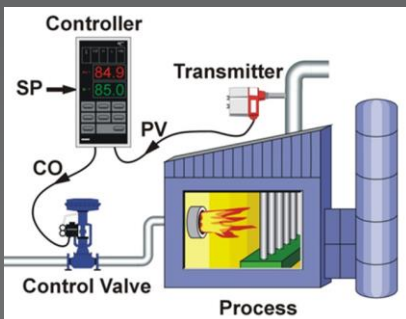


## WHY WORK WITH US

Yazzoom is a Belgian software and engineering company helping its customers for over ten years with software and services for industrial data analytics and process improvement. Driven by a passion for innovation targeted at creating value for our customers.

## PROJECT APPROACH

1. Definition of pilot scope and issue detection ambition (1-day elapsed time).
2. Installation and integration of control monitoring detector in your IT/OT architecture (1 to 2 weeks)
3. Configuration and training of initial control loop specific anomaly detectors (1 to 2 weeks)
4. Iterations of evaluation and improvement + knowledge transfer (2 to 6 months)
5. Scope expansion to additional control loops and/or other equipment like pumps and motors.



## CONTROL & VALVE MONITORING, ALERTING, QUICK DIAGNOSTICS

### WHY CONTROL LOOP & VALVE ANOMALY DETECTION?

#### PREDICTIVE MAINTENANCE

- From reactive to proactive maintenance
- Detection of mechanical, electrical, control setting or sensor issues in control loops (optionally with control valve). Lifetime prolongation.

#### PROCESS IMPROVEMENT – CO2 REDUCTION

- Detection of reduced process control performance
- Avoidance of loss in process efficiency and stability and/or reduced quality of produced products

### USED DETECTION METHOD

#### COMBINATION OF HUMAN EXPERTISE AND AI

- Uses self learning algorithms to learn from historical data what the normal performance of a specific control loop is, but has expert knowledge built-in about what signal characteristics are indicative of control performance degradation like oscillation, imbalance, sluggishness, saturation,...

#### CLOUD OR ON-PREMISE – YOUR PRIVATE DATA

- Our asset monitoring software is added to your data collection software, on-premise or in cloud

### DATA NEED?

#### USES AVAILABLE CONTROL LOOP SIGNALS

- Tries to detect any issue as early as possible using available signals: mandatory: controller setpoint and input; recommended: controller output and mode, variables indicating operating condition
- Historical data in all operating conditions for which you want to use anomaly detection

#### LOW CONFIGURATION EFFORT

- No need for any datasheets

## REDUCED EXPERTISE NEED

### NO DATA SCIENCE OR CODING NEED

Intuitive multi-lingual graphical user interface for configuration, analysis and system maintenance

### INTERPRETABLE BY OPERATORS AND MAINTENANCE PEOPLE

Involve reliability or control engineer only when detailed additional analysis or control tuning is needed

## SCALABILITY

### SCALABLE SOFTWARE ARCHITECTURE

Software scales from a few to thousands of monitored loops on cloud or on-premise Linux machine

### EXPANDABLE

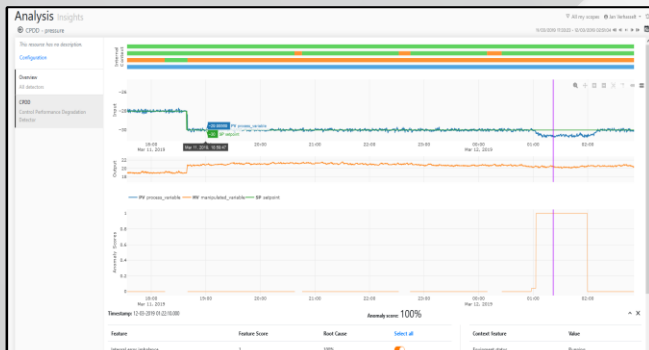
Control and valve monitoring is part of the AI-for-industries software **Yanomaly**. It also has detectors for monitoring pumps, motors & VSDs,...

## A FEW CUSTOMER REFERENCE USE-CASES



### Detection of high input travel

In example above Yanomaly shows high anomaly score and alert because the travel of controller input is higher than expected for this operating regime.



### Detection of control error imbalance

Yanomaly sent anomaly alert because pressure stayed abnormally long on one side of the setpoint. Is indication of valve issue or control sluggishness.

## YANOMALY IS TRUSTED BY

