Satellite Image Analyzer

Manufacturing

Oil and gas (O&G) companies' pipelines and remote assets extend over thousands of kilometers, often passing through deserts, forests, and water. Preventing damage to these expensive assets is challenging, but critical for any O&G enterprise. Traditional methods do not accurately monitor vast stretches of terrain for signs of problems in the pipelines.

Tata Consultancy Services' (TCS') Satellite Image Analyzer is a reliable and terrain-independent solution for round-the-clock surveillance of enterprise assets. Our solution is accurate, convenient, eco-friendly, and cost effective. We leverage digital technologies to empower enterprises to proactively respond to risks across the entire supply chain, thus avoiding calamities.

Overview

Pipeline damage can endanger human life and poses huge climatic risks as well. Excavation, natural forces, and third party damage account for about one-third of pipeline integrity breaches. Changes in terrain, construction activity, and growth of vegetation can be risky for pipeline operators. It is not only difficult but also expensive to detect such factors using traditional means such as land-based surveillance and aerial sorties. Operators spend millions ever year to evaluate, inspect, and maintain the integrity of pipeline systems, and ensure consistent and reliable services.

TCS' Satellite Image Analyzer leverages image analytics and change detection algorithms to identify risks in a pipeline corridor. Built on GE's Predix* cloud platform, our solution automatically triggers alerts when pipelines or remote assets face problems, enabling operators to respond in time and avert potential disasters.

Predix is a trademark of General Electric Company

Our Services

Part of TCS' Digital Store™, the Satellite Image Analyzer compares satellite, thermo-graphic, and drone images over time to detect changes in the assets and identify potential risks. Our solution can be easily integrated with automated business processes and can be used to develop real-time actionable apps and portals with visualization capabilities. It is a safe and terrain-independent solution that offers a cheaper and more reliable option for proactive surveillance of enterprise assets. Though it is built on Predix, it has the flexibility to be deployed on other IoT platforms available in the market.

Benefits

Our Satellite Image Analyzer offers benefits including:

Unmatched visibility and high precision monitoring of locations

Avoid unnecessary shutdowns and attain nearly 100% pipeline utilization

The TCS Advantage

TCS brings extensive domain knowledge due to our hands-on experience with several vast pipeline networks. We also leverage the best digital technologies in the industrial space. Our engineering and mathematical capabilities enable us to ensure both excellence and accuracy. This results in digital solutions that are easy to integrate, while our cross-functional skills ensure a high degree of reusability in other areas.

TCS' Digital Store™ is a suite of ready-to-use digital solutions that help global enterprises deliver superior customer experience, conduct real-time data analytics, and achieve organizational agility.

Up to $3000 per hour cost reduction compared to aerial inspection

Greater visibility into overall utility networks, operations, maintenance environment, and safety for proactive asset management

Significant reduction in cost and time for monitoring non-instrumented assets

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About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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