An expense control plan provides comprehensive control over variable expenses, which an organization can control by adopting certain policies.

Expense Control Plan

Cost Management

**Table of Contents**

[Introduction 1](#_Toc438476364)

[Project Cost Management Approach 2](#_Toc438476365)

[Cost Estimation 3](#_Toc438476366)

[Budget Determination 3](#_Toc438476367)

[Cost Management Roles & Responsibilities 3](#_Toc438476368)

[Cost Performance Measurement 4](#_Toc438476369)

[Cost Variance Response Process 4](#_Toc438476370)

[Cost Change Control Process 5](#_Toc438476371)

[Undertaking 6](#_Toc438476372)

[Glossary 7](#_Toc438476373)

# Introduction

The purpose of this Cost Management Plan is to define the methodology by which costs associated with Cost Management will be managed throughout the project lifecycle. To ensure the successful completion of the project within the allotted budget, this plan sets the format and standards by which the project costs are measured, reported and controlled. Several cost components are associated with this project. Metrics, cost variance considerations, and reporting activities will be outlined in this plan. To complete this project successfully, all key project members and stakeholders must adhere to and work within this Cost Management Plan and the overall project plan it supports.

This Cost Management Plan will:

* Outline the overall project cost management approach
* Outline how the project cost, budget and source of funding will be determined
* Identify who is responsible for managing costs, including who has the authority to approve changes to the project, its budget or sources of funding
* Identify the methods to be used for quantitatively measuring and reporting on cost performance
* Identify the reporting formats, frequency and to whom they are presented

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# Project Cost Management Approach

The Cost Management Plan approach for Cost Management requires that the project resources assist in establishing and managing the total cost of ownership of the project. This includes establishing the estimated budget and measuring actual spending against the planned budget for the following items:

* Agency project team staff and all of their associated costs
* STS resources
* Other external resources/contractors
* Infrastructure costs
* Software and hardware
* Vendor contracts

The Cost Management Plan establishes the activities and criteria for planning, structuring, and controlling project costs. Cost estimating and cost controls are the most important evaluation and control items for State projects. Actual costs and cost variances must be reported regularly to oversight committees and project sponsors. Any cost change over five percent requires project steering committee approval.

The Senior Project Director and the Project Sponsor(s) for Cost Management will jointly create the cost baseline and the Cost Management Plan. Beginning with the preliminary cost estimates identified in the Initiation phase, the Senior Project Director will develop updated cost estimates to perform the work included in the revised schedule.

Cost Estimation

The Cost Management Plan for Cost Management documents the methods to be used to manage and control the many internal and external cost components. Metrics and variance analysis must be applied to these cost components throughout the project lifecycle for tracking, re-estimating and adjusting the project budget if needed. These cost components include:

Internal

* Project management/project team resources
* Recruiting and hiring for additional staffing
* Hardware and other equipment
* Software and licensing
* Housing and facilities

External

* Vendor contract costs
* Construction costs

A ‘bottom-up’ approach will be used for preparing a detailed cost estimate of each cost component involved with each project activity. Costs estimates will be prepared using the best information available at the time of estimation. The basis for the estimate must be fully documented so that if better information becomes available at a later time in the project, the cost estimate can be adjusted.

# Budget Determination

Once the needs of the Cost Management have been determined, the project team will finalize the resource and staffing requirements necessary for the successful completion of the project. The Senior Project Director and Project Manager will complete the internal and external Work Breakdown Structure (WBS) respectively. Control accounts and staff labor categories will be created in each WBS element. Based on the labor costs and planned duration of each WBS element, an estimate will be determined. WBS element costs will then be totaled and verified against the allotted project budget. Once the project budget is approved, the Senior Project Director will compare the allocation for each WBS element against the overall budget and adjust allocations as necessary to comply with the project budget. Once all allocations have been reviewed and approved by the Project Manager, the project budget will be baselined. The project budget baseline may only be changed with authorization by the Project Sponsor.

# Cost Management Roles & Responsibilities

The Senior Project Director will work with the Project Sponsor to define various roles and expectations for resources involved in managing the overall project cost. These role definitions should define ownership for review and approval of all project expenses, project cost establishment, review of budget tracking system details, and day-to-day cost detail management. In most cases, the Senior Project Director will be intimately involved in managing these details. Using a disciplined project management approach to manage project costs will help ensure that the project is delivered on time and within budget.

The Senior Project Director will be responsible for managing and reporting on the project costs throughout the duration of the project. During the monthly project status meeting, the

Senior Project Director will present and review the project’s cost performance for the preceding month. Performance will be measured using earned value, as defined below. The Senior Project Director is responsible for accounting for cost deviations and presenting the Project Sponsor, Project Steering Committee and Change Control Board with options for resolving project budget shortages or overages. The Project Sponsor has the authority to make changes to the project to bring it back within budget.

# Cost Performance Measurement

The Senior Project Director will build a total cost of ownership model for Cost Management. This model will capture all vendor software and implementation costs, plus internal costs for staffing and related administrative and overhead costs, infrastructure, resources and other hardware needs. It will establish the total project baseline budget and a time-phased baseline budget by month and fiscal year for the development and implementation phases. Inputs are contract deliverable payments, project team staffing costs, budgeted amounts for infrastructure costs, and all other anticipated costs to the project.

The approach for cost performance measurement is to use Earned Value Management (EVM) for measuring and controlling the project costs. EVM integrates project scope, cost, and schedule measures to help the project management team assess and measure project performance and progress. The Senior Project Director and/or project resources will review the following earned value measurements: Schedule Variance, Cost Variance, Schedule Performance Index, Cost Performance Index, To Complete Cost Performance Index and Estimated Actual Cost at Completion.

# Cost Variance Response Process

|  |  |  |
| --- | --- | --- |
| **Performance Measure** |  **Yellow Condition** | **Red Condition** |
| Schedule Performance Index (SPI) | Between 0.9 and 0.8 or Between 1.1 and 1.2 | Less Than 0.8 or Greater than 1.2 |
| Cost Performance Index (CPI) | Between 0.9 and 0.8 or Between 1.1 and 1.2 | Less Than 0.8 or Greater than 1.2 |
| To Complete Performance Index (TCPI) | Between 0.9 and 0.8 or Between 1.1 and 1.2 | Less Than 0.8 or Greater than 1.2 |

Cost management measures will be reported in the monthly Cost Management Status Report. All cost variances outside of the thresholds identified in this Cost Management Plan will be identified, along with any planned corrective actions. Change requests triggered by project cost overruns will be identified and tracked in the monthly status report.

Control Thresholds Established for Cost Management:

If the project reaches one of the control thresholds of CPI, SPI or TCPI between 0.8 and 0.9 or between 1.1 and 1.2, or if the SPI, CPI or TCPI has a variance of between 0.1 and 0.2 since the prior reporting period, the Senior Project Director must report to the Project Sponsor the reason for the exception.

If the project reaches one of the control thresholds of CPI, SPI or TCPI less than 0.8 or greater than 1.2, or if the SPI, CPI or TCPI has a variance of greater than 0.2, the Senior Project Director will report the reason for the exception and provide executive management with a Cost Variance Corrective Action Plan to bring the projects performance back to acceptable levels.

Cost Variance Corrective Action Plan:

The Senior Project Director will present the Project Sponsor with options for corrective actions within five business days from when the cost variance is first reported. Within three business days from when the Project Sponsor selects a corrective action option, the Senior Project Director will present the Project Sponsor with a formal Cost Variance Corrective Action Plan. The Cost Variance Corrective Action Plan will detail the actions necessary to bring the project back within budget and the means by which the effectiveness of the actions in the plan will be measured. If the corrective actions to be taken result in a change, the project’s overall Change Control Process must be followed as well. Upon acceptance, the Cost Variance Corrective Action Plan will become a part of the Project Schedule and the project will be updated to reflect the corrective actions.

# Cost Change Control Process

The cost change control process will generally follow the established project change request process. Approvals for project budget/cost changes must be approved by the Project Sponsor. A summarization of the change control process is as follows:

* Identify and assess the change (typically generated from a cost variance analysis or corrective action report).
* Complete a Change Request Form and submit the form, along with required supporting documentation, to the Senior Project Director.
* The Senior Project Director will review the change request and may request additional documentation prior to review with the Project Manager.
* Using the Change Request Form, the Project Manager will mark the change as:
	+ Approved, in which case both the Senior Project Director and Project Manager will sign off on the change request and adjust other project planning factors as necessary.
	+ Approved, pending additional supporting documentation, in which case both the Senior Project Director and Project Manager will mark the change as approved / pending in the change control system, and sign off on the change request. The Project Manager will specify and coordinate gathering of the required documentation, incorporate the change and adjust other project planning factors as necessary.
	+ Denied, in which case both the Senior Project Director and Project Manager will mark the change as denied in the change control, and sign off on the change request. The Project Manager will notify the requestor of the status and reason for denial.
* The project manager will document the change request outcome as necessary (update WBS, schedule and budget documentation if impacted). If there is a change in the total cost of ownership or in how the estimated costs will be incurred over the remaining life of the project, a new project budget baseline, and time-phased budget baseline should be set (i.e., these are “re-baselined”).

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# Undertaking

Approved by:

 Date:

<Name of Approver>

Cost Management Executive Sponsor

 Date:

<Name of Approver>

Cost Management Business Sponsor

 Date:

<Name of Approver>

Cost Management Project Director/Manager

 Date:

<Name of Approver>

Cost Management Stakeholder

# Glossary

**Cost Performance Index (CPI)** measures the value of the work completed compared to the actual cost of the work completed. CPI is calculated as EV/AC.

* If CPI is equal to 1 the project is considered to be *on budget*.
* If CPI is greater than 1, the project is considered to be *under budget.*
* If CPI is less than 1, the project is considered to be *over budget*.

**Cost Variance (CV)** is a measurement of the budget performance for a project. CV is calculated by subtracting Actual Costs (AC) from EV. As explained in the paragraph above, EV is the actual value earned in the project. AC represents actual costs incurred to date. Subtracting AC from EV provides a measurement to indicate the status of the project as it relates to budget and cost.

* If CV is zero, the project is considered to be *on budget*.
* If CV is greater than zero, the project is earning more value than planned and is considered to be *under budget*.
* If CV is less than zero, the project is earning less value and is considered to be *over budget*.

**Estimated Actual Cost at Completion (EAC)** provides a forecast of actual cost to complete the project based on cost performance metrics. There are three ways to calculate EAC:

* Actual Cost plus Total Project Budget (TPB) minus Earned Value (AC + TPB – EV).
* Total Project Budget divided by Cost Performance Index (TPB/CPI).
* Actual Cost plus the result of dividing the difference between the Total Project Budget and Earned Value by the product of Cost Performance Index and Schedule Performance Index (AC + ((TPB – EV)/(CPI\*SPI))).

**Schedule Performance Index (SPI)** is a measurement of the progress achieved against that which was planned. SPI is calculated as EV/PV. If EV is equal to PV the value of the SPI is 1.

* If EV is less than the PV then the value is less than 1, which means the project is behind schedule.
* If EV is greater than the PV the value of the SPI is greater than one, which means the project is ahead of schedule.
* A well performing project should have its SPI as close to 1 as possible.

**Schedule Variance (SV)** is a measurement of the schedule performance for a project, and is calculated by subtracting the Planned Value (PV) from Earned Value (EV). EV is the actual value earned in the project, and PV is the value the project schedule tool indicates should have been earned at the measurement point. Subtracting PV from EV provides a measurement to indicate the status of the baseline schedule according to the project plan.

* If SV is zero, the project is considered to be *on schedule*.
* If SV is greater than zero, the project is earning more value than planned and is considered to be *ahead of schedule*.
* If SV is less than zero, the project is earning less value than planned and is considered to be *behind schedule*.

**To Complete Performance Index (TCPI)** measures the efficiency at which resources on the project should be utilized for the remainder of the project. TCPI is calculated as (Total Project Budget – EV)/(Total Project Budget – AC).

* If TCPI is equal to 1, the utilization of resources on the project *can continue at the current level*.
* If TCPI is greater than 1, the utilization of resources on the project *should be more stringent than the current level.*
* If TCPI is less than 1, the utilization of resources on the project *can be more lenient than at the current level.*