AMERICAN-MADE DIGITIZING UTILITIES PRIZE

predictronics
WE KNOW WHAT HAPPENS NEXT

TEAM:

David Siegel
CTO

Matt Buzza
SENIOR DATA SCIENTIST

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SENIOR DATA SCIENTIST

WHY PREDICTRONICS?

- 10+ years experience deploying professional predictive maintenance solutions for over 80 clients.
- Deployed solutions for relevant assets, such as control valves, chillers, compressors and pumps.
- Best-in-Class, robust, and accurate analytics
- Advanced algorithms for sensor data conversion, anomaly detection, and failure prediction
- Existing, proven software platform that is quickly deployable and scalable in an industrial environment

pdx

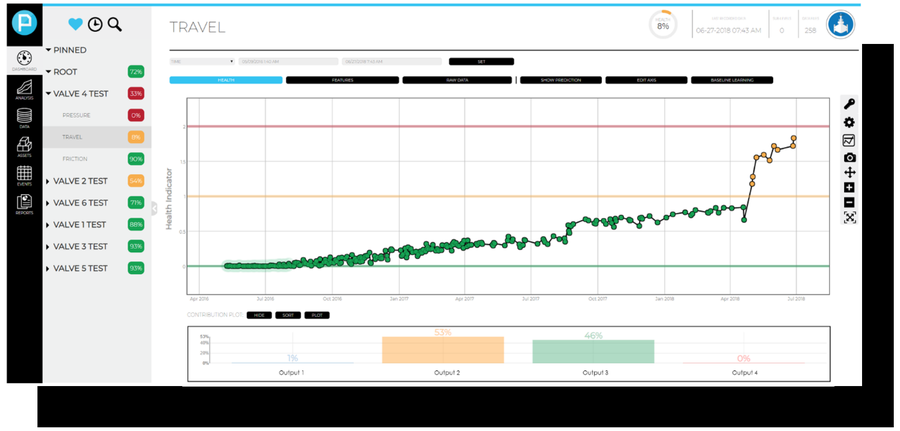
The PDX platform is an end-to-end predictive analytics solution that monitors critical assets by collecting and analyzing big data, with the goal of reducing unplanned downtime, increasing productivity and improving product quality.

CHALLENGES:

The UC Central Utility Plant is looking to leverage its existing digitization efforts to reduce unplanned downtime, avoid interruptions in electricity, chiller water, and steam for the campus and hospital facilities., and optimize its acquisition of energy from the grid. Various sensor tags are regularly collected to monitor many of the assets. However, extraneous planned downtime and unexpected failures are commonplace.

SOLUTION:

- A predictive maintenance solution will be configured and deployed to monitor the assets using existing data, data sources, and tags, avoiding the need for additional sensors, to accelerate the development and initial deployment of this solution.
- Target assets have been chosen based on domain expertise, as well as their criticality to the overall operation and the feasibility of deploying a solution for those assets using existing data.



Example of PDX dashboard for control valve health monitoring

VALUE:

The solution will provide early indication of failures for key monitored assets, ensuring maintenance is scheduled in a proactive manner. Value is realized through:

- Avoiding costly unplanned disruptions in power, steam, and chilled water to the university, hospitals, and the surrounding region.
- Reducing repair costs by proactively planning maintenance activities.
- Optimization of energy generation and acquisition from the grid.

University of CINCINNATI

TEAM:

Michael Hofmann
DIRECTOR OF UTILITIES

ABOUT MICHAEL HOFMANN:

- 37+ years in the electric utility industry, having worked in various roles.
- Previously responsible for operations and maintenance at Duke Energy, overseeing 12,000 MW throughout the Midwest.
- Currently responsible for the operation and maintenance of the 50MW cogeneration plant, including over 30,000 tons of chilled water capacity and over 600,000 pounds per hour of steam capacity.

UC CENTRAL UTILITY POWER PLANT

- The power plant provides electricity, steam, and chiller water to the college campus, as well as the surrounding hospitals in this region.
- Extraneous planned downtime and unexpected failures are commonplace.
- Key assets:
  - Boilers
  - Steam turbine
  - Chillers
  - Combustion turbines
  - Heat recovery steam generators
  - Fans
  - Pumps
  - Valves