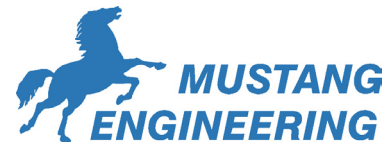


CASE STUDY

“The challenge facing Mustang is finding the best approach to manage document processing and data flow, making sure that all the parties involved have fast, easy, secure access to the information they need.”

COMPANY PROFILE

- Mustang Engineering, L.P.
- Construction
- Houston, Texas
- <http://www.mustangeng.com/>
- Citadon Product Purchased - Citadon CW



EXECUTIVE SUMMARY

Mustang Engineering provides engineering design, management, and consulting services for some of the most sophisticated upstream oil and gas structures, processing plants, midstream, pipelines and automation and control projects. Every project requires thousands of drawings, plans, specifications, datasheets and related documents that need review by internal team members, external contractors, and, of course, the client. The challenge facing Mustang is finding the best approach to manage document processing and data flow, making sure that all the parties involved have fast, easy, secure access to the information they need.

To facilitate team collaboration and streamline document management, Mustang has adopted Citadon Collaboration Workspaces (CW) as a centralized Web-based document management system. Mustang uses Citadon CW to store essential project documents and manage workflow and approvals. Standardizing on Citadon CW allows project stakeholders to gain immediate online access to critical documents, complete with an audit trail and built-in management tracking. Therefore, regardless of location, team members have immediate access to the latest document version with the most recent comments. By standardizing on Citadon CW, Mustang can complete projects faster, with fewer change orders, resulting in substantial savings in both time and money.

Of course, Mustang works with some of the largest companies in the world, including BP, ChevronTexaco, ExxonMobil, and Shell, to name a few. Many of these clients have their own established document and/or project management/collaboration systems. Mustang's ability to provide “best in class” project execution utilizing the best tools for each phase of the project work sometimes requires integration with the client's systems. For example, recent projects for some of these major client's has required Mustang to use Documentum and ProjectWise for document management. For most of these projects, Mustang used Citadon CW during the EPCm phase to execute the work and collaborate between multiple parties while the client's software was only really used as a document repository. Using Citadon CW to facilitate collaboration, imposing workflow controls and acting as the existing document

storage system during the EPCm project phase simplified collaboration and facilitated the efficient and seamless execution for all parties.

ABOUT THE COMPANY

Mustang Engineering, a Wood Group company is an independent services provider to the domestic and international oil, gas and chemical industries. Mustang specializes in design, engineering, procurement, project management and construction management of upstream oil and gas facilities and structures, midstream projects, process plants, petrochemical and chemicals, pharmaceuticals, pipelines, and automation and control projects. Capabilities range from feasibility studies through startup for both onshore and offshore projects. Mustang has U.S. offices in Houston, Texas; Tampa, Florida; Birmingham, Alabama; Savannah, Georgia; Monroe, Louisiana; Columbus, Ohio; Martinez, California; and Philadelphia; as well as international offices in London, England and Perth and Melbourne, Australia.

THE BUSINESS CHALLENGE

Mustang's culture embodies an entrepreneurial spirit, and to keep this spirit alive, Mustang gives its project leaders total control over their individual project areas, including how they collaborate with clients and subcontractors. Thanks to the efforts of Mustang's Project Information Management Group, led by Stephen Kersch, Mustang's project teams are starting to standardize on Citadon CW as their preferred document management system and collaboration platform. “Customers demand that we remain forward-looking and provide the best solutions available in the market,” said Kersch. “We need to deploy tools that are not only useful, but are easy to use. That's why we have standardized on Citadon CW.”

Kersch notes that using a Web-based document management and collaboration strategy like Citadon CW is essential to the success of Mustang's growing international business. Most projects typically require the collaboration of project team members, subcontractors and fabrication/construction contractors from around the world. For example, on one recent large project, the Houston-based project team had to coordinate engineering and design efforts with an international engineering and design firm

CASE STUDY

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based in Caracas, Venezuela. In addition, several international fabrication and equipment suppliers were involved in the project. The only practical and cost/time efficient way to share documents and track the progress of the project was to use Citadon CW for document management and collaboration.

THE CITADON SOLUTION

Citadon CW has proven an ideal electronic document management and collaboration tool for Mustang and its clients. Citadon CW provides a simple interface and balance between document management, business process management, and collaboration. Traditionally, document management and collaboration has been driven by less efficient storage and paper processes – e-mail, courier packs, network storage sites, etc. – which result in data silos that make it difficult to share information. These data silos lead to other challenges such as data security, version control, establishing an audit trail, and avoiding unnecessary delays, not to mention the additional cost of document reproduction and couriers to handle paper transfers, which also results in additional project execution delays and expense.

While enterprise-based data management systems digitize paper processes and provide a central document repository, they are difficult to use for document collaboration. Enterprise-based archives are typically hard to access, especially by external project partners, and archives don’t typically impose sufficient workflow rules.

By adopting Web-based collaboration, Mustang gains a number of advantages from Citadon CW’s Electronic Document Management Systems:

- Project documents become immediately available to authorized users once they are loaded into the system.
- Access is available from anywhere in the world via the Internet.
- Documents are made secure at multiple layers, including at the workspace, folder, and document levels.
- Citadon CW features a built-in viewer that supports more than 250 file types, so authorized users can access drawings, plans, CAD files, design specifications, and other project-critical data even if they don’t have the necessary software on their computers.
- An integrated redline tool works on top of the document file viewer format so project team members can communicate changes effectively.

- Citadon CW provides a detailed audit trail for each document so users know they are reviewing the latest version, and also provides audit information on document access by users to assist project management.
- Automated workflows can be configured to enhance the collaboration and management of information resulting in reduced turn-around time during project execution.
- Most importantly, Citadon CW provides a single point of access for all materials throughout the lifecycle of any project, creating a permanent library of electronic drawings and documents in their native format.

Benefits of Web-BASED Document management and Collaboration

While it is difficult for Mustang to specifically measure return on investment in dollars, the return “value” resulting from saving time during execution, saving transportation costs, and adding to client satisfaction by using Citadon CW is substantial. As one example, requiring all participating vendors to submit their documents via Citadon CW streamlines the submission, review, and return of documents to the vendor. This shortens the turnaround cycle by a minimum of four days for every vendor package. In one case, using Citadon CW was able to handle procurement and vendor document processing to purchase more than \$12 million dollars of equipment in approximately 6 weeks, where the schedule and estimate included 10-12 weeks for this phase of the work.

Another advantage is Citadon’s ease of configuration to customize the tool. “Every client is different and every project manager is different,” Kersch notes. “With Citadon we can create templates and functionality to meet the customized needs of each project team. Citadon’s technical support team has been a real asset in providing information to assist in configuring Citadon CW to meet Mustang’s varied project requirements. The tech support team is made up of consultants and field applications engineers with background in our industry. They understand the real world,” Kersch said.

For the future, Mustang will continue working with Citadon’s product development staff to refine Citadon CW and find ways to increase project management efficiencies shorten time to completion for new projects and simplify the user experience.

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