



CASE STUDY

Doosan Heavy Industries & Construction optimizes with Octave OnSite Construction Planning

Key facts:

Company: Doosan Heavy Industries & Construction

Website:
www.doosanheavy.com

Industry: Power

Country: Korea

Octave products used:
OnSite Construction
(Intergraph Smart Construction)

Doosan Heavy Industries & Construction (DHIC) is a leading Korean engineering, procurement and construction (EPC) contractor offering services ranging from the manufacture of castings and forgings to power generation systems and desalination facilities for power plants.

Founded in 1962, DHIC is now one of the fastest-growing infrastructure support businesses in the world. It provides communities across five continents with the fundamental solutions, tools and structures they need to prosper.

The challenge

At the core of DHIC's long-term business strategy is the ongoing investment in information technology to optimize the delivery of its EPC projects.

In managing a recent construction project, DHIC saw the need to improve information management, in particular, the millions of details and numerous complex variables it handles, including construction materials.

According to DHIC's Lee Young Geun, "We wanted a more efficient way to plan and manage work packages. That meant we needed access to the most accurate information, such as construction quantities, to make more informed decisions."

In short, a work package planning solution was required that would allow DHIC to check the construction status of projects using current information from various sources including 3D models, and animate the works with detailed schedules.



The solution

A long-term customer of Hexagon's Asset Lifecycle Intelligence division, DHIC selected OnSite Construction Planning, a dynamic work package planning solution, to enhance productivity during construction.

Key to the decision was the functionality and interoperability of OnSite Construction Planning. In particular, DHIC wanted to integrate the solution with its existing range of Intergraph design solutions, including Forte 3D, as well as its in-house CMMS.

OnSite Construction Planning is helping DHIC to better manage construction materials for key projects based on 3D models. The company has the ability to extract materials lists from various sources and transfer them to the CMMS.

DHIC's OnSite Construction Planning team leader explains: "OnSite Construction Planning allows us to achieve better planning and management of our projects. We can use information from various sources such as 3D models to create accurate materials lists and generate precise construction quantities."

Key benefits:

- Ability to extract materials lists from various 3D modeling sources and transfer them to the in-house Completions & Commissioning Management System (CMMS) for further management, scheduling and work package planning
- View progress in all stages of construction and gain a real-time picture of construction status
- Access to accurate engineering data and complete transparency in work packages improves the accuracy and consistency of construction quantity management and facilitates smoother construction

The results

Adopting OnSite Construction Planning and integrating it with the CMMS has resulted in quality, efficiency and productivity gains.

"OnSite Construction Planning provides a platform for us to review 3D models, generate materials lists, and check information," explains DHIC's Onsite Construction Planning team leader. "It allows us to precisely record field construction status based on configured rules of credit, and report on this status. We can view progress in all stages of construction and make informed decisions with confidence."

With OnSite Construction Planning's 4D technology, DHIC planners can now sequence construction to optimize projects and visualize complex schedule information. The solution is helping DHIC identify project-critical paths and resequence work packages to achieve project deadlines more easily.

The seamless integration of OnSite Construction Planning with DHIC's CMMS is improving productivity. Real-time material integration availability reports can be produced to provide dynamic re-planning capabilities, and a configurable planning window enables planners to make economical modifications before issues arise.

The benefits from data integration have been enormous. Employees now have instant access to accurate engineering data and complete transparency in work packages. Overall, the accuracy and consistency of quantity management has greatly improved, which in turn has facilitated smoother construction.

The future

DHIC's vision is to enhance the functionality of its CMMS in alignment with OnSite Construction Planning to further streamline the construction management processes.

Young Geun Lee concludes: "In our business, it's all about improving CAPEX efficiency. That's why we are focused on continually improving the accuracy of the information available, so we can better manage people and materials to deliver our projects on-time, on-budget and in the safest and most efficient manner."

Key learnings:

- **Information accuracy is key:** When working on major construction projects involving numerous workers, details and complex variables, managing data effectively is key.
- **Integration delivers efficiencies:** Having the ability to integrate information from various sources such as 3D models, 2D engineering tools, materials management and project control and scheduling systems ensures accurate and timely decisions can be made.
- **Build on proven technology:** Partner with an organization that has the industry experience, technology, and integration expertise to address the specific IT needs of your business.
- **Invest in change management:** Providing training for new systems ensures fast adoption and helps to overcome the resistance your teams may have to new tools.

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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