

# Shell Sensor Intelligence Platform

Stream Data in Large Volumes from Process Historians and Industrial IoT Devices to Open AI Energy Initiative



**Shell Sensor Intelligence Platform** is a new service that allows business users, data scientists and engineering teams to drive value quickly and easily by unlocking the insights contained in operational data. **Shell Sensor Intelligence Platform** enables users to move sensor data into the cloud at scale, in near real-time streaming or in historical batches, without impacting existing process historians' performance or stability. The sensor data can be used to enable Predictive Maintenance and other AI and Machine Learning (ML) use cases with high-volume batch or streaming requirements. By introducing automation into operations, users can unlock new opportunities to improve safety and business value, ensuring continued competitiveness in the energy industry's race to digitalize.

## With the Shell Sensor Intelligence Platform operators can:

- **Transfer and access data in large volumes, either in batch or near real-time high frequency streaming**, from time series databases, process historians and industrial IoT Devices to Azure Data Lake in the cloud, part of the infrastructure layer on which the BHC3 AI Suite resides.
- **Rely on a high-integrity, scalable and highly performance data ingestion service** to support machine learning and big data applications in the cloud, with minimum latency.
- **Provide operational data access** to data scientists, data engineers and data modelers for AI applications and big data analytics.
- **Unify data** to serve a wide range of AI use cases (e.g., reliability, optimization, integrity, digital twins).
- **Accelerate deployment of the Open AI Energy Initiative (OAI) solutions** such as BHC3 Reliability, Shell Predictive Maintenance Rotating Equipment, Shell Predictive Maintenance Control Valves or Shell Predictive Maintenance Subsea Electric Submersible Pumps, as well as future solutions.

## Shell Sensor Intelligence Platform Features

- **Self-service interface** – Select the time series data elements to stream with a simple, easy to use self-service interface
- **Simple job controls** – Control the time & cost of any data operation
- **Bi-directional integration** - Write back time series event data and outputs from advanced analytics and data science solutions to time series databases, historians and industrial IOT devices
- **Data visualization** – Visualize data with simple charting and visualization tools
- **Data conversion** – Convert data into different formats such as CSV or TSV
- **Seamless integration with existing tools** - integrate with existing systems to enable a seamless equipment reliability data flow
- **Designed for the BHC3 AI Suite** – supports the deployment of enterprise-scale AI without investments in on-premise servers

# Shell Sensor Intelligence Platform Enhances Time to Value of AI-enabled Solutions

- **Improve time to value** for cloud-based big data use cases, by significantly reducing data acquisition and solution development cycle times.
- **Reduce scaled data storage and compute costs** by leveraging efficient file formats with excellent compression, eliminating the need for entire files to be parsed in order to find a subset of data, reducing storage and compute costs.
- **Drive safety, increased production and reduced OPEX** by unlocking the value contained in assets' operational data.

Multi-threading VMs enable low latency asynchronous jobs, leveraging Parquet compression

