

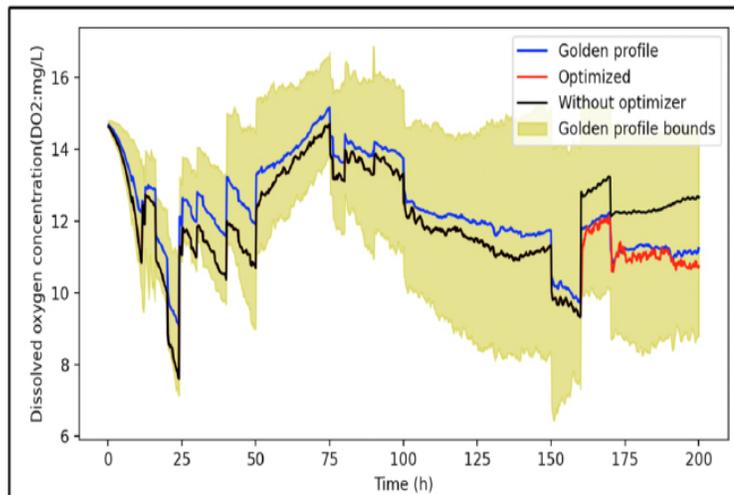
# BATCH 360™

Helps manufacturers maintain high quality production batches

## BATCH 360

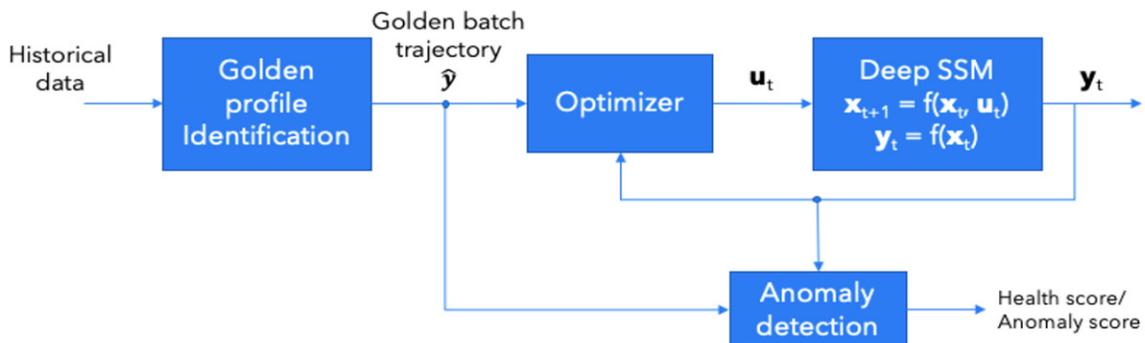
Batch 360 is a solution that helps manufacturers maintain high quality production batches within tighter specifications and lowers costs. It moves manufacturers from traditional Statistical Process Control (SPC) which is univariate and provides alerts too late in the process, causing scrap.

Sub-optimal outcomes of scrap and quality overruns are eliminated with a highly sophisticated AI-driven multivariate model control regime that harnesses all available data ranging from imagery, metrology, logs, and time-series data to provide meaningful actions to manage production at highest levels. Machine learning models with machine reasoning understand potential factors of deviations and continuously prescribe actions in real-time to bring the process back to its best operating point. Using Domain-specific rules and Failure Modes Effect Analysis, set point recommendations are made based upon dynamic operating conditions to generate a "golden batch."



## The Process

Input known variables characterizing ideal production conditions. Operators are prompted for proper procedures for the current run. Batch 360 provides real-time monitoring and supervisory control. Runtime data is historized and analyzed for golden batch conditions profiling. AI optimizes batch characterization.



---

## Features

- **Data Acquisition** - Connectors to a wide-range of data acquisition systems and an efficient data management system capable of streaming and batch analytics
- **Data Pre-processing** - Automated de-noising, imputation and contextualization using advanced ML algorithms
- **Soft-sensing** – Soft-sensing of critical production parameters in real-time.
- **Templatized AI Models** - Explainable AI modules with parameters tuned for the manufacturing process with deep learning and system identification modules
- **Deep Forecasting** - Deep forecast module for KPOVs with KPIVs with track-and-compare features
- **Golden Batch Analytics** - Identification of golden batch conditions from historical runs combined with ability to track deviations of batch runs in real-time
- **Anomaly detection and prediction** - Anomaly detection and prediction using deep self-learning AI models
- **Real-time quality assessment** - Real-time monitoring of production quality with automated defect detection, production unit health scores, alerts and notifications
- **Predictive Asset Health** - Explainable AI leading with automated cause analysis for predictive maintenance of equipment
- **Optimization and control** - Real-time supervisory control with sophisticated state estimation and optimizers to maintain production at highest levels
- **Model Management** - Automated model re-training for anomaly detection, forecasts, soft-sensing, and optimization
- **MLOps, Continuous integration, continuous deployment** – No resource drain for end-users or IT staffs to keep up with new releases and feature enhancements

### About SymphonyAI Industrial

SymphonyAI Industrial, a SymphonyAI business, is an innovator in industrial insight, accelerating autonomous plant operations. The industry-leading EurekaAI/IoT platform and industrial optimization solutions connect tens of thousands of assets and workflows in manufacturing plants globally and process billions of data points daily, pushing new plateaus in operational intelligence. SymphonyAI Industrial solutions provide high value to users by driving variability out of processes and optimizing operations for throughput, yield, energy efficiency, and sustainability.