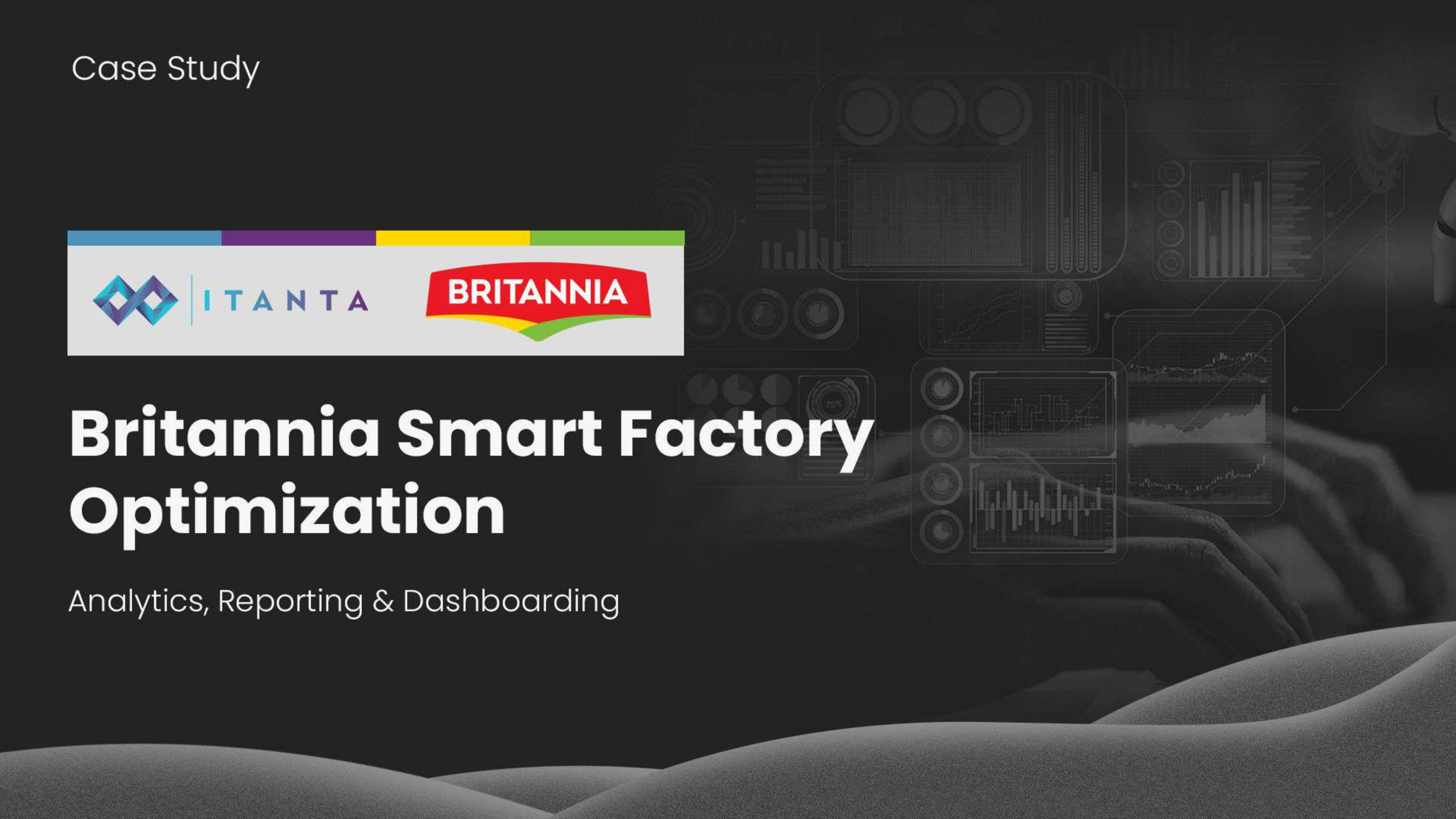
Case Study

ITANTA

BRITANNIA

Britannia Smart Factory Optimization

Analytics, Reporting & Dashboarding



INTRODUCTION

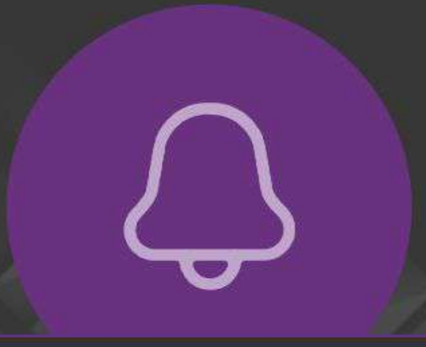
Project Name	**Britannia Smart Factory Optimization**
Objective	**Improve operational efficiency with real-time monitoring & automation**
Duration	**12 Months**
Key Brands	**Good Day, Tiger, NutriChoice, Milk Bikis, Marie Gold**
Key Fact	**Ranjangaon MIDC factory – one of the largest plants in India**

CUSTOMER REQUIREMENTS

Daily reports for Mixing, Molder, Baking, Oven & CMS (6 production lines)

MIHS (Minor Ingredient Handling System) deviation tracking

Packing machine performance tracking



SMS alerts and mobile app integration

Dashboard with OEE (Overall Equipment Effectiveness) calculations

Ensuring seamless production flow with minimal manual intervention is a key focus

SOLUTION OVERVIEW

Automated Data Collection

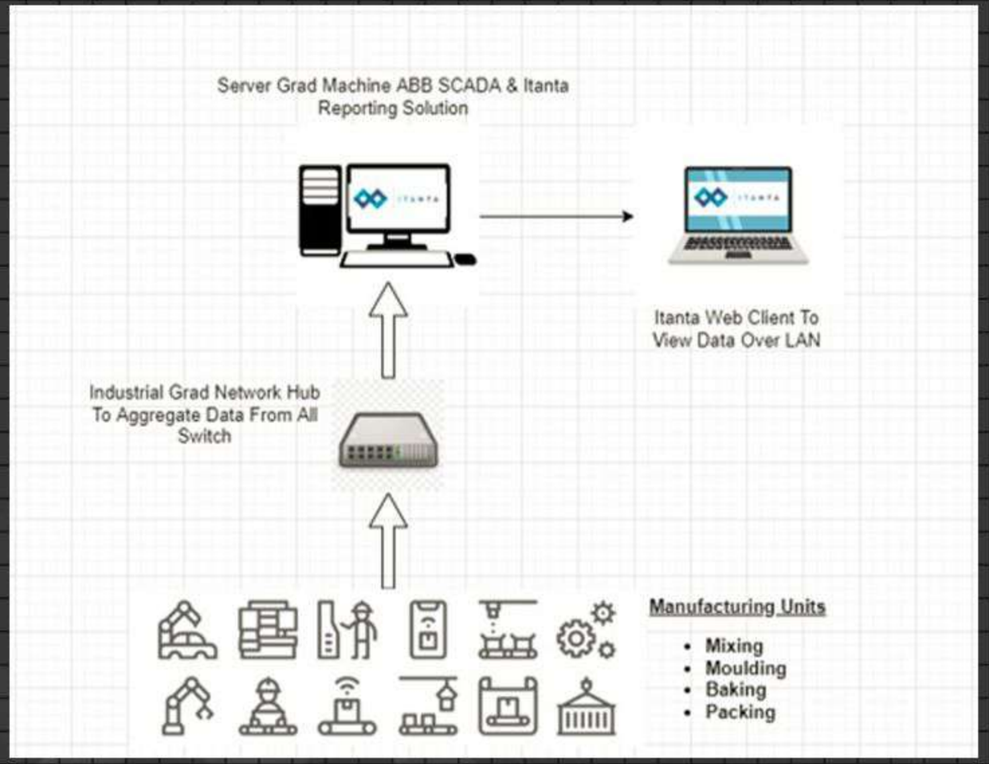
No-Code Dashboards on Live Data

Manual Data Entry Elimination

Itanta Reporting & Mobile App

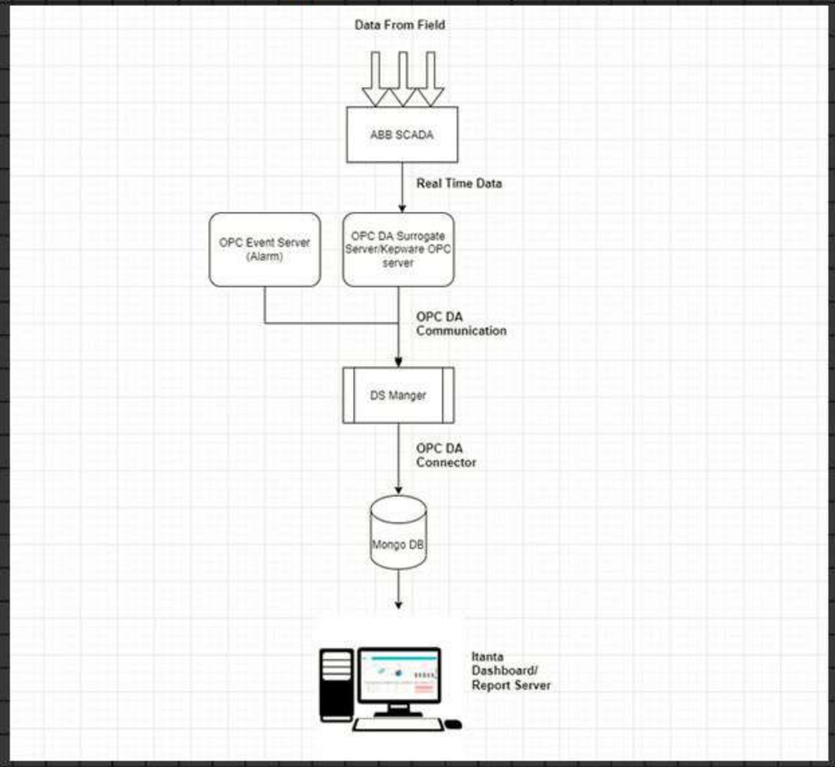
ARCHITECTURE

Network Architecture



- Data sources: ABB SCADA, OPC DA Surrogate, Kepware server
- MongoDB database stores all real-time production data
- Custom analytics config for per-second & per-minute data logging

Design Architecture



- Mobile notification system for real-time alerts
- A well-structured network and data flow ensure seamless communication between systems.

DASHBOARD VISUALISATION

Overview Dashboard

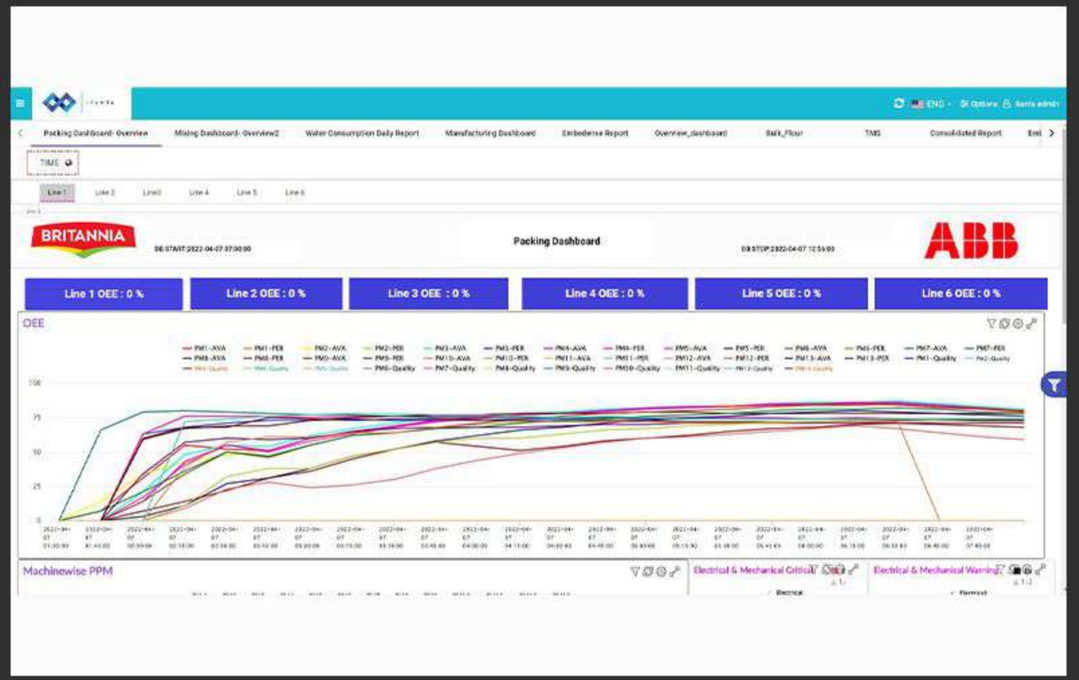
Line efficiency %, total production (Tons), OEE %, downtime (mins), wastage (kg)

Consolidated Reports

Baking time analysis, flour-cream ratio, downtime statistics

Manufacturing Dashboard

Molder/cutter speed, baking time, roller & conveyor speed (RPM)



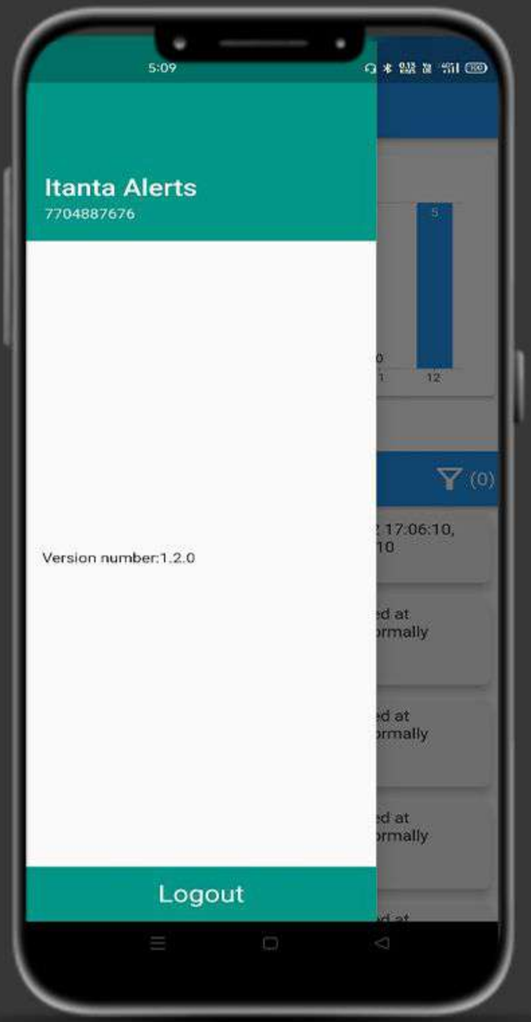
ALERTS & REPORTS

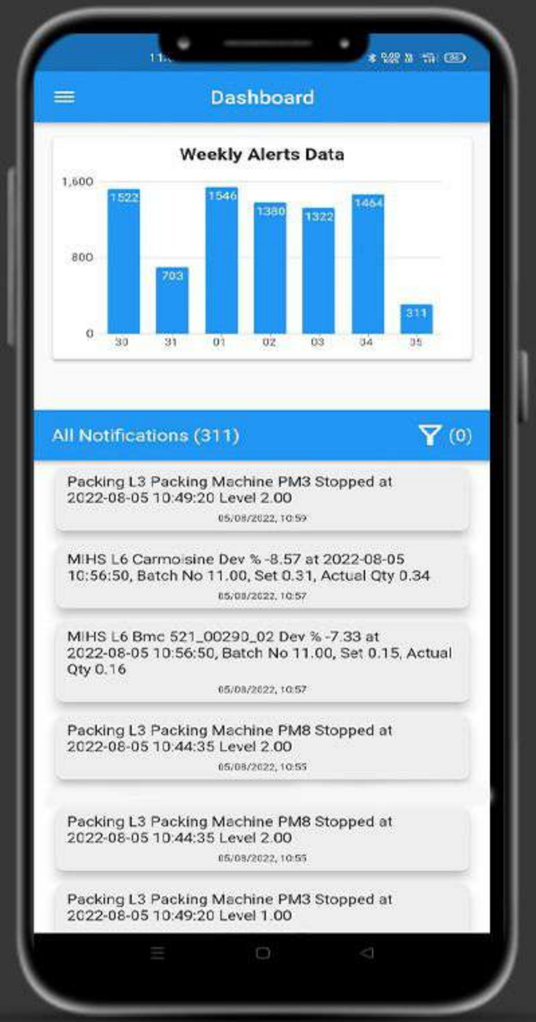
SMS/e-mail Alerts
For MIHS, Packing, Molding, Baking, etc.

Deviation Calculations
Using formula: Deviation = Set – Actual

Package Machine Tracking
Start time, end time, and downtime analysis

Timely Alerts
Ensure quick corrective actions, minimizing production losses





IMPACT & BENEFITS

The transition to smart factory solutions has significantly optimized productivity.

- **Automated data collection, reducing manual effort**
- **Improved tracking of ingredient usage & deviations**
- **Real-time alerts increased response efficiency**
- **Enhanced decision-making with OEE & production insights**
- **Better process control through mobile app integration**

CHALLENGES & RESOLUTIONS

Overcoming these challenges required a combination of technology, strategic planning, and training for the workforce.

Challenge	Resolution
Manual data logging was inefficient and prone to errors	Automated SCADA-based reporting with cloud storage
No real-time alerts or deviation tracking	SMS & mobile notifications for proactive monitoring
Lack of visibility into packing & baking inefficiencies	Real-time dashboards with efficiency metrics

NEXT STEPS

After a successful implementation of Itanta Smart Factory System

AI-driven analytics & predictive maintenance

Expansion to other Britannia production facilities

The journey towards full automation continues, with future enhancements in AI-driven quality control and predictive maintenance

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Thank You!