OSIsoft. PartnerEcoSphere

ELEMENT ANALYTICS™

Transforming Industrial Data into Actionable Insight

Make data-guided decisions that increase operational efficiency and cost savings

At-A-Glance

Solution Type

Rapidly join and prepare operations and business data for analytics. Get predictive models with machine learning and visualize actionable insights in applications like PI Coresight, Power BI, Azure ML and more.

Regions Available

US, Canada, Western Europe

Industries

- Oil & Gas (Upstream, Midstream, and/or Downstream)
- Chemicals
- Utilities
- Mining
- Paper and Manufacturing
- Diversified

Features & Benefits

- Automate data preparation
- Keep using and build on what you have, no rip and replace
- Leverage existing data to get more value out of your PI System
- Prevent asset failures to save costs and increase uptime and revenue capture
- Use predictive insights to improve maintenance and operations efficiency
- Make faster, data-guided decisions (vs. intuition-based decisions)

Implementation Requirements

- Access to PI System data or access to operational data through a historian that can connect to the PI System
- A subscription to Microsoft Azure

BUSINESS CHALLENGES

Today, industrial organizations face challenges such as a transitioning workforce and unexpected asset downtime and failures that can cost millions annually. For industrial operators to continue to streamline and work more efficiently, they need data in the form of analytical insights to make faster, better informed decisions. Predictive insights, in particular, can be extremely valuable. They can help organizations prevent failures, for example. But the key barrier to deriving insights from data is inconsistent and unorganized data, which is difficult to use and requires time-consuming data wrangling.

It's important to make data work *for* operators, proactively surfacing insight where it's needed most. And technology needs to do the heavy lifting of processing and preparing data so that people can have ready-to-use data.

BUSINESS IMPACTS

The web-based, user friendly Element Platform rapidly joins and prepares business and operations data for analytics. It also enables data scientists to create predictive models with machine learning, and connects to applications for visualizing actionable insights. For example, a predictive insight can reveal which submersible pump parts will fail when and what the costs and potential fixes would be. This enables maintenance to act sooner and more effectively. The result is greater operational efficiency and cost savings as well as increased asset uptime and revenue capture.

SOLUTION APPROACH

Rapid Data Preparation

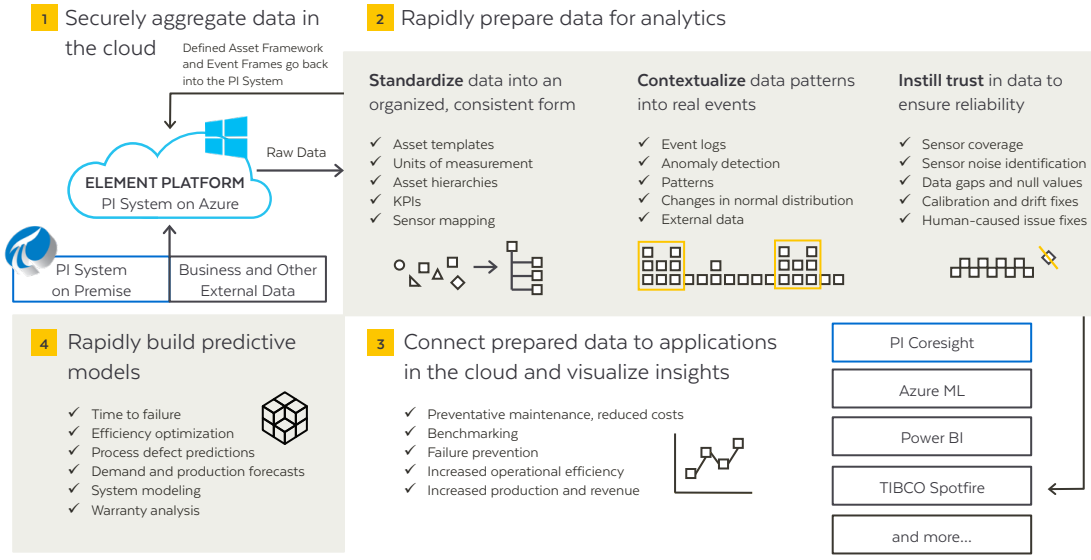
The Element Platform automates the heavy lifting of data preparation, which consists of 3 rigorous steps that would be too time-consuming to perform manually. In Standardization, PI System tags are rapidly mapped in bulk to assets, processes, sites, and other metadata. This standardizes units of measurement and automatically maps all PI System tags to an industry template. Operators can create custom asset hierarchies and export a complete PI Asset Framework (AF). In Contextualization, data patterns and anomalies are identified and labeled as Event Frames within PI AF, enabling cross-site event comparison. In Trust Assurance, sensor noise, sensor failures, and sensor drift are corrected. Data preparation is necessary for analytics and also facilitates the use of PI Integrators.

Application Connection for Visualizing Actionable Insights

Prepared data can be connected to diverse applications (e.g., PI Coresight) to visualize insights such as production by asset, time until equipment failure, prioritized asset maintenance, short- and long-term cost impact of various fixes, and the utilization of service team members in the field. This helps maximize the capabilities of PI Coresight. The Element Platform also facilitates collaboration between Data Scientists and SMEs, who can connect their applications to the same data sources and use those applications in the same place.

Predictive Modeling with Machine Learning

Data scientists develop proprietary predictive models that include time to equipment failure, efficiency recommendations, forecasting, and system modeling. These models use machine learning and are operationalized for use in applications.



ABOUT THE PARTNER ECOSPHERE

The OSIsoft Partner EcoSphere provides a collection of third-party services, applications, and technology to help customers maximize the value of the PI System.

Explore more solutions and the OSIsoft Partner EcoSphere at: partners.osisoft.com.

FOR MORE INFORMATION

Element Analytics™ is an industrial analytics company that makes data easy to use and provides actionable insights into daily operations. We empower industrial organizations to shift from reacting to making informed, proactive decisions for greater operational efficiency, sustainability, and profitability.

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