



CASE STUDY

Major Engineering and Construction firm partners with Octave to improve project execution, cultivate confidence and trust in construction projects

Key facts:

Industry: Construction

Country: Houston, TX, USA

Octave products used:
Forte 3D (*Intergraph Smart 3D*), Facets Electrical (*Intergraph Smart Electrical*)

Key benefits:

- Quick and accurate identification of required procurement materials for better decision-making, eliminating confusion and waste
- Clear visibility of project details for employees and contractors leading to improved collaboration between teams, higher efficiencies
- Consistent work processes and dependable, quality data for deliverables, reliable reporting

Identifying goals

A Houston-based premier engineering and construction solutions provider to the energy industry, operating in more than 50 countries with tens of thousands of employees and covering the entire construction lifecycle to transport and transform oil and gas into the products the world needs today, sought new ways to enhance project execution and cultivate higher confidence and trust in its construction projects.

As part of the EPC's digitalization transformation (DX) journey to operational excellence (OpEx) through continuous improvement (CI), it strategically pursues innovative ways to enrich project execution delivery. Through post-project reviews and evaluations, the firm assessed several key improvement areas to optimize their valuable resources of people, time, information and capital.

Overcoming challenges

Like many multinational EPC companies with offices, teams and projects around the world, the EPC project challenges that surfaced during post-project reviews are commonly known improvement areas. For example, project issues such as inconsistent work processes that hinder team collaboration and productivity. Or

siloed information entered on a disconnected application that misses being uploaded for use, such as electrical materials for procurement sitting in an excel file on a desktop. Other instances include multiple entry points causing duplicated data to be recorded, inadequate stakeholder project visibility, poor reporting methods and more.

Altogether, these types of typical project difficulties can lead to millions of dollars in material waste, additional hours of rework and a negative impact on project team confidence and trust.

However, through recognizing and evaluating these common issues impacting their project execution, the firm seized this CI opportunity and chose to partner with a trusted technology solutions provider that thoroughly understands these types of EPC project problems. That is why it selected Octave to deliver intelligent technology solutions, Facets Electrical and Forte 3D, to help address these project challenges the right way.

“The benefits gained from employing Octave solutions are numerous, and provide our projects teams a great level of data accuracy to optimize efficiencies, thus saving us time and preventable project headaches.”

Senior Manager
Technology IT

With Facets Electrical, engineering and construction companies can fast-track project execution through a task-specific, rule-driven and data-centric solution that drives collaboration and consistency and optimizes efficiency to design and maintain a safe, reliable power distribution system from load identification to plant startup. Furthermore, through the integration with Forte 3D its project teams can break through barriers imposed by traditional technologies to enable a genuinely integrated engineering environment.

Realizing results

Since partnering with Octave, the EPC has digitally transformed over seven major projects and gained numerous benefits from enhanced project execution using Facets Electrical integrated with Forte 3D. The company’s trust and confidence boosted in accurate data, deliverables, reporting, stronger collaboration, better project execution, schedule shrinking and potential budget savings. Here are some of the advantages gained for its project teams.

- Single point of data entry for better quality control
- Consistent work processes for streamlining actions
- Reliable data for accurate reports and deliverables
- Detailed cable management boosts efficiency
- Data reconciliation between other databases reduces confusion
- Global Workshare with access permissions for managing data privacy and protection
- Plant Breakdown Structure (PBS) Permission Groups with access variations, permissions and responsibilities;



Structure drives equipment TAG naming conventions Integrated Facets Electrical with Forte 3D allows for cable tray routing via contiguous network

- Cable tray management in Forte 3D guarantees precise cable lengths for voltage drop calculation and cable material take-off
- Faster, more accurate cable lengths, tray fill and routing
- Templated Facets Electrical reports deliver consistent information
- Data Handover incorporates Facets Electrical defined Brief Properties for project execution, ensuring accurate, consistent and complete information

Moving forward

Future next steps include the continued use of Facets Electrical integrated with Forte 3D to maintain costs across the project life into OnSite Construction Planning (formerly Smart Construction) in order to use the same routing information to optimize cable pulling work packages and cable trays installation readiness to increase project efficiency.

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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