Inefficient operations mean that refining facilities are already taking on the burden of significant risk.

Virtual technology leads to better outcomes.

By reducing downtime by validating asset changes offline before execution.

Improve safety through hazard analysis in virtual reality.

Increase profitability and residual value by increasing Gross Refining Margins.

An Integrated Technology Environment can encourage multi-disciplinary teams to collaborate.

Set standards for operational performance, security, and compliance.

OPTIMIZE ORGANIZATION’S BUSINESS PROCESS

To understand and optimize business processes.

To understand patterns in large data sets.

To understand & optimize product performance.

Digital transformation is needed to automate, modernize, and provide a foundation for intelligence and analytics using KPI-driven dashboards.

Establish a solid platform to develop a Virtual Twin to model plant systems and processes.

With the use of Virtual Twins, decision-making capabilities can improve substantially.

Virtual Twins offer the ability to simulate and model processes in a virtual world before going live in the real world.

Data management advances encourage enterprises to build full digital twins of operating assets. The overlay of economic and financial data will usher in a new era of business management based on evidence-based decision-making.

Virtual Twins offer the ability to see what works and what doesn’t in an artificial world before going live in the real world.

REAL-WORLD EXAMPLE

Apply analytics to determine the right balance of feedstock input to optimize the product mix for meeting market demand, realizing maximum cash margins.

The Top 2015 Drivers

Lower Commodity Prices put pressure on HR budgets.

Unplanned or prolonged shutdowns result in lower yields.

Optimizing equipment maintenance and asset utilization.

Ensuring compliance and security requirements.

Optimizing feedstock inputs to meet market demand.

Managing rapid expansion of facilities and processes to capture new markets.

Compensating for the lack of experienced staff due to budget constraints and workforce demographics.

An Integrated Technology Environment can encourage multi-disciplinary teams to collaborate.

50% - 30%

of companies will use simulation and virtual twins for products, processes, and facilities with real-time performance feedback in the next 1-2 years.

Optimizing Plant Operations in the Oil & Gas Industry: Bringing virtual into reality.

Recommended approaches:

1, 2: IDC EI report: Business Strategy: The Impact of Lower Oil Prices on Oil and Gas IT Budgets Is Not as Much as Expected.