CASE STUDY

Joint EPC venture reaps benefits using Octave OnSite Construction Planning on LNG Project

Key facts:

Industry: Energy

Country: Canada

Octave products used: OnSite Construction Planning *(Intergraph Smart Construction)*

Key benefits:

- Boosted transparency across the project with elevated collaboration
- Supported coordination and safety between the workers
- Streamlined planning and work-packaging process
- Eliminated the need for paper-based documents
- Enhanced reporting on package information for greater visibility and collaboration

A leading joint venture between two global EPC firms was responsible for delivering the engineering, procurement, fabrication and construction required for the successful execution and expansion of a liquefied natural gas (LNG) export project in Kitimat, British Columbia, Canada.

The challenge

The project's scope encompassed the establishment of two LNG liquefaction units (trains), designed to produce an estimated 14 million tons of LNG annually, with the future potential of expanding to four trains. To ensure harmony and uniformity among a workforce of more than 4,500 employees, the project required a secure and efficient method to manage people, plans, and materials from diverse subcontractors, trades and schedules.

The solution

Having previously used OnSite Construction Planning for other notable projects, the EPC firm is now employing the technology in innovative ways to enhance project management, including the creation of packages for hydro-testing, module and system walkdowns for improved visibility and insight. This strategic application firmly situates the EPC firm as a pioneer in Advanced Work Packaging (AWP) implementation, especially concerning the project's phases of Completion & Commissioning.

The outcome

In employing OnSite Construction Planning, the EPC firm has adopted a materials-focused strategy for inputting data into Component registers, which are structured in a 2D grid format. This forms the foundation for planning and organizing Installation Work Packages (IWPs). Simultaneously, the organization is using its materials management system to serve as the data source for populating these Component Registers within the Smart Construction Framework.

For other package types (i.e., Hydro-Testpacks), alternative applications are employed as the source for the Component Registers. Applications such as Octave Forte 3D or Octave Facet P&ID are utilized to efficiently load all required components, including non-modeled, for work packaging. Leveraging this process and the power of OnSite Construction Planning, users could use an intuitive interface to access pertinent information from work packages, 3D models and data, dashboards, checklists and more.

"OnSite Construction Planning has significantly helped us manage project costs with improved visibility on project plans, accelerated our response to real-world changes and seamlessly integrated with engineering, procurement and fabrication."

Project Manager

Benefits realized by using OnSite Construction Planning on this project:

- Expanded the use of OnSite Construction Planning for all disciplines and contractors across the project scope, and on modeled and non-modeled information
- Streamlined planning and work-packaging process
- Enhanced reporting on package information for greater visibility and collaboration
- Eliminated the need for paper-based documents
- Reduced the use of multiple applications to track time, resources and materials
- Enabled effective management of design & construction revisions to guard against costly, unexpected change orders
- Boosted transparency across the project with elevated collaboration
- Supported coordination and safety between the workers

Why EPCs count OnSite Construction Planning

OnSite Construction Planning helps EPCs plan and manage fabrication and construction projects by providing timely, integrated information from various sources, such as 3D models, 2D engineering tools, materials management, project controls and your scheduling system, and delivering it in an intuitive, easy- to-use interface.

From data retrieval to scheduling to materials forecasting, OnSite Construction Planning enables better business outcomes, including enhanced sustainability, increased quality, decreased whole life cost and improved productivity.

OnSite Construction Planning provides real-time forecast, status, reservation and visualization of materials through built-in integration with Intergraph Smart Materials or client internal material management systems. The OnSite Construction Planning dashboard for materials enables dynamic re-planning capabilities, and a configurable planning window enables planners to make economical modifications before problems grow.

OnSite Construction Planning is specifically designed for construction planners to maximize efficiencies in planning and managing fabrication and construction projects, resulting in enhanced safety, better quality, improved productivity and ultimately, savings of time and money.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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