



## Case Study

# Digitizing Chemical & Petrochemical Plants

Lessons from how we helped adoption of Industry 4.0 at scale for a Global Energy Company

Our Client is the only American Energy company to be included in the World Economic Forum Lighthouse Network for adopting Industry 4.0 at scale.



## Business Challenges

- ✓ Long cycle times for business decisions
- ✓ Limited visibility of real-time asset performance and associated accuracy of production reporting
- ✓ Inability to identify production losses & foresee unplanned downtime
- ✓ Inability to effectively utilize data for production optimization

## Solution Highlights

Legacy equipment instrumentation for effective data capture

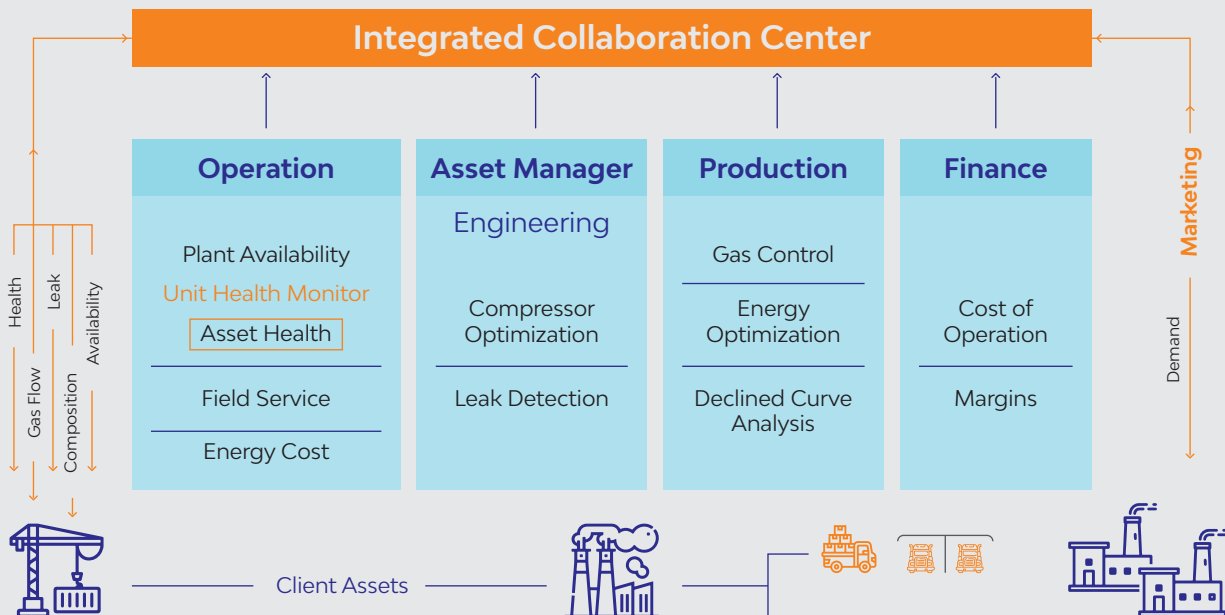
Creating an Asset Hierarchy for a connected ecosystem

Leveraging OSI Pi for data aggregation, visualizations & simulations

Digital Twins and AI/ML Algorithms for enabling Predictive Maintenance

Correlating OT data with Enterprise (Financial, Back-office) Data for decisions

### Bringing End to End Visibility in Operations



## End-to-End Visibility & Optimization

1

Creation of ICC to provide centralized, integrated & real-time visibility, workflows & data-on-the-go across plants nationwide for optimized operations

2

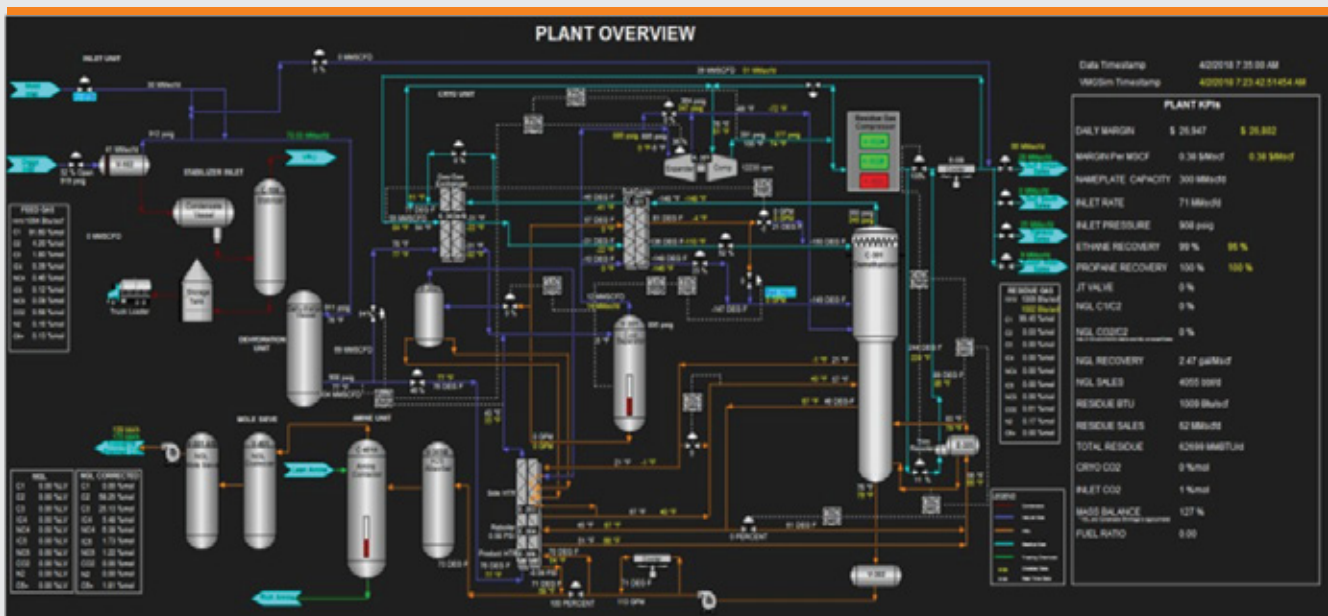
Real-time production surveillance & optimization, as well as correlation of operations data with contracts data to support operations decision making

3

Availability of real-time high-quality data enabling modern maintenance paradigm – predictive & risk-based maintenance

3

Remote monitoring of equipment health and performance minimizing the need for engineers to drive to assets to inspect them



Meeting market demand at right price with cost optimization by linking real-time & modelled data to provide current & potential value of plant operation

# Business Benefits

We have successfully delivered \$13M in margin improvement & an overall value of \$50M+ Return on Investment

## Some of the key KPI Improvements:

**50%**

Improved uptime, & reduced ad-hoc maintenance

**20%**

Reduction in operating costs

**70%**

Reduced field crew inspection miles & 28% lower repair visits

**12500**

MMBTU Average Volume Gas wastage saved per month

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