Case Study

IoT-Led Compressor Health Monitoring

Client

The client is a leading midstream company with over 50,000 miles of pipeline and more than 1,400 compression assets across more than 450 stations.

Challenges

- ✔ **Human Capital Productivity:** the client needed manual presence and intervention at compression sites to assess and manage continuous operations which led to inefficient usage of expert resources.

- ✔ **Efficient Maintenance:** a lack of analytics propagated preventive rather than predictive maintenance practices leading to non-essential maintenance downtime and lost productivity due to unplanned breakdowns.

- ✔ **Asset Utilization:** the inability to gather and process real-time data meant that the client could not monitor the current health of the asset and attain higher efficiency of utilization while being able to drive proactive actions to prevent shutdowns.

LTIMindtree Solution

- ✔ **Cloud-based Data Lake:** disparate sources of data from multiple asset monitoring stations were collated and moved to an Azure-based data lake to serve as a centralized repository with advanced analytics capabilities.

- ✔ **Asset Analytics:** LTIMindtree deployed advanced modelling and statistical analysis capabilities using its proprietary Mosaic platform to create predictive models for breakdown prevention.

- ✔ **Experience Transformation:** empathy-led design interventions created user-friendly, cloud-based visualizations of real-time asset health and performance to speed up decision making for business users.

Business Benefits

15%
Improved reliability for compression assets due to predictive and proactive maintenance practices.

75%
Reduction in miles driven for maintenance.

20%
Improvement in utilization of compression stations.