KBC

A Yokogawa Company

READINESS · SITUATIONAL AWARENESS · DECISION MAKING · OPERATIONAL EXECUTION · VALUE SUSTAINMENT

The Digital Journey for One Company

A solid foundation with one version of the truth paved the way for success

Key Benefits

- One version of the truth
- One common system all can immediately access
- Good data for good decisions

Background

- Regional North American refinery
- Large growth via multiple acquisitions
- Different operational cultures, localized data without integration

KBC Solution and Results

- Petro-SIM technology
- Consistent, reliable data
- Model-based balancing and calculations

Client Challenge

A regional refiner in North America had rapidly grown via multiple acquisitions that all had different corporate cultures. Their data sources were varied, dispersed, and the platforms lacked connectivity. Data requests had to go through each site plant engineer, who then sent a spreadsheet via email.

They were constantly working in spreadsheets. All the data was localized which made it difficult to view. The process was inefficient and unsustainable.

To solve this situation, the operator needed to set up a method to connect directly to the primary data sources and remove the need to rely on any one person for data. On this premise, they started on their digital journey.

The Solution

Having the right tools to assess data quality is a vital step for any digital journey. There is a cost to bad data. It leads to poor decisions.

To avoid this, the operator's goal was to get a solid foundation for all their data by using one agreed upon system that everyone could access.

Their first step was to get an understanding of their current level and quality of data. They evaluated their current data sources and realized they had too many. It was necessary to pair them down to a reasonable number.
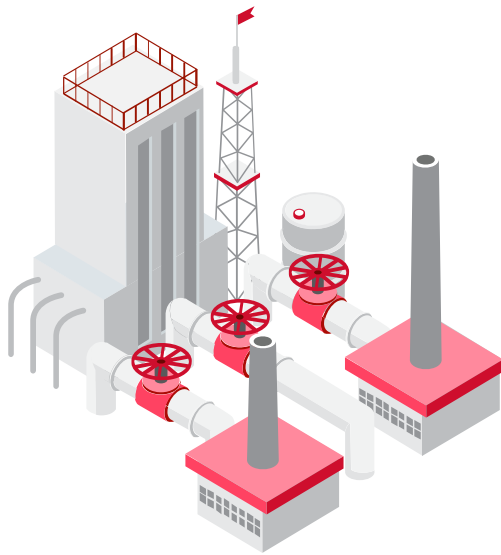
Then they started connecting the primary data sources and integrating the data into tools and models.

An issue arose after everyone gained access to the data. Individual teams began developing their own tools to determine corrected yields and conditions, creating silos. These customized tools were inconsistent, impacted troubleshooting sessions, and resulted in duplication of effort. This negated their primary focus, one version of the truth for all.

They formed groups around a given technology based on who was strongest in that area to resolve this issue. The teams then identified which tool would be the best for all.

In conjunction with their data analysis, they also started developing visualization tools. They used an Internet visualization for Petro-SIM® technology. The first tool they rolled out was unit health monitoring. This was put in place to support the organization's safe, stable, and reliable operations initiative. It remains a strong contributor to their operational excellence program. At the same time planning and economics took on an enhanced role in the balancing of the process units, and determining the reconciled yields using Petro-SIM software.

They put Process Performance trackers in place. These are Petro-SIM based flowsheet models that run online once a day to provide a snapshot of the last 24 hours of the unit. It was important for them to have one agreed upon system. Now, the organization gets reliable data reconciliation. They have confidence that system calculations are done in a consistent manner across all system units.

The operator is starting to coalesce around the one version of the truth. At all sites, engineers use these models as their primary data source for monthly reports. The biggest thing to come out of this was using model-based balancing and calculations using Petro-SIM technology.

Results

It took a lot of work and 15 years to get here. Now, their data resides on a common platform across their entire network. The company is now in a position where their data quality continues to improve. While not yet perfect, they are able to work around the data flaws because of Petro-SIM technology.

They plan to link data from the Petro-SIM Process Performance trackers into process historians via the PI AF interface. This way all their Engineers and SMEs can have easy and quick access to common data.

No longer do they need to use raw data for calculations. They have the capability to run models, either once a day, or every 10 or 15 minutes, to provide accurate data calculations that help them make better decisions.

The next step is to complete the corporate-wide rollout of the Process Performance trackers. It is essential to implement this technology at every site and across all the major units. They will continue their push to improve overall data quality across operations for increased efficiency and best possible decision making.

All about **EXCELLENCE**