

SMARTSIGNAL

Predictive analytics for prediction, diagnosis, and forecasting

Expert built models that decrease cost and risk

Predictive analytics, powered by SmartSignal, provide powerful models for your most critical investments and are backed by years of OEM expertise. With SmartSignal, you can feel confident your operation will have few surprises.

Key features

- Early anomaly detection via performance digital twins
- Time-to-action automation that help prioritize strategy
- Available “out of the box” for accelerated time to value
- Diagnostics that support Predictive Maintenance (PdM)
- Easy to build and maintain models
- Customizable for Power Generation, Oil & Gas, Renewables, Metals & Mining, and Aviation

PRIORITIZE & ACT

Move from reactive to proactive Operations & Maintenance with industry-leading predictive analytics.

Discover more



01

Avoid unplanned downtime

- Collect and action relevant data, analyze, and act in near real-time
- Detect anomalies and generate strategies to mitigate risk
- Automate tasks, giving your employees more time to focus on what matters
- SmartSignal analytics plug & play with Asset Performance Management (APM) applications

02

Move towards predictive maintenance

- Collect and action relevant data, analyze, and act in near-real time
- Detect anomalies and generate strategies to mitigate risk
- Automate tasks, giving your employees more time to focus on what matters
- Improved decision-making with proactive insights in APM applications

03

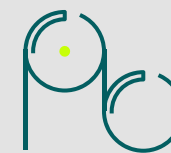
Gain embedded expertise in your software

- Access 350+ digital twin blueprints for GE and non-GE equipment types
- Out-of-the-box workflows, allowing for faster time to value
- Custom models designed with your most critical assets in mind
- Expert support via our Services team

04

Prioritize work and maximize operational efficiency

- Gain insights from diagnostics that allow you to prioritize the right work
- Access detailed asset history to proactively modernize your strategies
- Force rank asset criticalities, handling the most important first
- Centralize asset data, making it easier for your employees to be effective



\$522,700

saved

With an early notification on higher vibrations on a pulley for a product screening feed conveyor at a mining site avoiding further damages on the pulley bearings.



0.5MW

performance degradation avoided

During peak wind conditions on an offshore wind turbine was unintentionally curtailed at 3.1MW instead of 3.6MW.



\$150,000

saved

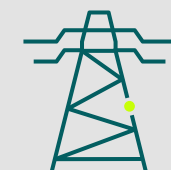
With an early warning of a shift in core parameters on a jet engine including the exhaust gas temperature and fuel flow avoiding operation loss of the engine in flight.



\$3,200,000

saved

With early warning detected on increased suction temperature preventing liquid carryover on a centrifugal compressor at an offshore platform.



\$906,000

saved

Early warning of increased oil moisture on a transformer allowing plant electrician to hookup processing unit to clarify oil.



\$1,400,000

saved

On an heat recovery steam generator (HRSG) from a drop in LP main steam temperature due to a leak with the HP Economizer allowing for planned maintenance to be scheduled.

SMARTSIGNAL SPANS APM FOR INTEGRATED PREDICTIVE ANALYTICS



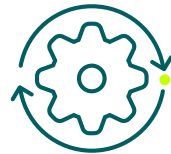
APM Strategy

- Predictive analytics provide organizations critical data to optimize strategies
- Operators can see in near real-time how strategy changes impact key performance indicators (KPIs)



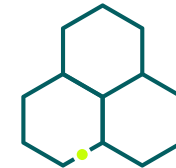
APM Health

- Diagnostics provide automated alerts of performance shortfalls or deviations from the norm
- Real time alerts with economic impact on plant capability provides data-based decision support



APM Reliability

- Predictive analytics are most effective when aligned with critical and highly critical assets
- APM Reliability monitors your most important investments, providing valuable insights into performance anomalies
- Action millions of datapoints, from anywhere, to make the right decisions for your operation



EAM/CMMS/Timeseries

- APM supports bi-directional connection with various data sources, allowing for Predictive analytics to impact more than just APM workflows

SmartSignal technical specifications

SmartSignal includes:

- Data integration tag mapping for application input data
- Predictive models deployed on-premise
- Model validation and QC
- Analytic configuration and diagnostic coverage
- Application software
- Implementation and Acceleration Plan for a customer selected term
- Managed Services – Optional service offering depending on project

Other requirements:

- Infrastructure to host software either onsite or Virtualized (i.e., AWS, Azure) refer to SmartSignal Infrastructure section here
- Connection to individual site historians or central historian
- Cyber security (i.e., firewall)

To view application the following are required:

- Chrome version 73.X or higher
- Laptop/Desktop

Customer supplied materials:

- Historian master tag lists
- Piping and instrumentation diagrams (P&IDs)
- Sample data sets including historical data covering load range and seasonal variation (i.e., 12 months of data)
- Historical upgrade events, major maintenance activities performed
- Plant and major equipment design information
- Process layout details like DCS screenshots
- Configuration data support access to plant personnel and data/information support personnel
- Technical support for data questions, sensor investigations and alternative data source discussions

[View all specs](#)



PERFORMANCE INSIGHTS FROM A SIMPLE DASHBOARD

Collect and normalize operational data and run key performance and degradation calculations.

THE POWER OF INTEGRATED APM

See how SmartSignal predictive analytics integrate with GE Vernova's APM suite to enhance operational excellence.

[Experience Demo](#)

