

CUSTOMER STORY

# Maintenance & Reliability Collaborate for a Total Asset Management Solution

This Midwest refinery had always wished to harness the power of its smart instrumentation installed base, but the business case for additional investments to complete that journey eluded the Maintenance Department. While the evidence clearly suggested that Facility Operations could benefit from spending less time reacting to failures and assigning more resources predicting them, the necessary network additions were viewed as a speculative and costly capital barrier to entry. Just as unscheduled production losses could be attributed to control valve failures, the Maintenance Department discovered that similar issues related to equipment reliability were plaguing other departments within the facility.

***By partnering across functional lines with the plant's Reliability Department, a common set of operating challenges forged an alliance between different system and equipment owners—with a joint purpose of minimizing random equipment failures leading to unplanned downtime.***

While the approach of condition-based monitoring was already an established and trusted work practice on rotating equipment, both Maintenance and Reliability understood that the same philosophy could be applied to other critical assets—posing equal (or greater) risk to Operations. Furthermore, Reliability realized that complementing existing work practices with online technologies could be an effective means of expanding its managed asset base and analyst productivity.

A viable strategy to demonstrate broader ROI was emerging, based on showcasing a universally accepted Reliability model across multiple asset classes. With it, the business case for Total Asset Management was born and would continue to substantiate future infrastructure investments that would benefit both Maintenance and Reliability.

OIL REFINERY

## Total Asset Management, a Win-Win-Win

Experitec partnered with the refinery to introduce Total Asset Management to normalize the principles of equipment health and performance monitoring across all types of assets in the facility, including those top tier critical valves responsible for production losses. Through the journey, Emerson's WirelessHART® solutions enabled edge analytics and portable analysis tools to be introduced as a two-pronged approach to magnifying their asset monitoring effectiveness and troubleshooting capabilities. Emphasis on failure mode and effects identification informed the decision process of where, and how many, predictive tools would be deployed to identify root issues.



*With more sophisticated trends from multiple PdM technologies, Maintenance and Reliability began to confidently catch impending failures and derive remaining useful life for their most critical assets. With each incremental win, prior roadblocks and funding hurdles dissipated, allowing the refinery to focus its efforts on expanding the wireless monitoring networks to new locations, applications, and types of assets.*



### A New Condition-Based Monitoring Approach

Previously, this facility depended on its staff as the only line of defense for detecting and preventing critical equipment failures, with technicians and analysts manually collecting operating data from equipment in the field on a routine basis. The limiting factor in any traditional Predictive Maintenance (PdM) program has always been a function of manpower, equipment availability, and equipment accessibility. Unless all three of those stars align, countless assets persist in missing even the most minimal monitoring interval, which meant that failures were missed, root problems persisted, and reactivity prevailed. This refinery aspired to flip its Maintenance philosophy from one of being heavily dependent upon schedule-driven data collection to one being more dependably centered on actual condition-based monitoring.

*By applying this same principle across different asset classes and equipment types, the refinery discovered that valves and smart instrumentation could just as easily be driven towards more reliable operations as rotating equipment—by adopting technology and adapting corresponding work practices.*

Experitec has served the industry for over 100 years, partnering with our customers to gain competitive advantages and unlock the hidden potential in their facilities. By optimizing operator and control performance, improving asset reliability, creating safer places to work, and helping clients reach their environmental and sustainability goals, Experitec is dedicated to achieving positive outcomes for the businesses we serve. Our unique long-term partnerships with Emerson and others enable us to connect customers with innovative technologies, subject matter expertise, and 24/7 lifecycle support and engineering services. As employee owners, the Experitec team is eager to partner with you on your next automation or reliability project in a positive, driven, and collaborative way. We have local offices in St. Louis, MO; Kansas City, MO; Memphis, TN; and Decatur, IL; as well as warehouse and service locations in the surrounding areas.