HEXAGON

Solution Sheet

SmartPlant® Enterprise for Owner Operators Project Execution Solution

Managing projects to ensure delivery on schedule, to specification, and within budget is a major challenge for owner operators and project management contractors (PMCs). The increasing size, complexity, and globalization of projects mean that traditional ways of managing projects are no longer sufficient. The SmartPlant® Enterprise for Owner Operators (SPO) Project Execution solution builds upon the SPO Core solution and provides pre-configured processes supporting key work processes for successfully managing the execution of greenfield and brownfield projects. These processes include:

- **Management of change**
- **Management of technical/site queries** (also known as Requests for Information)
- **Management of non-conformities**
- **Interface management**

Management of Change in Projects

Changes to the approved project design basis are the single greatest influence on project cost and schedule. Any major project will be subject to thousands of changes, of which hundreds may be under consideration at any given time. The process of evaluating changes is complex, involving many technical and administrative stakeholders in the project, and the complexity is compounded by overlapping scopes between changes.

The SPO Project Execution management of change process provides a unique level of change control within projects, and provides management with increased visibility through management reporting. This includes the critical distinction between development within existing project scope (commercial and design development) and changes to existing project scope (commercial and design changes). Changes are referenced to the underlying engineering design basis items affected: tags, documents, and parts of the Plant Breakdown Structure. This enables change impact analysis against other changes (either already approved for implementation or under review) that may be impacted by the change under consideration. Similarly, the impact on associated processes such as interface items, which would potentially be affected if the change were implemented, can be clearly seen. The SPO management of change process uses automated workflows to ensure auditable traceability through the review, approval, and implementation cycle, and to demonstrate compliance and adherence with project authorization procedures.

Management of Non-Conformities (Deviations and Waivers)

Non-conformities to applicable laws, regulations, corporate governing documents, and project specifications all need to be closely managed on projects. Traditional electronic archive- or paper-based systems suffer from poor process management and reporting. The associated history of review and approvals can be difficult to find, especially during operations. When an incident does occur on a plant, it can take a long time to gather the necessary information for the investigatory team to conduct root cause analysis and for the owner to receive permission from the regulatory authorities to resume production.

The SPO non-conformity process is closely linked and integrated with other SPO project execution processes, such as technical queries or management of change, and demonstrates compliance with regulatory requirements for managing non-conformities. SPO offers a process to manage non-conformity requests from all parties and the granting of temporary and permanent waivers or deviations. The SPO non-conformity process provides an automated workflow to track the process of receiving, reviewing, and approving non- conformities.

The SPO non-conformity process also includes the linking of non-conformities to affected plant areas, systems, tags, documents, etc. This helps make non-conformities highly visible for the operations readiness team so appropriate steps can be taken, such as increasing the frequency of planned inspection or maintenance. Where incidents do occur, SPO reduces the impact of downtime and facilitates a quicker restart of production by enabling all documentation and information related to the waiver process to be presented without delay, including complete, auditable traceability.

Management of Technical and Site Queries

On any major project, thousands of technical and site queries (also known as Requests for Information) need to be addressed and answered within a tight schedule to avoid impacting project schedule and potential variation orders. Traditional paper-based or electronic archive-based solutions demand a high level of administration and manual effort between all of the parties involved in resolving queries.

The technical/site query process in SPO greatly simplifies the administration and processing of queries. Flexible, templated workflows and management reports ensure consistent handling. Bottlenecks can be identified early to enable management to implement remedial action before claims arise.

Interface Management

Interface management provides technical interface control between project stakeholders. A typical CAPEX project will have 20 to 100 separate interfaces that need to be managed, each with hundreds of interface issues that need to be resolved. The traditional use of spreadsheets is insufficient for managing the complexity of interfaces and reporting. SPO's templated process offers hierarchical structuring of interface needs and manages the identification, responsibility, planning, and status of both physical and soft interface items. Interface issues and information needs can be linked to the affected parts of the plant. Tags, areas, systems, and more provide multiple access routes to interface information. Management reports highlight where interface issues are not being addressed as planned, enabling management to take remedial measures before consequences become serious.

Benefits

- Simple capture, retrieval, and analysis across the project lifecycle for key project management processes.
- Powerful impact analysis from tight integration between project execution processes and affected plant objects.
- Powerful management reporting for overall visibility, enabling proactive intervention and better decision-making.
- A common environment for ensured adherence to project procedures, demonstrable compliance, and complete auditable traceability through automated work processes.
- Reduced risk of project cost or schedule impact from inadequate management of project interfaces, change, non-conformity, or queries.
- Clear line of sight between Project Execution work processes through cross-references to provide complete traceability. For example, a technical query can result in a temporary or permanent non-conformity or a project change that could impact an interface item. The ability to link these project execution work processes enables complete oversight.
- Rapid, low-risk implementation based on preconfigured work processes.

About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

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