



Digital pipeline defect & corrosion management solution

Corrosion and structural defect detection of oil and gas pipelines using SAP Leonardo ML and IOT



As oil and gas pipelines run through miles of harsh terrain, relying on physical inspections of pipelines for signs of wear and tear is not only time consuming and costly but also exposes workers to unnecessary hazards. Digital pipeline defect & corrosion management solution involves visual inspections with drones and real-time monitoring of pipeline networks using ultrasonic sensors for corrosion and other structural defects in pipelines.



Failure prediction and integrated maintenance operations with one-click maintenance notifications created in backend S/4HANA systems



Analysis of failure patterns and trends, and adoption of maintenance solutions in real-time

Real-time tracking of pipeline asset integrity across remote locations using drones and sensors

Solution features

Visual inspections:

Visual detection of surface corrosion and structural defect or leakage of pipelines using self-guided drones remotely.

Remote monitoring with sensors:

Non-destructive testing using ultrasonic sensors for measuring pipeline wall thickness and erosion due to corrosion.

Failure prediction:

Structural failure prediction of pipeline sections due to corrosion based on historical corrosion data of pipeline in various geographies.

Defect analytics and trends:

Pipeline failure trend analysis across regions, defect types, severity and current trends.

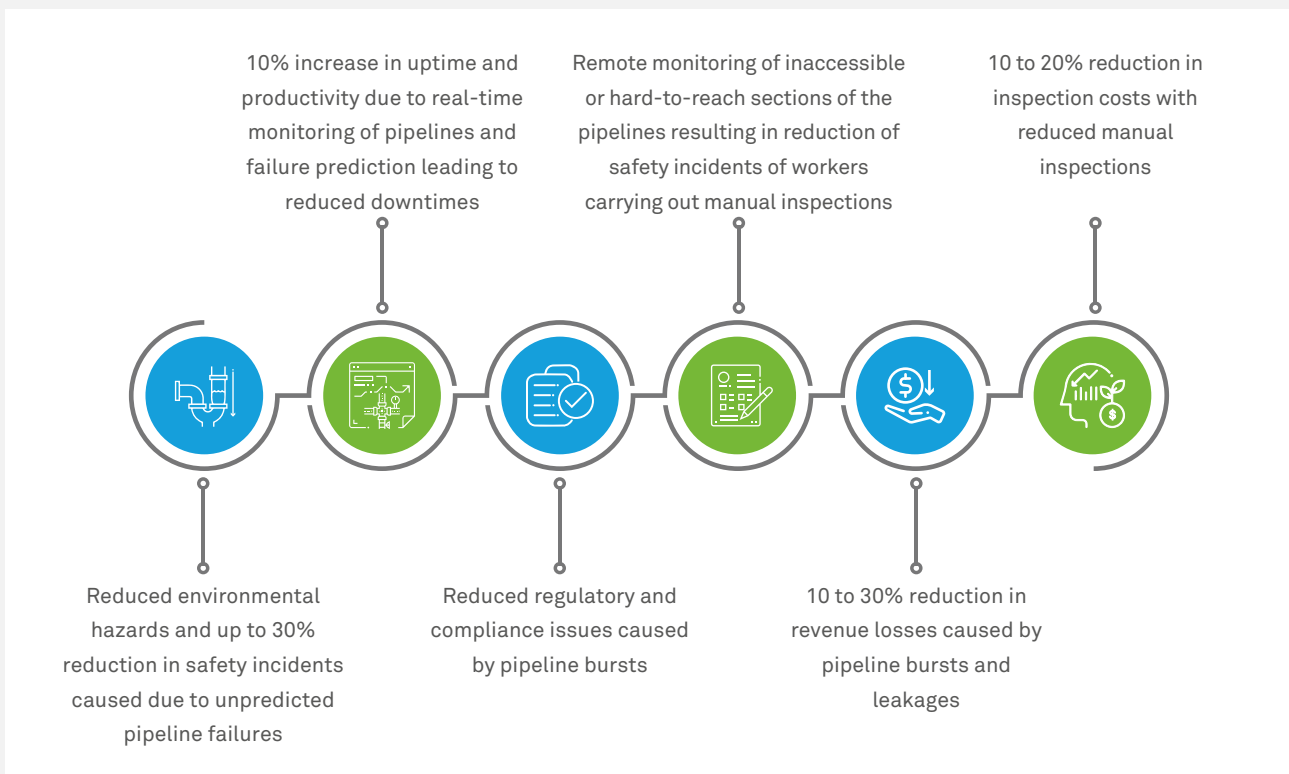
Maintenance planning:

Visibility into previous similar defects and actions taken to close help plan accurate maintenance.

Maintenance notification:

Integration with back office S/4HANA system to initiate maintenance process for the alerts triggered.

Business benefits



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