

CASE STUDY

A Leading  
**Conglomerate**  
improved its product  
quality by 17%  
by using the  
**Golden Batch  
Analytics System**



### Executive Summary

The client, a leading conglomerate, needed a Global Batch Analysis system for predicting the optimal process setpoints at the start of the batch process and in near real-time to improve the overall quality score of tobacco output



### Client Profile

The client is a leading conglomerate in tobacco manufacturing, with a portfolio of invaluable brands. The company's tobacco business stands as a testimony to the company's unwavering and unrivaled commitment to quality, innovation, and consumer focus



### Business Challenge

The client needed an automated analytics system that predicts optimal values of critical and influencing parameters in the current batch process from various machine and process data to achieve the desired level of quality output of tobacco



## Solution

Innominds built a modern data analytics platform with the following key features:

- Customized on-premise and cloud components to address the insights generation and historical analysis requirements, with the ability to scale and support additional features and output product types
- Built the Golden Batch reference ML model to derive the benchmarked process parameter values that influence the quality of output parameter values, and improve the overall quality score of the batch output
- Reference model deployed on the on-premise inference server for process monitoring, analysis, and prediction of optimal setpoints at defined frequencies
- Ability to run offline analytics on the cloud, including diagnostics and root cause analysis, based on historical data and insights accessed through intuitive dashboards
- Ability to track the model performance, retrain and refresh the reference model considering the incremental new batch data at defined frequencies

## Benefits

- Enhanced efficiency and consistency across batches and maintained high quality output
- Reduced raw material and interim product wastage

## Key Services



Data Engineering



AI/ML



Application Development



Dashboarding



DevOps for on-premise and cloud

## Tools and Technologies

- Azure IoT edge
- Azure components for data ingestion, storage, data transformations
- Azure Synapse/Python packages for AI/ML model
- Angular + NodeJS for operator web app

## About Innominds

Innominds is a Silicon Valley-based Product Engineering Services and Solutions company headquartered in San Jose, CA. Innominds offers co-creation services to enterprises for building solutions utilizing digital technologies focused on Devices, Apps, and Analytics. It provides expertise in the field of Cognitive Analytics, Connected Devices & Cloud Apps, and assists enterprises in their digital transformation initiatives.

Looking for comprehensive and automated analytics system?  
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