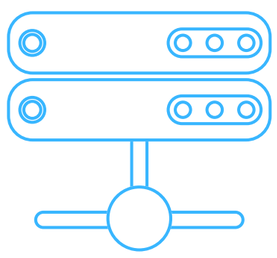
SensoCore Real-Time Holistic Monitoring System

The SensoCore Real-Time Condition Based Monitoring System is based on machine learning and artificial intelligence supplemented by the physical characteristics of the specific client system and by SCADA data. The objective of the SensoCore system is to provide an innovative real-time monitoring and predictive maintenance solution for multiple energy industries that features both high accuracy and minimal false alarms.

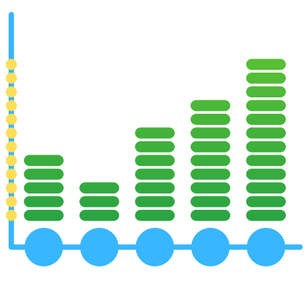
The SensoCore System is made up of three modules, which – in workflow order - are as follows:

Data acquisition/Storage module



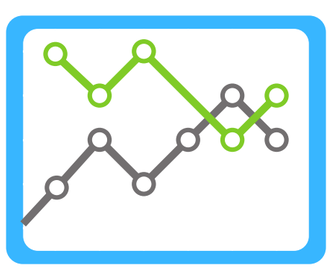
A duplicated Ethernet-fed SCADA stream from the Client's system constitutes the SensoCore system provides the standard input data stream to the SensoCore System (alternate input methods can also be made available where required). The data streaming can either be pre-trimmed to the tagged devices according to the client's needs or performed automatically by the SensoCore system.

ML module and AI analytics module



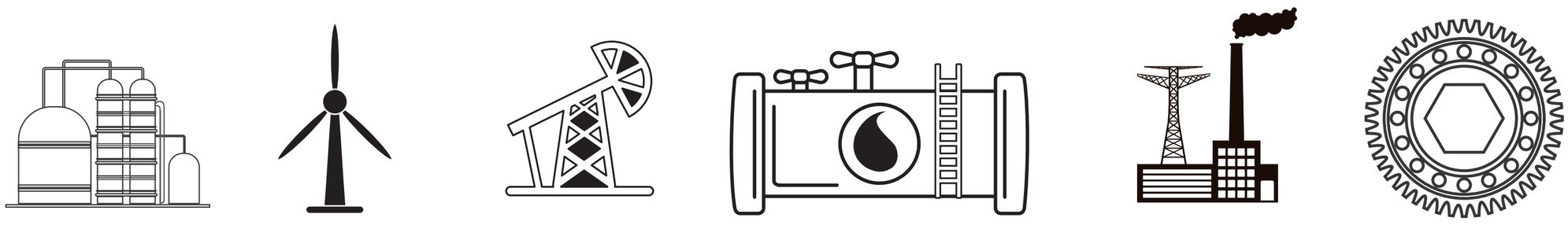
This module is pre-configured with machine learning algorithms that allow the assessment of input data, the identification of irregular data, and the preprocessing and cleaning of input data. It also contains the logic necessary for identifying anomalies and the threshold levels for condition identification. Upon discovering an anomaly, the module will – if necessary - carry out additional automated decision-making processes for screening and interpretation purposes.

Reporting/visualization module

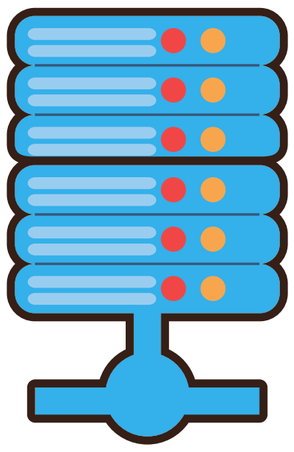


This module provides visualizations to suit virtually every device and facilitates enterprise-wide sharing and collaboration. The module's visualization features include, among other things, a standard local small screen and light indicators for status (green, amber and red with reset buttons). Once an anomalous condition is identified, the local screen will provide the condition's tag range as well as a description of the event's location and time stamps. This local feature allows the SensoCore system to run alongside other systems without interference and thus permits comparison and testing. It is also essential for the on-line testing and set-up of the system as part of a standard package. The optional feeding of module outputs into client system(s) can also be configured in accordance with client requirements.

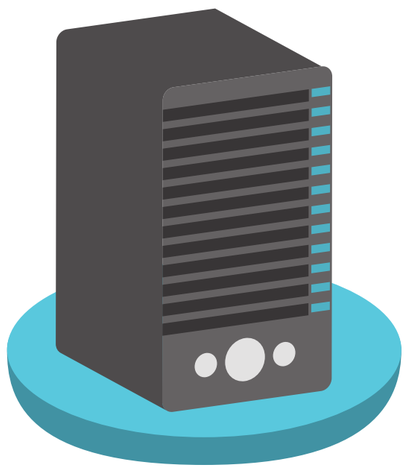
Applications of the SensoCore System



Measuring Instruments: sensors/ meters

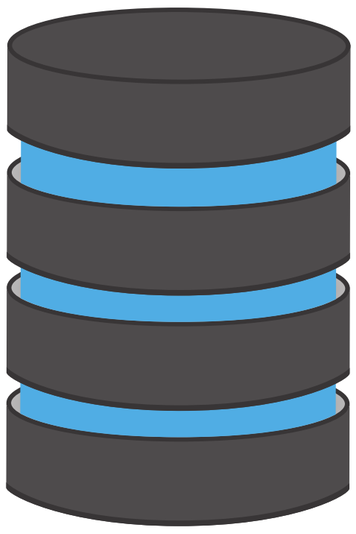


SCADA System

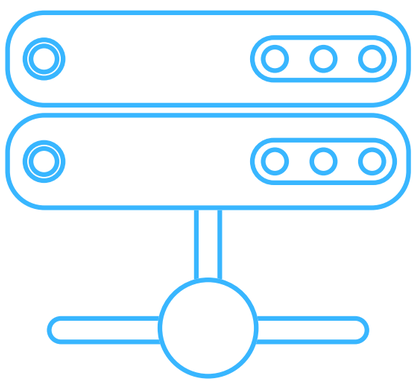


Operator Display

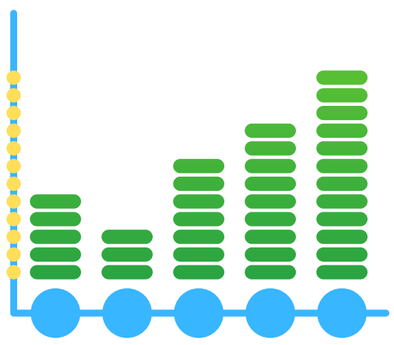
Database/Historian



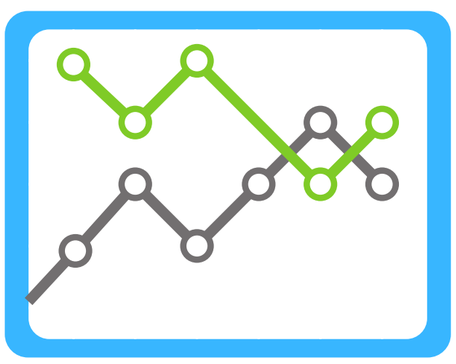
Data Acquisition



Machine Learning (AI) Analysis



Reporting - Alerts/Alarms



- Parallel installation to augment existing SCADA configuration
- Learning nature dynamically reconfigures as overall system changes
- Very Accurate Analysis
- Low False Alarm Rate
- Customizable Data Presentation