

Gulf Coast Petroleum Refiner Successfully Migrates Plant to Modern HMI with an On-Shore Development Team

With an aging control system, a large petroleum refinery was due for an upgrade. A unique approach, using MAVERICK's on-shore development resources, kept the project on budget while a detailed quality cycle and flexible team ensured a smooth startup.

Objective

Large human machine interface (HMI) conversion projects often require a trade off between development costs versus quality and support. Utilizing outside resources to support screen development is a common way to reduce cost, but any disconnect between the developers and the rest of the project team can be problematic. A hybrid approach to this problem keeps cost down while maintaining quality and support.

Results

By focusing on training and planning upfront, implementing a careful review process and utilizing an experienced and flexible team, MAVERICK was able to deliver quality high-performance HMI (HP-HMI) screens on schedule and within budget ensuring a seamless transition for the operating staff.

Solution

MAVERICK's PlantFloor24® global operations center in Columbia, Ill. is staffed 24 hours a day, 365 days a year to support customers remotely. With resources always available, the center provides the perfect opportunity for development work to occur during those times when remote support is not being provided. This model compresses the schedule and reduces project cost for customers.

The core development team for this project included PlantFloor24 analysts and an HMI subject matter expert.

In order to ensure quality and minimize rework, training and storyboarding were upfront priorities for the team. Storyboarding is the process of laying out the screen definition and hierarchy optimized for process needs.

The project leaders utilized several weeks of intense in-person and remote training with simulation systems to ensure all developers were proficient with both the technology platforms and the customer standards.

Development was carried out using several quality feedback loops. This process ensured screens submitted for approval were error-free, facilitating a review focused on overall layout and quality.



The technical conversion process started with screenshots and data exports from the existing system. Quality checks ensured all elements from the original screens were captured in the new screens.

Depending on the needs of the project, as-is screen conversions or performance optimized layouts were created using industry recognized best practices.

Using PlantFloor24 resources on the development team allowed for efficient resolution of punch list items during factory acceptance testing (FAT) and startup commissioning. The team was already familiar with the control system, project standards and customer expectations. Because the team is familiar with working remotely, they were available to make updates during the off-shifts due to an around-the-clock staffing model.

MAVERICK's PlantFloor24 resources also allowed for a dynamic team composition. Resources were available to increase the team size when schedule or scope changed.

Once the project was complete, the team was trained and ready to continue supporting the customer 24 hours a day, seven days a week, 365 days per year.

The MAVERICK Difference

The combination of extensive experience and an on-shore development team resulted in higher performance for lower cost. Why off-shore when you can on-shore and make sure your project team provides around the clock support once the project is finished?



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