4insight® Asset Integrity provides data-driven decision support based on live monitoring and anomaly detection algorithms, thereby reducing cost and increasing uptime. The cloud-based service also enables extension of lifetime through monitoring of loads and operational history. Insights are delivered simultaneously to onshore and offshore personnel.

4insight® is a digital service providing key decision support to energy operators. The service enables domain experts to collect large amounts of data and create new insight based on machine learning and AI. Users can choose from a large selection of readily available applications or tailormake their own apps running on 4insight®. The portfolio includes 4insight® Asset Integrity, 4insight® Drilling, 4insight® Data Analytics, and 4insight® Marine Operations.

**KEY BENEFITS**

- Detects anomalies before they develop into operational issues
- Provides operational decision support based on machine learning and AI
- Ensures immediate access to relevant information when needed for all stakeholders
- Enables safe sharing of data with third parties
- Reduces OPEX by avoiding unplanned repairs and replacements
- Reduces CAPEX by extended lifetime of assets beyond original design life
- Enables operators to have a global organisation with specialised teams that work closely with each asset regardless of location
- Reduces time spent on finding information and avoid misunderstandings
**Digital Twin as a Service**

4insight® Asset Integrity provides operators with critical decision support delivered simultaneously to onshore and offshore personnel.

A production facility often has tens of thousands of sensors monitoring the condition of various equipment. The data is mostly used for simple alarms, while there is great value in running analytics on this data to create new insight enabling production optimisation, prediction and advanced anomaly detection using artificial intelligence to continuously assess enormous live data streams.

A key principle behind the 4insight® service is its open APIs and open accessibility. Operators are free to hook onto any data stream of raw or processed data through open APIs. The operator is also free to give access to the solution and its data to any third-party organisation of choice.

**Features**

- Visual user interface allowing users to click on assets for immediate access to relevant information
- Comprehensive asset register including all documentation, metadata, live sensor data, and decision support
- Asset Risk module that provides accurate understanding of system risk among all stakeholders
- Overview of asset integrity status and recommended mitigating actions
- Easy access to live streaming of sensor data and cloud computing on large data sets
- Publishing tool for sharing insight and selected dashboards with third parties
- Open APIs for interfacing other systems

**System Architecture**

The architecture behind 4insight® is designed to receive and compute large amounts of data, unlocking the true potential of the data to ensure the best possible decision support for operators. The service contains Digital Twins of the assets and helps operators improve data quality and manage the ownership, security, sharing and use of data, while at the same time reducing operational costs and risk. 4insight® is a multi-tenant solution residing on Microsoft Azure.