AACE® International Recommended Practice No. 60R-10

DEVELOPING THE PROJECT CONTROLS PLAN
TCM Framework: 8.1 – Project Control Plan Implementation

Rev. December 21, 2011
Note: As AACE International Recommended Practices evolve over time, please refer to www.aacei.org for the latest revisions.

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Disclaimer: The opinions expressed by the authors and contributors to this recommended practice are their own and do not necessarily reflect those of their employers, unless otherwise stated.

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INTRODUCTION

This recommended practice is intended to serve as a guideline, not a standard. As a recommended practice of AACE International, the intent of the guideline is to improve the communication among stakeholders involved with preparing, evaluating, and using project controls information. This recommended practice (RP) of AACE International defines the overall development, implementation and management of a project controls plan. This deliverable can be included as part of an overall project execution plan (PEP), or considered a standalone document that describes specific approaches that each functional entity will use (engineering, procurement, construction, safety, quality, etc.).

The project controls plan describes specific processes, procedures, tools and systems that guide and support effective project control. The plan is a narrative or qualitative representation of the project control process, while the estimate, budget, schedule, etc. represent the quantitative aspects. Organizations may use this RP to develop a fit-for-use template as a model document, which is further customized for each specific project.

Purpose

This RP is intended to provide guidelines (i.e., not a standard) for the development of a project control plan that most practitioners would consider to be good practices that can be relied on and that they would recommend for use where applicable.

The purpose of the project controls plan should include, in part:

- A plan to implement an integrated set of work processes, procedures and applications to plan, monitor, execute and control the work. For all intents and purposes, the TCM Framework will provide the basis for general work processes. Procedures and applications (systems) can be specific to an organization or a project, and therefore, all procedures and applications to be used should be stated in the project controls plan.
- A plan to implement an integrated suite of applications (systems).
- A plan to identify roles, responsibilities, and accountabilities for the project controls team members.
- A plan to produce the project control deliverables, expectations and scope of work

The use of a project controls plan is considered a leading indicator for assisting in the success of the delivery of the project. The time invested in preparing, documenting, and communicating a solid project controls plan will increase the success of the execution of the project. The introduction of the project controls plan and all aspects within this document assist the project team in reducing project delivery risk. Therefore, any consideration not to implement the project controls plan in whole or portions of introduces a level of risk to the project.

Background

This recommended practice (RP) describes the important elements of defining the project controls plan and the requirements for communicating project information to the project team and its stakeholders. This recommended practice coincides with the TCM Framework.

As part of the TCM Framework, the project controls plan should provide the project team and its stakeholders the process model based upon the PDCA management or control cycle. As stated in the TCM Framework, the PDCA
model is a generally accepted quality driven, continuous improvement management model. The project control process is the recursive process cycle nested within the “do” step of the strategic asset management process cycle. Therefore, the project control plan will only apply to the project control process.

The PDCA steps of the project control process cycle include:

1. Project Planning
2. Project Implementation
3. Project Performance Measurement
4. Project Performance Assessment

Project control is a process for controlling the investment of resources in an asset. The project controls plan is considered the communication tool for instituting the project control process.

![Figure 1 – Project Controls Process - Total Cost Management Framework](image)

Project control may be considered the quantitative resource control subset of the project management process, and therefore, the project controls plan should be considered a subset or compliment to the overall project execution plan. Prior to developing the project controls plan a requirements elicitation and analysis process should be completed. The requirements elicitation and analysis process will assist the team in identifying the stakeholders (decision-makers and those who interface with project controls) needs, wants, and expectations; and documenting them in a form that supports planning, communication, implementation, measurement, and assessment. Figure 1 represents the project controls process of the Total Cost Management Framework.

As identified earlier, the project controls process is an integrated and quality driven process model. Also, the application of the project controls process provides our membership and others in exercising due diligence in the stewardship of the six elements of project controls, which are:

- Know what has to be done
Developing the Project Controls Plan

- Know what has been done
- Know how actual performance compares with baseline
- Know what remains to be done
- Identify and implement corrective actions to bring performance in line with expectations
- Check results of corrective action

Using the Project Controls Plan with a Phased Project Process

A phased project process, often known as a stage-gate process is a conceptual and operational road map for moving new projects from proposal to closure. Stage-gate divides the effort into distinct stages separated by management decision gates (gate keeping). Project teams must successfully complete a prescribed set of related activities in each stage prior to obtaining management approval to proceed to the next stage of project delivery. In its simplest terms, the stages of a phased project process can be:

- Ideation
- Planning
- Execution
- Closure

Specific industries, such as IT, pharmaceuticals, and the process industry have identified the stages that reflect their business models. In some cases, stages are supported by AACE International Recommended Practice No 17R-97, Cost Estimate Classification System. A key concept in project control plan implementation is phased control (continuously involved in all phases of a project), which recognizes that project control must start when work begins for a project phase. Implementation of project control cannot wait until the start of execution phase.

Continuous Improvement during the Project Life Cycle

It is expected that the project controls plan continuously be updated during the life of the project in order for the project team and its stakeholders to be kept current of the requirements and expectations of the project controls team.

The project controls plan is considered a dynamic document, and as such, revisions will be required and be distributed (revision control is required for the purposes of ensuring that the most current information is communicated to the project team and stakeholders). The project controls plan recommended practice and the plans of practitioners using this RP are dynamic and may undergo change based on contemporaneous practice.

RECOMMENDED PRACTICE

The project controls plan is considered the scope of work (SOW) for the project controls team that will support the overall project team and its stakeholders. To further assist in understanding the requirements of project controls, the project controls plan is divided into five (5) sections, with each section defining the recommended requirements for the development of the project controls plan. Section Two describes the major steps or sub-processes of project controls as per the TCM Framework. The major steps or sub-processes are organized by the PDCA model, as described earlier. The following can be considered the table of contents of the project controls plan:

1. Project Control Plan General Requirements
   a. Mission Statement
   b. Delegation of Authority Guideline