CASE STUDY

PRINTING PLANET SMART FACTORY TRANSFORMATION WITH GOOGLE CLOUD

Client Background

Printing Planet is a printing company that helps its clients enhance marketing and branding objectives by enabling a better consumer experience through aesthetics and high impressions. The company, headquartered in Sokilniki, Lviv; Ukraine, is a specialized printing house that produces state of the art printing labels for top producers of alcoholic beverage as well as soft drinks. The printing labels are applied during the best in class high-speed bottling lines.

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Business Challenge

Printing Planet wanted to initiate its smart factory transformation—gather data from engines, compressors, and other devices and transfer it to the cloud. Having this information gathered, stored, and presented would give customers the ability to make better decisions and receive additional value—by reducing costs—from the data insights. Implementing predictive maintenance would also reduce energy and maintenance costs.

Prior to its cooperation with SoftServe, the client used cycled maintenance—expect a certain number of cycles for engines/machines and then make changes to some parts based on the information—and had no sensors installed.

Project Description

Printing Planet consulted with SoftServe to help implement its smart factory transformation. The project, which is ongoing, was divided into three phases. During the first phase, the team reduced the energy used by the compressor by 10%. Energy reduction was achieved by detecting energy use patterns with three-phase energy quality meters—called i-sockets—and then some printing activities were rescheduled to avoid energy usage peaks. Understanding energy usage not only on the line, but also at the machine level will give Printing Planet the ability to conduct better root-cause analysis for production inefficiencies.

The SoftServe team was responsible for identifying the correct sensor types and then deploying them to the factory. They built the required infrastructure—end to end from edge to cloud—for storing sensors data, training/running ML models. Additionally, they provided dashboard and report implementations.

Throughout the project the team used Google Cloud Platform (GCP) services including:

- Cloud IoT core
- Pub/Sub
- Functions
- ML Engine
- BigQuery
- Cloud Datastore
- Cloud Storage
- Data Studio

Value Delivered

As a result of phase 1, the client had a complete solution infrastructure deployed on the GCP that included dashboards and reports.

The solution:

- Provided better prices for its customers through improved financial margins due to reduced costs—using less energy and improving equipment maintenance and quality issues.
- Increased market share by improving overall costs and positioning itself as an industry leader in the local market.
- Increased overall equipment efficiency to 90%—improving uptime, quality, and throughput—and reduced wasted material by at least 50%.
- Contributed to a reduction in carbon footprint and better environmental protections by reducing energy use and pollution with improved print quality.
- Enhanced workforce safety by reducing the number of risky situations and lowering the probability of injury by adding corrective and preventative maintenance functionality.
- Increased customer satisfaction—higher equipment availability, which translates to a higher printing capacity and less quality issues, gives Printing Planet the ability to quickly react to customer demand.
- Increased employee satisfaction with better working conditions.
- Improved production capacity planning and resource planning.

ABOUT US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, media, financial services, software, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation—from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience are built on a foundation of empathetic, human-focused design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy—No matter where you are in your journey.

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