CUSTOMER CASE STUDY

Rapid ILI Fitness-for-Service Assessment

Rapidly assessing ILI data to prioritize remediation and support standards-based inspection and repair decisions.

Solution: Automated Fitness-for-Service Assessment **Industry:** Midstream **Use Case Focus:** Pipeline Integrity Management

GOALS

- Streamline pipeline fitness-for-service compliance assessments.
- Reduce manual engineering hours spent screening smart pigging data.
- Prioritize critical remediation efforts quickly across the network.
- Integrate real-time field measurements to update inspection intervals.

CHALLENGES

- High volumes of pipeline corrosion indications from ILI smart pigging.
- Unsustainable manual engineering efforts required to evaluate every anomaly.
- Delayed maintenance decisions due to slow data analysis workflows.
- Inefficient resource allocation and repair budget optimization across networks.

SOLUTIONS

- Deployed automated screening tools aligned with asset-specific design criteria and industry standards.
- These systems ingest raw ILI data to perform automated first-pass assessments tailored to specific operating loads and pipeline designs.
- Programmed logic to account for inherent tool measurement errors during screening.
- Built a digital system for field crews to input actual in-trench measurements.

RESULTS

- Screened and processed over 90 percent of incoming corrosion indications.
- Significant reduction in engineering hours required for manual defect reviews.
- Enabled real-time recalibration of inspection intervals using field measurements.
- Optimized the physical repair budget by focusing on high-risk anomalies.

EXECUTIVE SUMMARY

BKOAI automates fitness-for-service assessment of in-line inspection (ILI) data to help pipeline operators screen large volumes of corrosion indications, prioritize remediation, and support standards-based inspection and repair decisions. The workflow combines automated first-pass screening, logic for ILI measurement uncertainty, and field-entered in-trench measurements. This allows integrity teams to focus engineering effort on the anomalies that require attention while recalibrating inspection intervals with updated field data.

Managing High-Volume ILI Corrosion Data

In-line inspection programs can produce high volumes of corrosion indications that require fitness-for-service review. Manually evaluating every anomaly consumes engineering time, slows maintenance decisions, and makes it harder to prioritize repair resources across a pipeline network.

Automated First-Pass Fitness-for-Service Screening

BKOAI deploys automated screening aligned with asset-specific design criteria and industry standards. Raw ILI data is assessed against operating loads and pipeline design conditions, while screening logic accounts for inherent tool measurement error. The workflow processes more than 90 percent of incoming corrosion indications, allowing integrity engineers to concentrate on the higher-risk cases that need detailed review.

Connecting Field Measurements to Integrity Decisions

When field crews expose a pipeline segment, actual in-trench measurements can be entered into the digital workflow. The updated measurements are used to recalibrate assessment results and inspection intervals in real time, reducing uncertainty and supporting better-targeted remediation. This helps focus the physical repair budget on high-risk anomalies while improving the speed and consistency of integrity decisions.