

**LTI**

Let's Solve



## Preventative Gas Pipeline Maintenance for O&G Midstream Major



A Larsen & Toubro  
Group Company

## **Client**

The client is a leading US-based Midstream Oil & Gas firm with 60+ gas processing plants across the region.

## **Business Need**

Create a preventative maintenance solution leveraging IoT data for continuous monitoring of critical parameters inside pipelines to send alerts of suspected leaks for fixing, for a leading Oil & Gas Midstream Major.

## **Challenges**

Gas leaks in pipelines not only result in loss of revenue, but also pose severe environmental risk by way of oil/gas seepage, which could have adverse impact on wildlife, plants, and water. Leak detection in pipelines spread over thousands of miles in remote areas has been a major challenge for the client that could not be solved through deployment of human capital. The objective was to build an analytics-based solution to leverage technologies for monitoring critical parameters to detect leaks.

## **LTI Solution**

LTI developed a scalable framework based on statistical control and machine learning midstream process converging to cover 67K miles of low-pressure pipeline and 22 gatherings which comprise a total of 40,000+ active meters. It featured:

- ✓ Consideration of gauge pressure, gas volume, asset information, and business rules for predictions.
- ✓ Data enrichment by creating additional 60+ derived variables based on ML and statistical process rules.
- ✓ The algorithm to define, detect, determine, and deploy leak occurrences.
- ✓ Democratized solution to visualize leaks and related trends.
- ✓ Self-learning framework built using Azure ML, Snowflake, Python, and Power BI.

## Business Benefits

Proactive detection with condition-based maintenance calendars for field staff.

Higher accuracy of leak detection and reduction in false alarms.

**15%** reduction in field service costs through reduced truck rolls.

LTI (NSE: LTI) is a global technology consulting and digital solutions Company helping more than 435 clients succeed in a converging world. With operations in 31 countries, we go the extra mile for our clients and accelerate their digital transformation with LTI's Mosaic platform enabling their mobile, social, analytics, IoT and cloud journeys. Founded in 1997 as a subsidiary of Larsen & Toubro Limited, our unique heritage gives us unrivalled real-world expertise to solve the most complex challenges of enterprises across all industries. Each day, our team of more than 36,000 LTIites enable our clients to improve the effectiveness of their business and technology operations and deliver value to their customers, employees and shareholders. Find more at <http://www.Ltinfotech.com> or follow us at @LTI\_Global

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