

Member Communication Experience

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- 2. Any effective project review begins by assessing performance against the established baseline. It is essential to ensure that the project review is being conducted against the then-current project baseline. This reaffirmation should be reflected in the project report, typically on a title page listing client and project details; project description and relevant scope of work; contract type and approved value; and schedule, including key milestones. It is important that the entire review team is aligned and that no assumptions about what is being discussed are unclear. As trivial as this may seem, the author has witnessed project review meetings where various participants had different perceptions of what was being reviewed (for example, partial project vs. complete project).
- 3. The importance of safety must be emphasized continuously and at all levels. Selection of safety topics should reflect upcoming safety challenges the project is likely to face. Relevance is key. At this point, safety performance from the prior period, planned upcoming safety actions, or areas of concern should be laid out.

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review team should seek to identify common drivers of change and elevate discussions as appropriate, including subsequent management team conversations with the client. Scope control is essential to project control.

- 9. These should include current assessments of risks related to safety, cost, schedule, quality, sustainability (environmental and social), and contract. Risks that have emerged to date and their associated costs and impacts should be compared to the established risk reserves and decisions made as to whether any portions of the risk reserve should be released. Risks likely to emerge in the near term should be discussed to ensure adequate risk reserves are available and sufficient management and mitigation measures have been taken. Opportunities should be discussed similar to those described for project risks. Assumptions should be confirmed, and any assumption migration assessed for impacts.
- 10. The influence of time (schedule performance) and cost on project outcomes cannot be overstated. Review of the schedule before detailed performance and cost reviews of various project elements helps provide context for particularly impactful areas and identifies areas requiring alternative execution approaches. The master schedule review should reflect both overall major milestones as well as those specific to the project being reviewed. All phases of the project should be considered engineering, procurement, construction, and startup and commissioning. Engineering deliverables touch all phases of the project. The focus on phases and areas of emphasis will change. Reviews should highlight schedule progress, ensuring the correct schedule performance index is being used. Forecasts should be challenged where measurable improvements in productivity or other performance rates are assumed.
- 11. This series of detailed examinations of the various project elements includes:
 - a. Engineering (discipline- or task-focused)
 - b. Procurement (long lead; high value; supply chain challenges)
 - c. Construction (site; early works; major trades; specialty trades)
 - d. Commissioning and startup

Reviews will consider staffing and labor-related performance as well as any specialty equipment and its performance (e.g., tunnel boring machine). Various review elements are discussed subsequently.

- 12. Engineering reviews should include:
 - a. Planned vs. actual engineering staffing (by discipline as appropriate). This should include any lead engineering office and any secondary engineering locations, including any specialty engineering subcontractors. Support staff should be similarly reviewed for appropriateness and level.
 - Forecast staffing needs and a review of any issues or concerns related to staffing.
 - c. Engineering performance and progress for each location and discipline. Any performance issues should be examined with respect to cause and strategies to address. Earned value or other performance factors for engineering efforts should be compared with planned and forecast factors. Persistent shortfalls in performance should not be allowed to distort anticipated future performance (forecast must reflect likely realities).

- d. The status of engineering reviews and quality approvals should be examined and any quality assurance trends discussed.
- e. Gient review and approval status should be examined and impacts on performance delay and approach to improvement reviewed.
- Delayed inputs from dients, vendors, or others should be reviewed, tracked, and resolution of outstanding items discussed.
- g. The level and nature of engineering holds should be reviewed.
- Issued for procurement or issued for construction (IFC) should be reported, including an assessment of project impacts.
- The nature and types of requests for information (RFIs) received should be reviewed to identify any potential engineering quality issues.
- j. Status of Building Information Models (BIMs) should be reviewed for current and intended use, such as construction planning, progress assessment, and completeness for dient asset management usage.
- 13. procurement and fabrication reviews should be conducted for both the final project site as well as any module or fabrication yards or facilities. Staffing profiles and performance should be reviewed similar to that described for engineering labor. Specific focus and review should be placed on:
 - a. Owner Furnished Equipment availability, timing, adequacy for intended purpose; operating or warranty limitations.
 - b. Mechanical equipment vessels, tanks, pumps and other rotating equipment, heat exchangers, and heaters. Progress should be reviewed against plan and any holds resulting from client or other approvals; engineering holds or unaddressed RFIs; or material or subcontractor issues. Potential impacts should be discussed. Vendor shop loads should be reviewed as appropriate and current progress against the plan assessed. Status of equipment lists should be confirmed.
 - c. Electrical equipment and instrumentation progress should be reviewed against tag status and any delayed items discussed with respect to potential construction impacts. Any common vendor quality issues should be highlighted.
 - d. Bulk materials aggregate, concrete, steel (excluding specialty steels or custom shapes), piping (excluding specialty piping but including status against line lists), and electrical bulks and instrumentation bulks.
 - e. Specialty materials specialty steels and custom shapes; specialty piping and other specialty items that may impact overall project execution. Ensure overall material and testing status and documentation.
 - f. Valving status of procurement against valve lists.
 - g. Logistics and expediting export/import permit status; shipping, special transporters (e.g., self-propelled modular transport, SPMT), traffic and logistics; and warehousing (other than site).

- 14. review of labor, materials, and equipment; review of construction progress, considering both earned value and schedule performance index.
 - a. Labor reviews should include staffing levels by trade vs. plan; overtime and shift work usage; productivity, trends, and factors impacting productivity; safety performance; retention rates; indirect labor; and subcontract labor and performance.
 - Material reviews receipts; quantities installed and installation rates; inventories; wastage; forecast needs and any likely receipt shortfalls; and quality testing results.
 - c. Construction equipment usage (hours); fuel and fills consumption; maintenance status and schedule; specialty equipment requirements; and equipment release dates.
 - d. Indirect Field Costs
 - e. Construction progress by account civil, concrete, structural steel, buildings, mechanical equipment, piping, electrical, instrumentation, painting, insulation, scaffolding, and others.
 - f. Status of key subcontracts staffing, performance, progress, change orders, daims, and payments.
 - g. The appropriateness and effectiveness of construction technology used should be reviewed.
 - h. Compliance reviews to address both Buy America(n) and any project labor agreements as well as

- ii.
- iii. Qaims and disputes
- b. Revenue
 - i. Client furnished materials (CFM)
 - ii. Payments received
 - iii. Revenue reserves (advanced payments; payments in dispute)
 - iv. Unbilled amounts (earned but not yet billed)
- c. Cost
 - i. OFM
 - ii. Labor
 - iii. Materials
 - iv. Equipment
 - v. Subcontracts
 - vi. Indirect field costs
 - vii. Commissioning and startup costs
 - viii. Cost reserves (contingency breakdown and analysis)
 - ix. Risk reserves
 - x. Event risk reserves
 - xi. Bonds and other financial costs
- d. Cash
 - i. Cash balance and forecast (anticipated receipts and bills coming due)
 - ii. Invested cash
 - iii. Receivable status and aging
 - iv. Outstanding mobilization payments
- e. Available incentives earned, unearned, forfeited; likely amount at completion. These are often related to project Key Performance Indicators (KPI)
- f. Remaining risks
- g. Profit & Loss (P&L) comparison to project plan (as-sold values/ as contracted values) and forecast at completion
 - i. Gross project margin
 - ii. General & Administrative (G&A) and overhead including unbillable expenses
 - iii. Earnings before interest and taxes (EBIT)
- 20. review of findings and status of corrective actions; focus on any systemic issues identified.
- 21.

Effective project review meetings are essential to oversight and control of projects. A consistent, enterprise-wide approach (project report; project agenda) improves the overall quality of project reviews and facilitates the identification of enterprise risks and performance issues.

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