How O3OZONE Reduced Waste by 20% in Food Factory

Reduced Waste & Streamlined Production

Modern-Day Food Factory Challenges

The food and beverage industry operates in a highly competitive environment, facing numerous challenges. Companies must adhere to regulatory standards, minimize their environmental impact, and adapt to evolving consumer demands.

Key operational challenges include:

- **Quality Control**
  Ensuring consistent quality standards while scaling production.
- **Waste Management**
  Finding effective ways to reduce waste without compromising output
- **Operational Efficiency**
  Streamlining operations to stay competitive in a global marketplace

To address these challenges, companies are adopting digital solutions for real-time insights, automation, and data-driven decisions.

Sustainability & Waste Reduction

Integrating sustainable practices reduces waste and aligns with environmental goals, while also cutting raw material costs. This approach not only benefits the environment but also strengthens the company's market position and profitability.

Essential Factors for Success

Data Driven Decision Making

Real-time data analytics empower companies to make swift, informed decisions that improve operational efficiency and product quality. Predictive insights help identify potential issues early, enabling proactive interventions that optimize production processes.

Digital Lean Management

Implementing lean management with smart technology reduces waste and optimizes workflows. Automated systems ensure the consistent application of lean principles, resulting in significant cost savings and a more streamlined, sustainable operation.

Improve Quality

Automated quality control ensures consistent adherence to product standards by detecting deviations in real-time. This reduces defects and enhances customer satisfaction, helping maintain a strong brand reputation in the market.

Complex Real Time Data Management

Handling vast amounts of real-time data at high speeds from machines & IIoT sensors is complex without a robust system in place to capture, process and present it. Real-time analysis is also needed to ensure data consistency, avoid production delays, record accurate inventory levels and limit quality control failures.

Challenges in Food Factory

Food Factory which approached O3OZONE faced two main challenges, inconsistent quality and excessive waste

Inconsistent Quality

The existing quality control processes were manual and inefficient, leading to frequent inconsistencies in product quality. Defect monitoring and corrective actions were often delayed, resulting in a higher rate of rejects and rework.

Excessive Waste

Inefficient production processes and a lack of real-time data visibility led to excessive waste, negatively impacting both profitability and company's environmental footprint. The inability to make timely adjustments during production further exacerbated these issues.

O3OZONE In Action

O3OZONE implemented an advanced MES system which included, Production Management, Quality Management, Maintenance Management and Machine connectivity. These solutions automated key processes, provided real-time insights, and centralized data for better decision-making.

Automated Quality Control

Real-time monitoring of production parameters was established, enabling immediate detection and correction of deviations from the set quality standards.

Waste Reduction and Process Optimization

By analyzing data in real-time, the company identified inefficiencies and optimized processes, leading to a significant reduction in waste. Automated alerts and predictive analytics played a key role in maintaining optimal production conditions.

Results And Impact Analysis

Quality Improvement

The food factory experienced significant improvements in product quality and waste reduction. Real-time monitoring and automated quality controls allowed the company to detect issues early and take corrective actions swiftly, leading to a more consistent output and a reduction in defective products.

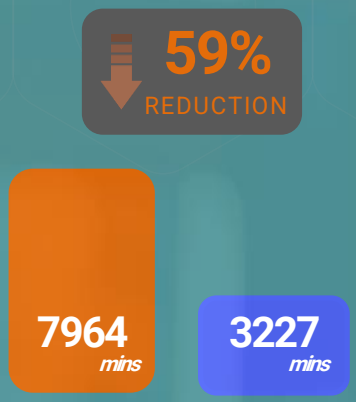
- Achieved a 20% reduction in relative waste, translating to cost savings and a lower environmental footprint.
- Enhanced product quality with a reduction in rejects and rework, boosting overall customer satisfaction.
- Reduction in Non-Conformance Rates (NCRs)

Operational Efficiency

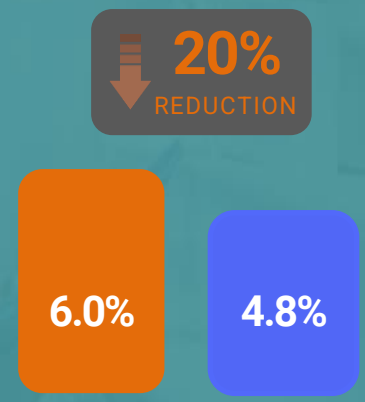
The integration of predictive analytics and process optimization through O3OZONE's platform resulted in a significant improvement in operational efficiency. The company was able to reduce downtime, optimize resource allocation, and streamline production processes.

- Reduced unplanned maintenance downtime by 59%, leading to higher Overall Equipment Effectiveness (OEE).
- Decreased processing time by 15%, enabling faster production cycles and improved delivery timelines.

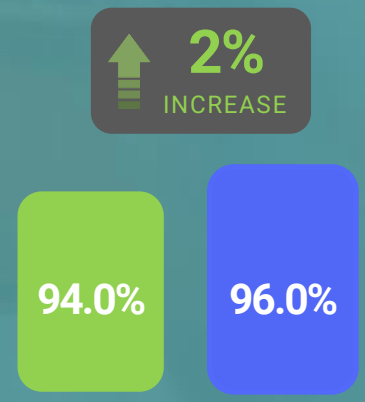
Unplanned Downtime



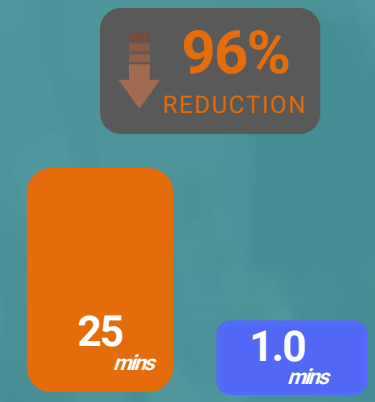
Minimizing Waste



Increase In Volume



Reduction in QA out of spec analysis



Smart Operations Platform

Options For All Digital Maturity Levels

MES

Essential for every manufacturer

Production Ordering
Manage production orders on the shop-floor

Productivity
Track production and operations in real-time

IoT Edge
Seamlessly connect machine and PLC data

Quality Management
Manage non-conformities and complaints

Progressive Maintenance
Prevent system breakdown with proactive maintenance

Mobility App
Operational interfaces for mobile devices

Lean Co-Pilot

Be lean with continuous improvement modules

Performance
Increase workforce efficiency and productivity

KPI
Set and track strategic KPIs across your operations

Autonomous Maintenance
Operator management for machine maintenance

Loss Analysis
Quantify operational losses with real-time insights

Total Delivery Cost
Identify gaps and optimize cost-efficient operations

AI Analytics

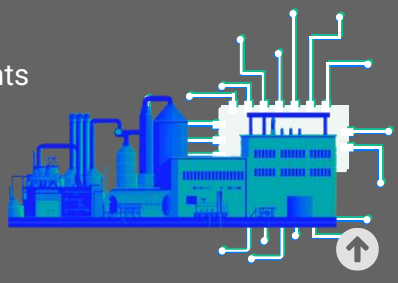
Analytics and insights for optimal decision making

Analytical Tools
Full suite of data-driven tools

AI Analytics
AI-powered anomaly detection for machines

Alerts and Workflow
Optimize task workflows and notifications

Gen AI
AI chatbot to gain deep contextual insights



Build Smart Factory Foundations with O3OZONE

Implementing the O3OZONE platform will give you real-time visibility over your operations. You will be able to see production data visualizations live from the factory floor, as well as managing quality, KPIs, maintenance, and more.

With the O3OZONE Analytics suite enabled, you will also get automatically generated data insights.

O3OZONE integrates with your existing MES systems and machine sensors. With the IoT edge module installed, you can also install IIoT sensors and link them to get all the data you need

Driving Sustainability and Efficiency with O3OZONE Technology

O3OZONE enables businesses to minimize waste through real-time monitoring and process optimization, leading to environmental and cost-saving benefits. By integrating O3OZONE with your existing systems, you can track waste reduction and achieve sustainability goals.

Enhancing Quality and Satisfaction with O3OZONE Automation

O3OZONE helps businesses automate quality control processes, ensuring real-time monitoring and immediate response to deviations. This reduces defects and enhances overall product quality, leading to increased customer satisfaction.

Operational Efficiency

O3OZONE offers tools to streamline operations, reduce downtime, and improve overall equipment effectiveness (OEE). By leveraging predictive analytics and automated systems, businesses can achieve higher productivity and lower operational costs.

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