ECI PC104

Interpret project scope and develop the project controls plan

Overview

This standard is about interpreting project scope and developing project controls plans.

You will need to be able to apply the principles of project controls to interpret the project scope and develop a project controls plan. This plan must meet the requirements of how the project is to be delivered, along with all relevant environmental, social and governance (ESG) requirements including appropriate oversight and reporting framework.

Who this standard is for

This standard is for project controls-related roles, including project controls engineers, estimators, planners, schedulers, cost controllers, risk analysts, risk managers and contract managers.

Performance criteria

You must be able to:

1. gather the information required to determine the project scope
2. Identify and assess factors that affect project controls, including:
3. produce a document that details the project scope
4. compose the required breakdown structures from the identified scope
5. review the project scope and identify actions to resolve from:
6. develop a comprehensive **project controls plan** that:
7. present the project controls plan to various stakeholders and justify how its contents meet project requirements and utilises the most suitable controls approach for the project
8. obtain necessary approval for the project controls plan
9. develop a planning and scheduling strategy that meets project requirements and works with the project controls plan to achieve the project deliverables
10. demonstrate alignment with the basis of schedule, estimate and/or risk
11. apply safety in the context of your role and work in accordance with company procedures
12. follow quality requirements
13. follow all relevant procedures including completion of all required documentation, correctly and accurately
14. identify and escalate any issues relating to non-conformances
15. review and update the project execution plan, as appropriate, throughout the project lifecycle
16. identify relevant stakeholders and develop a reporting framework to meet their engagement requirements
17. determine, implement, adapt and refine the project controls procedures, methods and systems incorporating relevant **organisational management systems**
18. interpret technical information from different sources, identify and know the correct data and elements to monitor and control, ensuring the basis for any recommendations is credible
19. prepare planning and scheduling strategic frameworks and make recommendations on different levels of plans and schedule to meet different project needs

Knowledge and understanding

You need to know and understand:

1. the factors that can impact on project controls including:
2. the importance of interpreting the project scope and identifying the deliverables
3. the nature of projects, the project lifecycle, and its phases
4. the importance of good planning
5. how to interpret **sources of information** that impact on the work scope
6. the purpose/content of project controls plans and reporting framework and how they underpin the generation and reporting of meaningful controls data
7. how to develop a **project controls plan**, the inputs required to produce it and the typical processes to get it approved
8. different methods, styles and formats for presenting project controls plan information at different levels
9. planning and scheduling strategies, what they should contain and how to develop them
10. **planning approaches**, their advantages and disadvantages, which to use and when and how to use them
11. how to plan the **logic of activities**
12. the importance of assumptions
13. contingencies and allowances
14. the key elements that must be identified to develop the basis of schedule and estimate
15. the importance of quality assurance and how quality management systems support the governance of projects
16. underlying engineering and manufacturing principles including the principles of reviewing and interpreting technical project documents such as scopes of work and engineering drawings
17. the importance of safety, including **HSE knowledge** relative to the industry and project controls
18. **quality management systems and procedures** relevant to project controls
19. project controls, arrangements, processes, procedures, systems and tools including project set-up principles and requirements prior to project start and throughout the project lifecycle
20. project controls content of the execution plans of others, such as construction and manufacturing execution plans and sequences

21. how to identify stakeholders and follow a stakeholder communication plan
22. how to review the project execution plan throughout the project lifecycle, and modify, if necessary
23. different levels of planning and scheduling frameworks

Glossary

Additional information:

Sources of information
That impact on the work scope may include:

- business case/project mandate
- outline design
- technical requirements and specification
- key stakeholders
- scope of work
- invitation to tender
- contracts
- contracting / subcontracting strategy
- project definition
- bid package
- risk and opportunity register

Quality management systems and procedures
That are relevant to project controls may include:

- the main terms relating to quality and what they mean
- those relevant to project controls and how they fit into an overall quality management system
- the application of procedures and systems
- related reporting requirements and effective record keeping
- the importance of checking and confirming procedures have been followed
- how to identify corrective action to deal with non-conformances and to limit their effects
- escalation thresholds and procedures

Project controls plan

This may include:

- compliance with relevant legislation, local rules or procedures
- identification of appropriate project controls systems
- determining the data to track for progress and to generate meaningful reporting controls data that meet the requirements of the project
- identifying relevant stakeholders and their reporting requirements
- communications plan/reporting framework to meet stakeholder requirements, specifying what to report and the frequency of reporting
- roles and responsibilities (for example, RACI matrix)
- frequency of updates to schedule, cost plan and plans for environmental hazards, including carbon
- recommendations for incorporating contractual deliverables
- recommendations for the most suitable project controls approach for the project approach
- recommendations for relevant governance activities to incorporate to exercise oversight at the required scale
- recommendations for the arrangements, procedures, processes and systems to be established prior to project start and justify them compared to alternative options, including comparing the practicalities of developing systems and reporting processes
- working assumptions to use
- organisation of project controls
- measurement of % complete, rules of credit and earned value techniques
- scope statement
- schedule hierarchy, description and intended stakeholder
- specifying project information required for the set-up of data information systems (IT) to meet the needs of project execution
- specifying the project controls requirements for procedures to identify records and

data that will be required for retention
    - how these are to be secured
    - the timing of retention
    - access to these records for quality assurance or to support dispute resolution

Planning approaches

These may be:

- top-down
- bottom-up
- rolling wave
- agile

Logic of activities

These may include:

- clarify project scope
- incorporate project objectives
- determine resource availability
- identify dependencies
- develop project structures
- interfaces
- risk-adjust plans

Inputs

Documents from which to source inputs to a project controls plan may include;

- project execution plan
- communication plan
- information management plan
- risk and change management plan
- resource management plan
- quality plan

HSE knowledge

This may include:

- national and industrial health, safety and environmental standards and legislation
- the obligations of safety in design and construction, design and management (CDM) regulations

Organisational management systems

These may include:

- quality
- data management and security
- document and version control
- record keeping

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