



## Case Study

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# Digital Twins Maximize Asset Performance and Improve Equipment Uptime for US-based Process Manufacturer

Our Client is a leading US-based Midstream O&G firm with 60+ gas processing plants across the region.



## Business Challenges

- ✓ Lack of central real-time visibility prevented operations SMEs from monitoring and managing equipment operations centrally
- ✓ Critical assets at most sites monitored and managed manually - based on time-based maintenance; lack of real-time data prevented the operator from modernizing their maintenance strategies
- ✓ Missed opportunities for cross-plant optimization - ability to redirect gas to plants with additional capacity, when critical assets are down in one plant
- ✓ Sought to reduce miles driven by field technicians to perform standard inspection and maintenance activities

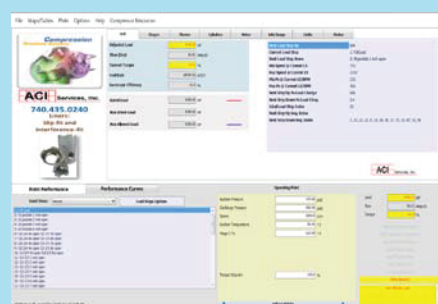


## Solution Highlights

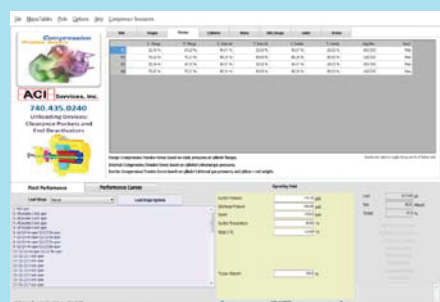
- ✓ Instrumentation of legacy equipment and aggregation of real-time data as per asset hierarchy into enterprise historian
- ✓ Detailed visualization of critical equipment operating parameters such as pressure, temperature and energy consumption to enable SMEs to analyze and recommend operations changes
- ✓ Integrated view of operations across sites into an Integrated Collaboration Center enabled SMEs to drive optimization across plants
- ✓ Digital Twins and AI/ML Algorithms to enable predictive maintenance



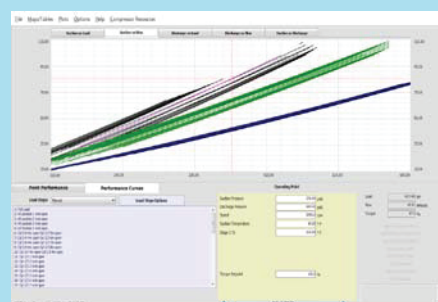
Real-time operations data from equipment



Performance Simulation to identify ideal operating window



Detailed performance parameters to allow SME to analyze and make informed decisions





## Outcomes Delivered

- 1 Integrated Operations: Enabled central visibility of plant operations allowing stakeholders to collaborate effectively to manage performance in and across plants.
- 2 Remote monitoring of equipment health and performance reduced miles driven to inspect and manage them.
- 3 Comparison of real-time data with simulated data to drive asset, unit, plant and cross-plant optimization opportunities
- 4 Ability to transition from time-based to condition and risk-based predictive maintenance strategies.



## Business Benefits

**12% Increase**  
in equipment uptime

**20% Reduction**  
in maintenance cost

**75% Reduction**  
in miles-driven for maintenance

## About LTIMindtree

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