

# Increase reliability of connected mechanical systems with physics-driven analytics



## Physics-Driven Platform

Tignis provides unique physics-driven analytics that uses digital twin and machine learning technologies to increase the reliability of your connected mechanical assets. We produce a durable, extensible digital replica of your environment, and then work with you to develop precise analytics that serve your specific asset characteristics and business needs.



## Mechanical Systems Analytics

Eliminate false positives and let your sensor data work for you. By navigating the intricacies of sensor configuration, the proliferation of sensor data, and the ongoing challenges of swift issue identification and resolution, you can work with us to make better sense of the assets you oversee, and manage them accordingly.



## True Predictive Maintenance

We help you make sure your mechanical systems work together, efficiently and effectively, with a minimum of downtime or unexpected hassle. Tignis identifies the precise root cause of issues faster and more accurately so you can predict operational impacts, instead of waiting for the inevitable break/fix cycle.



**“Rather than just telling us there’s a problem, Tignis’ software tells us why there’s a problem and what to do about it. Tignis delivers a carefully curated list of instances of faults that are meaningful—we can be sure that they’re something we can act on.”**

Fred Woo, PE, Manager of Engineering – Optimum Energy

# How Tignis Works

**Move past the data issues, equipment downtime and false alerts that come between you and the effective management of your mechanical systems. Tignis enables you to increase mechanical system reliability, focus on root cause analysis of real problems, and achieve the most productive outcomes. Here's how Tignis works:**



## 1. Collect

We start with two items you likely already have:

- Piping and Instrumentation Diagrams (P&ID)
- Historical Sensor Data—A copy of your historical file is typically where we start. If you are using spreadsheets such as Excel to analyze or review sensor data from your mechanical/industrial system, we can help you get to digital.



## 3. Physics-Driven Analytics

Our analytics approach is unique. We use the principles of physics to drive our analysis in order to deliver better outcomes, while enabling you to leapfrog many of the obstacles limiting results today. The Tignis physics-driven approach analyzes physical properties to detect anomalies. This allows Tignis to deliver immediate and highly accurate results.



## 2. Digital Twin

Tignis provides a detailed view of the current state of your systems, with remarkable speed and accuracy. We create a digital replica of the piping and instrumentation systems, in just hours, and then handle ongoing changes with ease, by using our:

- Patent-pending adaptive modeling capabilities that automatically handle changing conditions
- Proprietary components library and drag and drop capabilities
- Visualization capabilities, optimized for mechanical systems



## 4. Ongoing Advantages

We build in advanced technology, machine learning and artificial intelligence, so that our algorithms and analytics are capable of delivering both initial results and ongoing advantages by:

- Automatically monitoring and learning
- Continuously detecting threats to reliability, even on diverse and complex systems
- Precisely identifying and predicting operational impacts

**See what Tignis can do for your business.**

For more information on applying analytics to your 24/7 monitoring data, visit [www.tignis.com](http://www.tignis.com).