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Interface Management – OPG's Perspective.

The advent of mega, multinational offshore projects in the last decade, and the relative lack of success for the timely, within-budget delivery of these projects, finds industry grappling with how to bring a sense of balance to the planning and execution of these developments, in terms of effective planning, risk allocation and conflict resolution. Many in industry have determined that more effective interface management (IM) – meaning the proactive avoidance or mitigation of any project issues, including design conflicts, installation clashes, new technology application and regulatory challenges— would support the successful delivery of megaprojects.

While specific avenues for improvement may vary, OPG assert that because of the magnitude of today's projects, operators need greater oversight of the interface management process to ensure continuity, authority and accountability. ***The bigger the project, the greater the interfaces and the greater the project risk for asset owners and contractors alike.***

With IM problems accounting for up to 20 percent of project cost, projects need to allocate appropriate funds up-front to ensure project continuity and facilitate effective management of critical activities. Cost overruns and delays often result from poorly defined interfaces between different scopes of work or equipment supply, and failure to properly manage the resulting conflicts.

Large, multidisciplined projects can easily have some 75,000 task-related interfaces. Further, in an effort to reach first oil or gas, engineering for activities including topsides, subsea and floating systems must often work in parallel, often in different parts of the world, creating significant interface challenges.

Studies by ***Independent Project Analysis***, Inc. support these findings. The IPA reports that in the last 15 years, 14 of the industry's largest projects have experienced 46 percent cost growth over project sanction. Industry needs qualified IM people in place to facilitate information sharing and consistency of practice across project teams. On a $1 billion project, 46 percent amounts to $460 million, creating a lot of opportunity for integrating qualified IM experts into a project organization.

IM professionals need to be skilled at assessing project risks; adept at eliminating any disconnects between the operator and contractors; and effective at mitigating interfaces.

Other issues contributing to the complexity of projects include deeper water depths, higher pressures, new applications of technology, the diversity of cultures and languages, and conflicting nomenclature or understandings for technical descriptions within project documents and daily communications, both electronic and direct.

Technology issues are usually very well-researched, planned and considered. It's the subtle issues, such as working in a country for the first time or the cultural differences in project execution and contract administration or nuances in regulatory rules, which can present the greatest issues

In the last decade, misalignment of risk between operators and contractors on large EPC— engineering, procurement and construction— projects also has initiated a lot of the interface management issues, with contractors assuming a significant portion of project risk. Focusing on their own specific work scopes and schedules, contractors often coordinate their own interface management issues well. Problems arise when issues cut across delivery teams, with cross-function issues often not receiving the necessary priority," various project teams and disciplines are often unaware of how their activities impact the delivery or operation of other project teams.

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Large complex projects require a clear plan to achieve project goals. This plan should identify who has the vested interest for deliverables; should allow sufficient time for front-end planning; and should incorporate an overall project contracting strategy.

Projects should conduct a detailed project assessment, clearly defining the scope of work. We also need to anticipate how to mitigate interfaces through an effective evaluation of project tie-in points.

In considering how best to plan the work, that reorganizing work processes or re-sequencing tasks may help avert an interface problem or avoid recycling. The later an interface management issue is addressed, the greater the consequence and impact on delivery and start-up.

Projects need to establish an interface management philosophy early in project planning, working to balance risk between the operator and contractors.

Interface management begins during concept development and selection. This process includes the formation of the contracting strategy to achieve the right number of EPCI—engineering, procurement, construction, installation—contracts compared to the number of project interfaces involved.

Projects need to further understand and distinguish internal and external interfaces, which "internal" interfaces occur within a single contract or scope of work; "external" interfaces occur between contracts or scopes of work.

Interface managers must have the authority to motivate project teams and get issues resolved early, thus preventing issues from being ignored or delayed. an interface manager must have knowledge of project organizations, leadership skills and the ability to facilitate and negotiate issues.

During front-end engineering design; Operators to require the contractor to incorporate dedicated interface management personnel during FEED so that conflict issues can be effectively identified and resolved during that phase. Also during FEED, projects should establish and implement the interface management procedures to be used during execution.

This approach facilitates the selection and working of critical interfaces; establishes detailed requirements and dates for interface resolution; and will ultimately minimize installation conflicts.

In terms of motivating contractors and facilitating interface management that industry operators need to understand the technological complexity of projects while seeking to facilitate clarification of design. This approach to contracting will minimize change orders that drive up project costs.

We as an industry need to facilitate operator/contractor success. We need to identify each contractor's major cost-drivers and develop purposeful plans to achieve mutual goals.