

Section

8

Closing Process Group





Project Management Manual Sections

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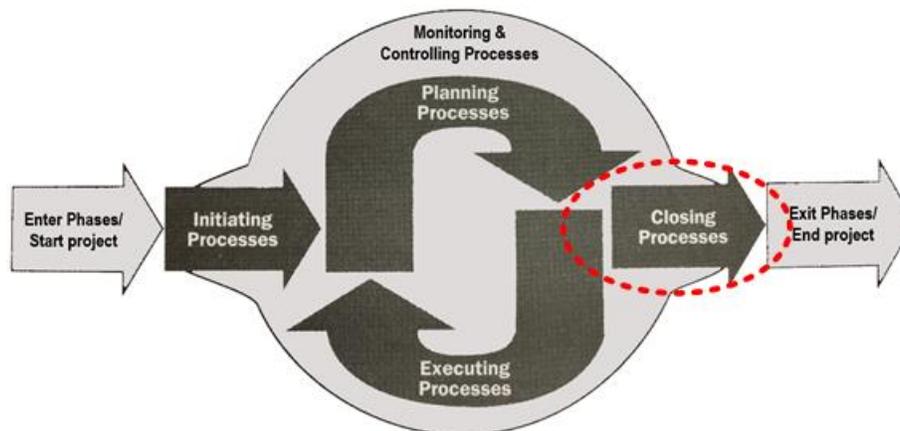


8 Closing Process Group

Closing is the last of the five project management process groups.

The purpose of this process group is to formally complete or close a project, phase or contract. This process group verifies that the defined processes are completed within all of the process groups to close the project or phase, as appropriate, and formally establishes that the project or project phase is complete.¹²

Figure 8-1. Closing Process Group



8.1 Update Business Case

The phase gate approval process adopted for the Project Management Manual, illustrated in Figure 5-2: *Task Components Integrated into the Project Management Approach*, requires the Business Case to be validated, updated or finalized at the early phases of the project, and then to confirm the Business Case benefits for the later phases of the project.

The progressive updating and confirming of Business Case benefits proceed through the entire project lifecycle in order to validate the initial investment. The project produces updated information that is used to update the assumptions used in the initial Business Case. If any of these assumptions change and have a negative impact to the benefits of making the investment, the project needs to be reassessed and consideration given to re-scoping or terminating the project. These decisions are typically made at the end of the planning phase gate where more detailed information has been produced to validate the assumptions made in the Business Case.

The Project Delivery Framework is designed such that the project produces information on the product in the early phases (or parts for a Major Capital Project) of the project, so that decisions can be made to cancel or delay the investment before spending the large dollars in the later phases (or parts of a Major Capital Project).

¹² Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge*, Sixth Edition, p. 633.

8.1.1 How to Update the Business Case

The Business Case contains initial specific information and benefit metrics that are unique to each project.

All information in the Business Case should be updated, including assumptions used in the need assessment, option analysis – cost evaluation, cost estimates and measurable benefit determination, as required when significant project changes occur that impact any of the above sections of the Business Case.

The Business Case is updated by incorporating the new information to the existing information, such as actual costs, and refined measurable benefit, including utilizing “*Approvals and Business Case Update Log*” tab to track significant content changes in the project’s Business Case.

It is important that the updates are based on the same baseline metrics to enable meaningful and credible comparisons.

For further information on Business Cases, refer to the Investment Planning Manual on the Corporate Asset Management Office website.

8.2 Close Project Phase



Project Close-out
Report
template

Download from the
City’s Infrastructure
Planning Office
website

In the Close Project phase, all activities across the project management process groups are finalized to formally complete the project phase.

A Project Close-Out Report summarizing project delivery is prepared along with either the Business Case update or benefit validation.

8.2.1 How to Close Project Phase

The Project Manager must confirm that all project phase work is complete and the phase objectives have been met. The Project Delivery Plan and work plan are used to determine whether the work has been completed and is ready for closure. All deliverables and transfers must be complete before a phase can be closed.

The phase closure assessment depends on the original Business Case. At a minimum it includes:

- Business Case update or benefits validation
- Scope verification
- Report on scope changes
- Budget and cost updates with Earned Value Management and Estimate at Completion
- Schedule report
- Report on quality
- Risk Register and report
- Issues log
- Project Management Checklist template

8.2.2 How to Terminate a Project

At each phase gate (or control point for major capital projects) in the project, a “go or no-go” assessment is completed based on the forecast cost of the project verses the benefit of the investment.

As the scope, cost, risk and benefits of the project are refined during each phase (or part for major capital projects), the Business Case can be re-assessed with more realistic numbers to re-affirm the cost/benefit and residual risk of not making the investment.

Typically upon completion of the Class 3 Cost Estimate (post planning phase), this decision is made with the Project Sponsor, Business Owner and in consultation with the Major Capital Project Advisory Committee and/or Project Advisory Committee. This assessment includes multiple factors such as value for money, risk assessment, level of service targets verses willingness to pay and validating identified benefits.

8.3 Commission and Transfer

Many projects have special procedures that must be completed to provide the Business Owner with the information it needs to successfully take ownership of the operation and maintenance of the work. The Project Manager coordinates with the Business Owner, the planning and preparation for the information transfer, commissioning, and start-up of the projects’ delivered product, service, or result. Operating budgets are established and employees are trained to operate and maintain the product, service or result.

Commissioning and transfer includes the following:

- **Product Data** – Vendor and product information must be collected from the Contractors for all the materials and equipment received. This includes product sheets, operations and maintenance manuals, and shop drawings.
- **Record Drawings** – As-built drawings or record drawings are required to document the as-constructed status of the projects for operations, maintenance, and future repair of the assets and infrastructure. Timely preparation of drawings and operating manuals is imperative for operating facilities and must be completed as soon as possible, turned over to the Project Manager for quality assurance, and submitted to operations for the start-up process.
- **Commissioning** – This is a process for confirming that the components and systems have been installed as specified and can be operated and maintained according to the design intent. The Contractor shall be responsible for completion of all commissioning, installation and performance verification activities, proving that the installed equipment and systems are correctly installed and operate according to project specifications.
- **Installation verification** includes all checks and balances required by the Contractor to ensure that all the equipment and systems are properly installed, and operate according to contract technical documentation. Prior to performance testing of each system, the Contractor shall ensure that all physical installation of components and systems being tested are installed in accordance to the Contract documents.
- **Performance verification** testing includes checks and tests to be carried out by the commissioning team. It may include, other Authorities Having Jurisdiction that may mandate third party verification. The result of the testing is expected to confirm the design intent as outlined in Contract documents. Prior to the performance verification of each system, the Contractor shall ensure that all Installation verification checks are complete.
- **Commissioning** is a process for validating product deliverable performance and also facilitates orderly transfer of the product from the constructor to the Business Owner.
- **Start-up** – For complex equipment, the Contractor, vendor, and manufacturer may be required to undertake a start-up process. This can involve the Contractor taking responsibility for operation of the equipment for a specified period of time to demonstrate its successful operation.

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- **Training** – Product training is frequently required before the City can take ownership of the new equipment and its operation. Refer to the Contract specifications forming part of the Contract documents for training requirements.
- **Warranties** – All products and installation warranties need to be listed and identify if extended warranties are available. The duration of warranties needs to be noted. Warranties are to be issued to the Business Owner under the name of the product manufacturer, and shall warrant both product and installation.
- **Transfer to Operations** – The level of effort and work required in transferring the completed work to the owning and operating business unit (department) depends on the scope and nature of the work. The transfer includes all the project records and new information required for operation and maintenance. The Contractor shall submit to the Business Owner the required copies of the Operation and Maintenance Manuals, in the timeframe required as per the Contract documents.
- **Update Asset Registers** – The Asset Management System requires asset information to be captured in an asset register. If maintenance management systems are used, the asset information must also be recorded in the system and the operations and maintenance procedures must be documented. This function may be carried out by the Contractor, the Consultant, or the City, with the approach pre-established and identified in the Project Delivery Plan.
- **Tangible Capital Asset Updates** – The City maintains a register of its tangible capital assets consistent with public sector accounting requirements that must be updated with any additions or deletions that would typically occur during capital projects.

8.4 Review Consultant Performance



Standard Performance
Review for Consultants
template

Download from the
City's Material
Management
website

FM-002 Materials Management Administrative Standard states that Consultant performance reviews should occur at least annually and that the reviewer communicates the results to the Consultant and that the Consultant Standard Performance Review should be kept in the project file.

Poor performance should be documented. The Standard Performance Review for Consultants template can be found on the Materials Management website.

8.4.1 How to Complete a Consultant Standard Performance Review

The overall goal of Consultant Standard Performance Review is to ensure Consultants are more aware of, and responsive to, the City's needs and expectations.

Consultant Standard Performance Reviews should be carried out based on the following principles:

1. The reviewer remains objective.
2. The meeting remains positive and the reviewer provides constructive criticism. *Areas of above standard or superior performance* should be noted as well as areas that *need improvement*.
3. The review process identifies and quantifies the City's expectations of the Consultant's service. For example, the reviewer identifies what is expected in terms of meeting deadlines, communicating problems, accuracy in cost estimating, and accuracy in Contract documents.
4. The Consultant Standard Performance Review form is available on the Materials Management website at:
winnipeg.ca/matmgt/templates/consultants/Consultant_Information_Page.stm

8.5 Close Project

The final process is to close the project. Final closure can be extended well beyond commissioning and start-up due to deficiencies, finalization of operations and maintenance manuals, finalization of as-built drawings, transfer of documents, and administration of the warranty period.

Close-out is required to:

- Complete the records management processes
- Finalize project deliverables and product turnover
- Document significant changes made from the original Business Case to the final product
- Compare budgeted cost to final cost and explain significant deviations
- Compare scheduled events with actual events and explain significant deviations
- Summarize major problems or innovations developed during project delivery and assess their overall impact on the budget and the quality of the deliverable
- Complete, document and conduct a Consultant Performance Review
- Complete the Project Close-Out Report that documents an overall summary of the work completed, a project performance assessment and captures lessons learned, and also documents the Administrative and Contract closures required for the project. The template is found on the Corporate Asset Management website.

8.5.1 How to Close the Project

The City's Project Manager is responsible for:

- receipt of formal documentation
- for completion of the contract
- final inspections
- and end of warranty

The Project Manager is responsible for:

- updates to final documentation
- closing the project files
- closing the project accounts
- and completes the project documentation archiving process

8.6 Conduct Lessons Learned

Identifying lessons learned is an important part of the continual improvement process for both the Consultant and the City.

The lessons learned process defines the activities required to successfully capture and use lessons learned.

The lessons learned process is to:

- Identify and collect project comments and recommendations that could prove to be valuable for future projects
- Document and share the lesson learned findings
- Analyze the results
- Store the lessons learned in a project repository
- Retrieve previous lessons learned in future projects.

With the compilation of documented lessons learned information can be analyzed and recommendations for change can be incorporated to the Project Management processes, procedures, tools, templates and improve the Project Management Manual as well as the management of future projects.

8.6.1 How to Prepare Lessons Learned

The lessons learned are initially prepared by the Project Manager and then turned over to the City's Major Capital Projects Oversight branch for managing continual improvement.

The lessons learned are developed through a sequence of:

- reviewing the project performance results
- interviewing representatives from the Project Team and stakeholders
- identifying successes and areas in need of improvement

The lessons learned are formally documented in *Part 5 - Lessons Learned* in the *Project Close-Out Report* template.

8.7 Celebrate Project Success

Celebrate project successes in many different ways throughout the project lifecycle. Successful projects often involve incremental accomplishments through collaborative effort between the Consultant, Project Team and relevant stakeholders. It is important to reward success as it occurs.

At the conclusion of a successful project, recognitions should be leveraged to acknowledge Project Team members contributions and mark the official project closure for team members.