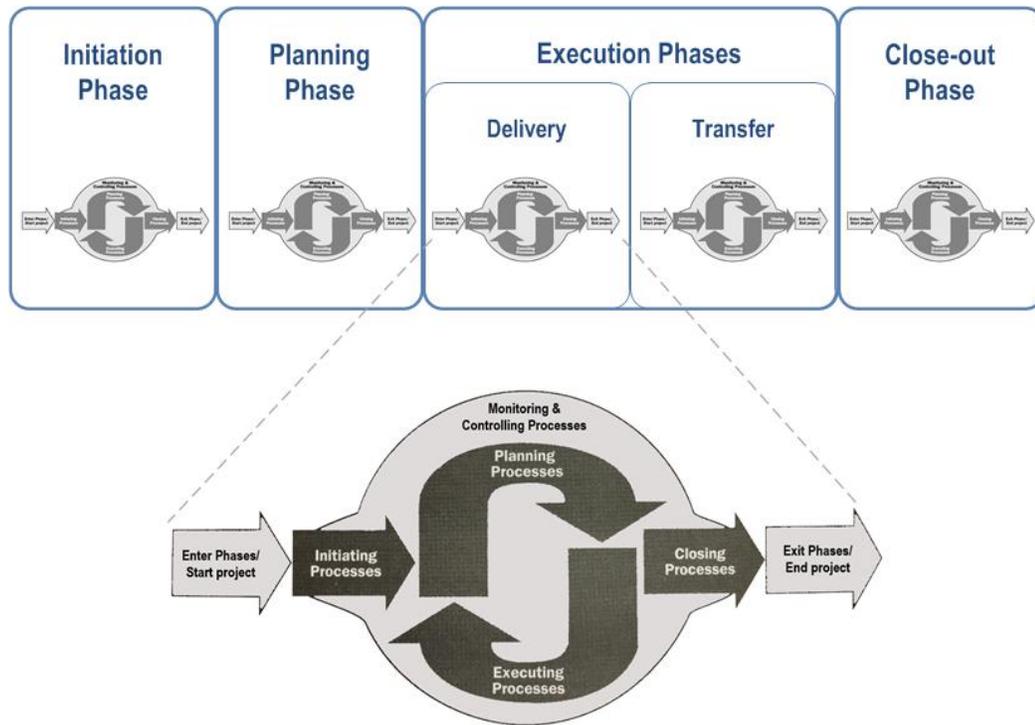


Figure 1-1 illustrates the relationship between *project phases* and the *process grouping structure* used in this manual. Each of the project phases includes the five process groups as shown in the lower portion of Figure 1-1.

Descriptions for these process groups are presented in *PMM Sections 4 to 8* of the manual. For example, the initiating processes for the initiation, planning, execution and close-out project phases are described in Section 4 – *Initiating Process Group* of the manual. The process workflow is presented for a specific project delivery method in *PMM Appendix A: Design-Bid-Build (DBB) Project Delivery Process Charts*.

In addition to the *Project Management Book of Knowledge (PMBOK)*, the project management process driven methodology described in *Projects in Controlled Environments 2 (PRINCE2)* was also reviewed during the initial development of the Project Management Manual (PMM). PMBOK provides standards and not a prescribed methodology, whereas PRINCE2 provides a structured methodology and provides direction on applying its concepts.

One PRINCE2 feature adapted for the PMM is use of phase gates. Phase gates initiate a phase-end review and a response to a phase’s deliverable(s). As the final process of the closing process group, a phase gate is included at the end of each project phase.

1.5 Program or a Project?

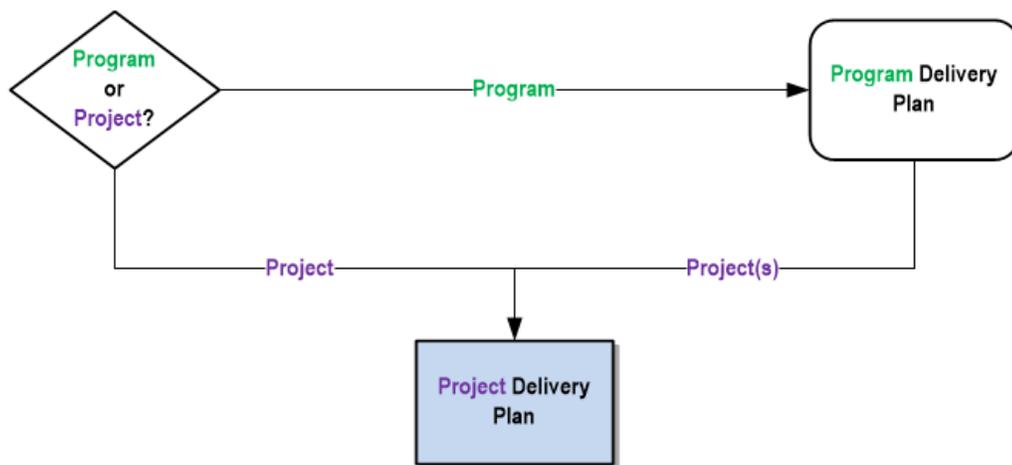
The first decision-point is the determination if the Capital Budget Authorization is either a Program or a Project. In most instances, identifying whether a Budget is a Program or a Project is relatively straight-forward.

Program Related subsidiary programs and program activities that are managed in a coordinated manner to obtain benefits not available from managing them individually.³

Project A temporary endeavour undertaken to create a unique product, service, or result.³

The approved Capital Budget Authorization may also identify the budget as a program or a project. Refer to Figure 1-2 below.

Figure 1-2. Capital Budget Authorization: Program or Project?



If the Capital Budget Authorization is a *program*, then the Project Manager is required to complete the documentation required for the Program Delivery Plan. Note that if there are any individual projects within the program that meet the requirements for Project Delivery Plan, then it must be completed for that project.

If the Capital Budget Authorization is for a *project*, then the Project Manager is required to complete documentation required for the Project Delivery Plan.

³ Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge*, Sixth Edition. p. 715.

1.5.1 Assessing Project's Level of Risk

The Project Manager (PM) should first make an overall risk assessment of the project and determine the level of risk as either High, Moderate or Low. The project levels of risk are defined in Table 1-1. Project complexity, project specific risks, potential to impact service delivery, potential to impact tax/utility rates and public profile are some of the considerations in determining project risk.

Table 1-1. Project Level of Risk Definitions

Level of Risk	Definition
High	The risk is severe . If risk occurs, has negative effects that could greatly impact the project's cost, schedule, scope, and quality. If a high risk occurs, it could place the project in jeopardy of being completed on time and/or on budget.
Moderate	The risk has negative impacts on cost, schedule, scope, and quality. If a moderate risk occurs, it could place the project in jeopardy of being completed on time and/or on budget.
Low	The risk has minimal impacts on cost, schedule, scope, and quality; If a low risk occurs, it should not jeopardize the project from being completed on time and/or on budget.

In assessing the level of risk as defined above, the Project Manager shall consider the following potential outcomes:

- If there is any potential impact on health and safety of the public or employees.
- If there is any potential to impact or interruption in service delivery to the public.
- If there is any potential impact on City finances including additional borrowing or increases to property taxes or utility rates.
- Reputational risk to the City of Winnipeg.
- Potential to disrupt the City's workforce in the performance of their daily duties.
- Project complexity.
- If the project is non-repetitive in nature.
- Potential for environmental impacts.
- Other project specific risks.

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1.5.2 Assessing Project's Size

The next assessment the Project Manager shall make is the category of the project based on size. Project size is taken from the approved Capital Budget Authorization and fits into categories as shown in Table 1-2.

Table 1-2. Project Size Categories

Size Categories	Capital Budget Range
Small	below \$1.0 million
Medium	\$1.0 million - \$4.99 million
Large*	\$5.0 million - \$22.99 million
Major*	\$23 million and above

* The Major Projects' Capital Budget lower range is set every year in the *Adopted Budget Capital Project Detail Volume 3 in Appendix Major Capital Projects*. This limit is subject to change each budget cycle, and will impact the upper range for large size projects as well. The above project sizes are based on the 2019 *Adopted Budget Capital Project Detail Volume 3*.

The matrix in Table 1-3 is a summary illustration of the potential project level of risk / project size categorization for any given project.

Table 1-3. Project Scaling Decision Matrix – Project Level of Risk / Project Size

		Size Category			
		Small	Medium	Large	Major
Level of Risk	High	High / Small	High / Medium	High / Large	High / Major
	Moderate	Moderate / Small	Moderate / Medium	Moderate / Large	Moderate / Major
	Low	Low / Small	Low / Medium	Low / Large	Low / Major
Capital Budget Range *		Below \$1.0 million	\$1.0 million to \$4.99 million	\$5.0 million to \$22.99* million	\$23.0* million and above

* The Major Projects' capital budget lower range is set every year in the *Adopted Budget Capital Project Detail, Volume 3, in Appendix Major Capital Projects*. This limit is subject to change each budget cycle, and will impact the upper range for large size projects as well. The above project sizes are based on the 2019 *Adopted Budget Capital Project Detail Volume 3*.

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The major objective is to expend additional resources where there is significant risk or large dollar amounts at stake.

Major capital projects are normally very complex, and due to their size cost, overruns can have an impact on taxpayer rates. As such, a low level of risk /major size classification is unlikely. The Project Manager should reassess any *low level of risk /major size* classifications carefully prior to finalization.

Bundling of smaller projects together is a fairly common occurrence in programs such as Local Streets. Local Streets packages would tend to fall in the *low level of risk/large size* category. Due to the low risk nature of small projects, bundling several small projects does increase project risk.

The appropriate level of project reporting and/or documentation should be determined by the Project Manager and approved by the Project Sponsor.

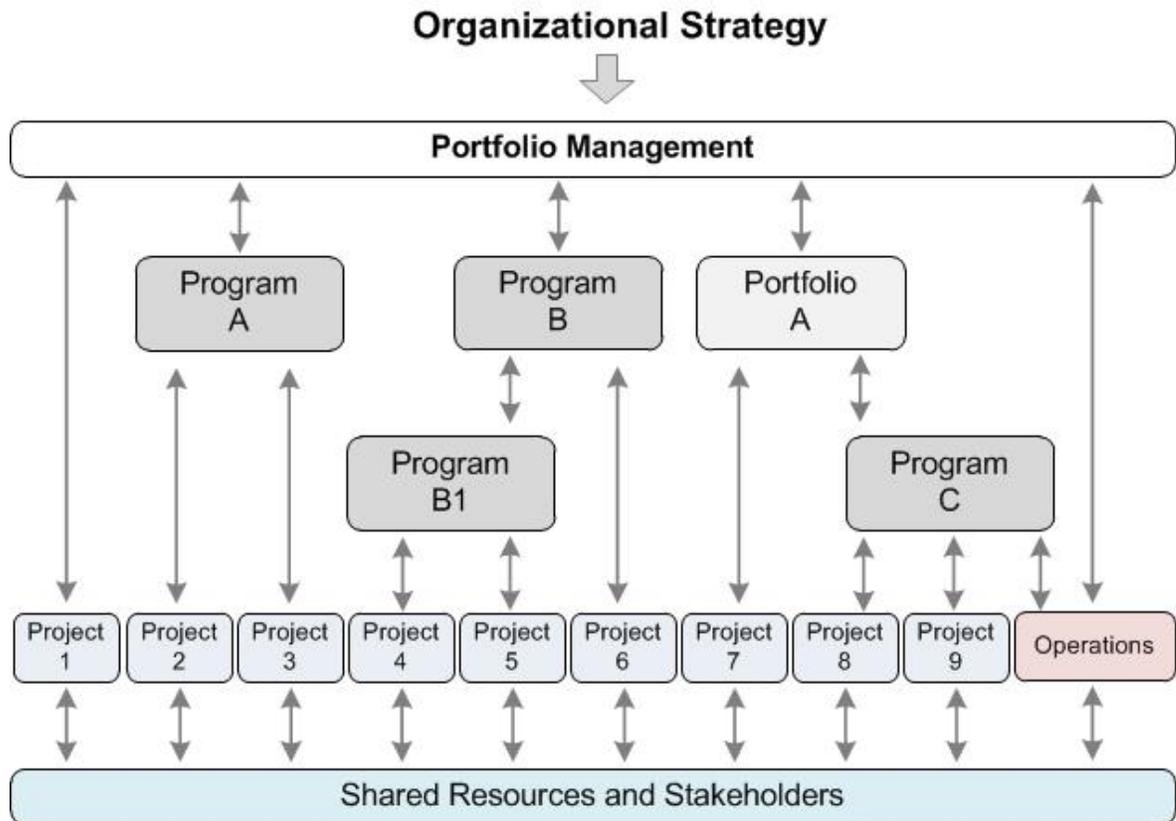
1.6 Relationship among Project, Program and Portfolio Management

Management of projects, programs and portfolios, is aligned with and driven by organizational strategies and contributes in different ways to the achievement of strategic goals. Consider project, program and portfolio management from an organizational perspective, program and project management focus on doing programs and projects the right way, while portfolio management focuses on doing the right programs and projects.

Disciplines	Description			
Portfolio Management	Centralized management of programs and projects at both the corporate and department levels to achieve the City's strategic objectives for services and assets.	Led by the business.	Investments are aligned to business goals and strategies.	Investments based on service targets, risk and benefit assessments.
Program Management	Management of a group of projects to obtain the benefits (or result) according to an agreed-upon business case and control not available by management of projects individually.	Sponsored by the business.	Projects align with overall program benefits.	Compliance with project management standards.
Project Management	Management of an endeavour of finite duration undertaken to create a unique product, service, or result according to an agreed-upon business case (which addresses how an idea is developed into a viable investment proposition).	Delivery of product, service, or result	Balance, scope, cost, and schedule constraints.	Responsible for quality of deliverable(s).

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Figure 1-3. Portfolio, Program, and Project Disciplines



The hierarchical relationship between delivery components is illustrated in Figure 1-3. Each component can have multiple subcomponents; that is, relationships can be one-to-many.

1.7 Other Key Disciplines Integrated within Project Management

Contract Administration	<p>Contract Administration is a process where an already developed and initiated contract is managed and/or administered, which includes managing Contract relationships, monitoring Contract performance, and modifying Contracts when appropriate.</p> <p>Contracts and the administration of those Contracts (Contract Administration) is significantly involved in and integrated with Project Management.</p> <p>For more information, refer to <i>PMM Section 9</i>.</p>
Organizational Change Management	<p>Is a framework to promote and enable the adoption of changes that may occur as the result of the Project deliverables (product, service, or result), and thereby, to support the achievement of project results and outcomes.</p> <p>Organizational Change Management is a discipline that offers a structured approach that is aligned with <i>Project Management Institute (PMI) Project Delivery Lifecycle</i>.</p> <p>Refers to the management of <i>organizational change</i> and as such, should not be confused with <i>Change Control within Project Management</i>.</p> <p>For more information, refer to <i>PMM Appendix D: Organizational Change Management</i>.</p>
Public Engagement	<p>Is a process whereby the City facilitates dialogue with and between the public and stakeholders to collect input which supports better decision making by the City.</p> <p>The purpose of engaging the public is to achieve decisions that are sensitive and responsive to community values and concerns. It ranges from sharing feedback and perspectives to empowering the community to make decisions as referred to in <i>PMM Section 1.10.1</i>.</p>



Note: *The Office of Public Engagement in the Customer Services and Communications Department is developing a policy for public engagement for Council approval.*

1.8 Integration with the Asset Management System

The City has adopted an Asset Management System (AMS) that aligns with *International Organization for Standardization (ISO) 55000* standards and the *British Standards Institution's (BSI's) Publicly Available Specification (PAS) 55* Asset Management System. The AMS defines the framework for integrating asset management components throughout an asset's lifecycle. This framework assists in establishing a common language and direction within the City's multi-functional organization.

The AMS establishes a disciplined approach to creating the best stakeholder value for each asset portfolio. This disciplined approach requires breaking down departmental barriers; establishing planning, coordination, and prioritization; and rationalizing competing performance goals. As illustrated in Figure 1-5: *City of Winnipeg Asset Management System*, the AMS is defined in terms of governance, processes, and outputs. These elements frame how the City manages its assets.

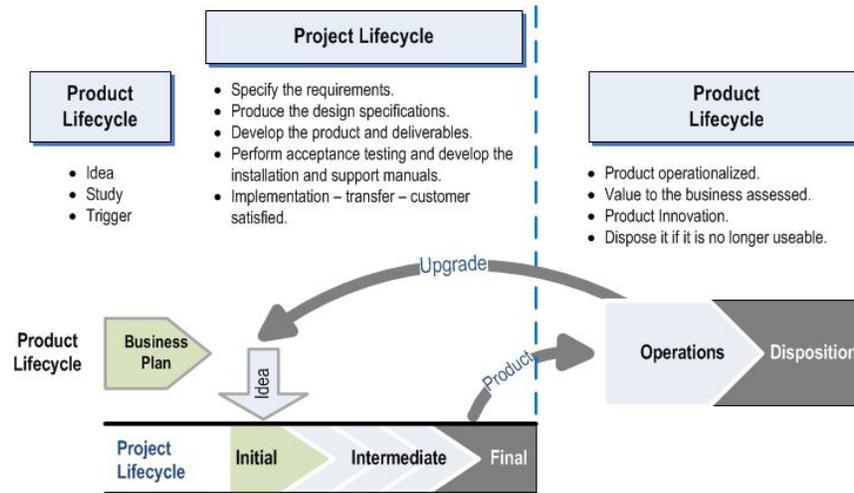
With reference to Figure 1-5, key governance documents and management plans are at the top of the model, highlighted in dark blue boxes and provides the policy (FI-011 Asset Management Policy), directives (FM-004 Asset Management Administrative Standard, and others), and rules for managing the assets (Asset Management Plan, Quality Management Plan). The next level is

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the defined processes, highlighted in yellow boxes which define how work will be done in order to optimize costs and performance. A sample of the process outputs are highlighted in grey boxes at the bottom of Figure 1-5.

The AMS makes an important distinction between a **product lifecycle** and a **project lifecycle** in Figure 1-4.

Figure 1-4. Product lifecycle vs. Project lifecycle

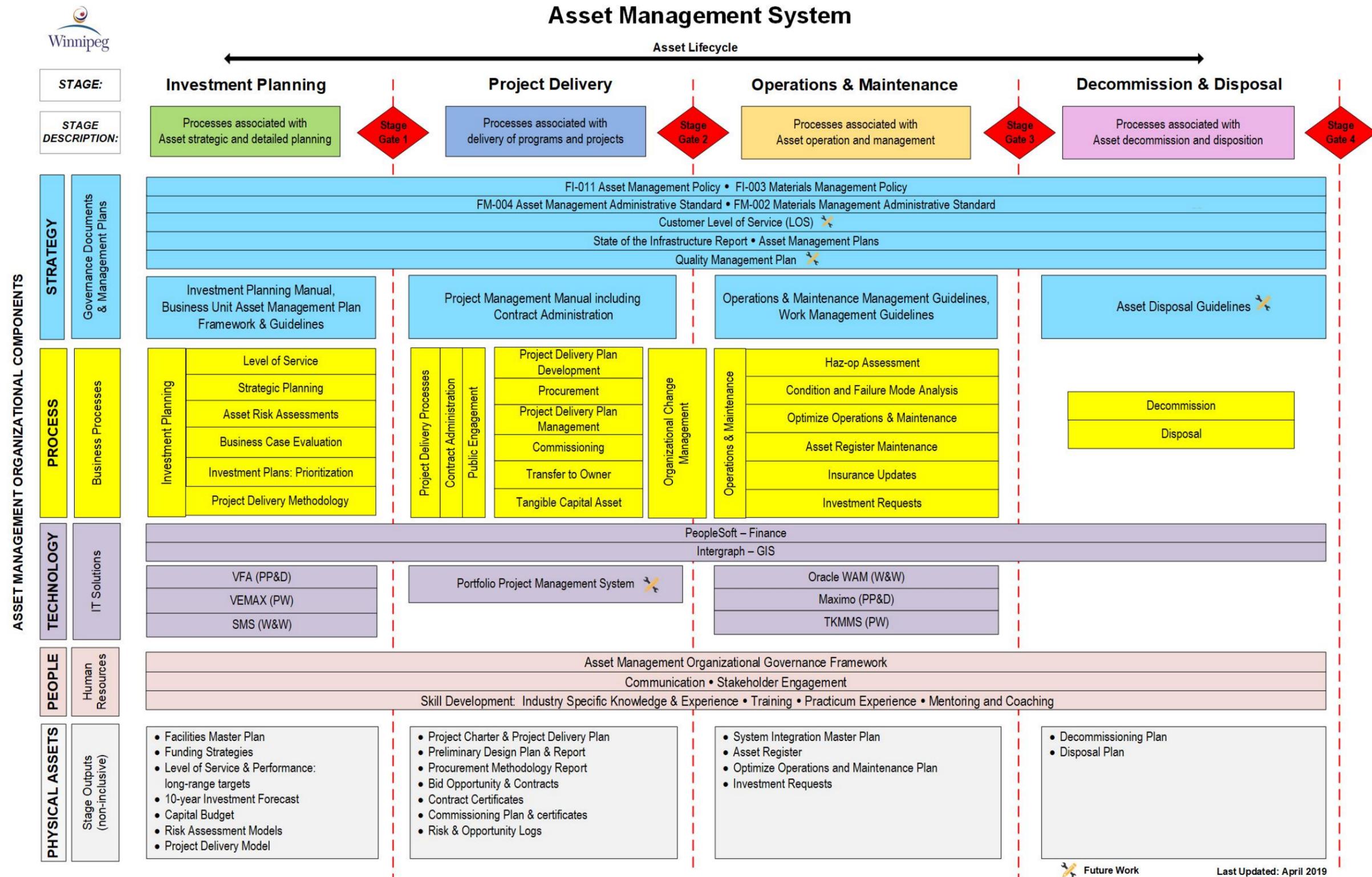


The **product lifecycle** extends from idea (Investment Planning) through to final disposition. Products may be in various forms, such as roads, bridges, buildings, or sewer assets.

The **project lifecycle** is confined to the project delivery part of the product lifecycle.

The project delivery part addresses implementation of projects for products or service where an asset (product) is physically created. The two key integration points for the product lifecycle are with the adjacent planning stage and with the operations and maintenance stage. The integration points in the planning stage are the Business Case and budget approval processes. The integration point in the operations and maintenance stage is the formal transfer of defined documentation, such as instructions for operations and maintenance of the completed product, service, or result.

Figure 1-5. City of Winnipeg Asset Management System



1.9 Organizational Change Management

The purpose of change management is to promote and enable the adoption of changes that may occur as the result of Project Delivery, and thereby to support the achievement of project results and outcomes. Organizational Change Management is a discipline that offers a structured approach that is aligned with *Project Management Institute* (PMI) project delivery lifecycle and the City's Project Delivery Framework.

The City of Winnipeg has certified Change Managers (ChM) located in every department who form a Change Management Working Group sponsored by the CAO. This group is a change management resource pool for projects. Its members are trained to apply tools and methods for change management within the change lifecycle framework.

Project Managers should know who their departmental Change Managers are and should engage them in all the phases of the project lifecycle. For a list of departmental Change Managers, refer to the distribution list in MS Outlook, CITY-ADKAR-Change-Managers.

PMI recognizes that change management is an important feature of project management and for successful project delivery. Without attention to change management, less than 40 percent of projects are successful. Thus, the inclusion of change management activities within the project delivery model is essential for minimizing barriers to change and for ensuring rapid and effective implementation of project outcomes.

When a Project Manager develops the project's stakeholder assessment in the Project initiation phase, the need to follow the City's formal integrated organizational change management procedure should be identified. This need should be included in the Project Charter and discussed with the Project Sponsor.

By following the organizational change management procedure together with developing the Project Delivery Plan, a Project Manager will formulate a solid plan to manage the change created by the project.

The Project Manager may assign a separate Change Manager, if applicable. Criteria could be developed based on project complexity, risks, financial loss, quantity of stakeholders, rushed timeline, etc. For projects deemed high level of risk, a separate Change Manager could be assigned and implement the ADKAR model which would be of great assistance for the Project Manager.

Organizational Change Management refers to the management of *organizational* change, and should not be confused with *Change Control*.

For more information, refer to *PMM Appendix D: Organizational Change Management* for the details of how to manage the change created by initiating a project.

1.10 Public Engagement

Public Engagement refers to a process whereby the City facilitates dialogue with and between the public and stakeholders to collect input which supports better decision making by the City.

The purpose of engaging the public is to achieve decisions that are sensitive and responsive to community values and concerns.

Public engagement planning should be undertaken with the following steps:

1. Determine if public engagement is required
3. Discuss with office of public engagement
4. Determine the level(s) of engagement (public's level of influence)
5. Determine what input will be collected from the public
6. Identify stakeholders
7. Allocate a portion of the budget allocated towards public engagement
8. Bring the above together to draft an early project public engagement strategy
9. If public engagement Consultants will be hired, involve the office of public engagement in RFP development.
10. Public engagement lead develops public engagement objectives, techniques, and timeline
11. Bring the above together to draft a comprehensive public engagement strategy (using guidelines and other supporting policies)

Public engagement should be conducted when the public's input may influence a City project. Public engagement does not apply to day-to-day operations nor does it include the ongoing discussions with stakeholders required as issues arise or ensuring continual evaluation and improvement of existing programs.

1.10.1 Is Public Engagement Required?

Complete the following questions to help determine if public engagement is required:

Question	Yes	No
1. Have you been directed by Council to consult the public?		
2. Is there a legislated requirement to consult the public?		
3. Were you directed by the Director of Customer Service and Communications to consult the public?		
4. Is the project approved in the capital budget?		
a) Will the public's input help define or influence the final outcome?		

- If you answer 'yes' to questions 1, 2, or 3, you must proceed with public engagement.
- If you answer 'no' to questions 1-3, and answer yes to question 4, proceed to question 4a to determine if you should proceed with public engagement.
- If you answer 'no' to question 4a, you should reconsider the purpose of engaging with the public. You are likely informing the public and should contact the communications lead for your department to develop a Communications Strategy.

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Contact the Office of Public Engagement if you have any questions about this assessment table or interpreting the need for engagement.

In order to achieve its intended purpose, Engagement must be meaningful. This means that it:

- acknowledges the community's desire to participate in decisions that affect them and provides a means for incorporating the public's values, interests, needs and desires into decisions.
- facilitates understanding – by both the public and the decision-makers – regarding:
 - the definition of the problem or opportunity being addressed
 - the issues of relevance
 - the common ground from which options for a solution can be developed and evaluated
 - the rationale for the ultimate decision
- improves decisions as it:
 - identifies critical issues early, when flexibility in the process is greatest; and
 - brings all perspectives to the table, thereby improving the likelihood that a broader range of perspectives is addressed, there is a positive attitude towards decision outcomes, and therefore that it is less likely to result in decisions being overturned or vetoed;
- opens doors to innovation, creative problem-solving, improved service, greater efficiency and win-win conflict resolution.

Meaningful engagement requires time and resources. Timelines and resources available for each project will influence the approach towards engagement and the techniques used to engage. Engagement should only occur once a portion of the project budget is dedicated to engagement and the project timeline is coordinated to allow adequate time for public input to be collected, considered, and incorporated before key steps in the project.

The Project Manager has roles and responsibilities in the public engagement process, including:

1. Collaborating with the Office of Public Engagement before a project begins to determine the level of engagement and support required.
2. Considering how engagement input can influence a project and allocate project time and budget towards public engagement early in project planning.
3. Ensuring a record of engagement process and outcomes is publicly posted when processes are carried out by departmental employees or Consultants.

The office of public engagement will assign identify a Public Engagement lead for the project, which could be in the department or an OPE employees member. When hiring a Public Engagement Consultant, serious consideration should be given to hiring them as an independent Consultant rather than a sub to another consultant being hired for the project, since Public Engagement is concerned with sensitivity and responsiveness to community values and concerns for the overall project.

For more information, refer to *PMM Section 5.8 – Plan Communication Management*.

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