CASE STUDY

Octave OnSite Completions streamlines operations and reduces work hours in Qatar's North Field East LNG project

Key facts:

Company: Chiyoda Corporation

Website: www.chiyodacorp.com

Industry: Integrated engineering

Country: Qatar

Octave products used: OnSite Completions *(Intergraph Smart Completions)*

Identifying goals

Chiyoda Corporation, a frontrunner in the EPC industry, leverages the knowledge and technology from its extensive experience in plant construction to offer 'Plant Lifecycle Engineering.' This service supports every stage of a plant's lifecycle, from business planning for process plants and social infrastructure development to design, procurement, construction, operations and maintenance.

This project involves the EPC (engineering, procurement and construction) work for an LNG plant and ancillary facilities with an annual production capacity of 32 million tons, (eight million tons x four trains). The plant will liquefy approximately six billion cubic feet per day of natural gas, newly processed from the eastern part of the Qatar North Field, the world's largest single gas field. By executing this project, Qatar can increase its LNG production capacity from 77 million tons to 110 million tons annually.

Overcoming challenges

Regardless of the scale of the project, construction, commissioning and completion activities are executed on-site under site leadership. Operating often with limited real-time reporting, this makes it difficult for headquarters to grasp the exact execution status. As a result, it becomes hard for them to recognize when and where support is actually needed. Additionally, switching from a traditional paper-based approach to a fully digital execution was needed to improve productivity.

Key focus areas were the digitalization of the Inspection Test Record 9 (ITR), alongside the project completion dossier.

Key benefits:

- Using the cloud enables checking construction, commissioning and completion status from remote locations possible
- Improvement of consistency by managing multiple tasks within the same database
- Detailed construction status management using work packages
- Digitalized operations streamline work procedures and review cycles and enable a paperless environment
- Batch preparation of handover documents for the client
- Reports automation through API integration

Realizing results

The cloud

- With cloud adoption, construction, commissioning and completion status can now be monitored from headquarters, making both tool support and execution support easier. Remote status monitoring is also possible.

Digital execution

- Workflows for ITR, punch list, preservation, etc., have been established, resulting in time savings.
- It is no longer necessary to create separate communication records for ITRs, reducing personnel needs and shortening closure time.
- Improved visibility of work status allows for easier identification of current issues.
- Managing all functions (tag, ITR, punch list, preservation, etc.) in a single database simplifies data management and saves time.
- Eliminating paper loss has removed the need for rework and storage space, reducing costs (no longer requiring 20-foot containers).
- Time and personnel required for client handover documentation has been reduced.

Introduction of work packs

- The introduction of Work Packs through AWP (Advanced Work Packaging) execution enables detailed tracking of construction status, making it easier to develop more precise strategies.

Data integration

- Previously, report data preparation took time, but API-based automatic data retrieval has shortened report creation time.
- System-level data integration displays warnings for open ITRs and Punches during certificate closure, preventing oversights and reducing rework.

Moving forward

To expand the scope of execution using tablets, Chiyoda plans to improve the functionality of the mobile app and enhance the on-site environment.

"Digitalization has significantly reduced the time and effort required to organize and analyze data to manage project completion. In terms of execution, the ability to quickly access documents, previously managed separately on paper but now available in a digital format with the latest updates, has greatly improved operational efficiency.

Furthermore, being able to check construction, commissioning and completion status at any time, whether from headquarters or on-site, provides a major advantage by enabling more accurate and timely support from the headquarters."

Akihito Kakikura
Completion Manager, Chiyoda Corporation

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.

©2026 Octave Intelligence plc and/or affiliates. All rights reserved.