

Reimagining Manufacturing Operations with AI for a Global Electronics Manufacturer

SPECIFICATIONS

Industry

- Manufacturing (Electronics / Power Conversion)

Drivers

- Modernize legacy systems, reduce reliance on tribal knowledge, improve process efficiency, enable intelligent workflows

Project Type

- Application Modernization and AI-Powered Process Automation

Products

- Azure Cloud Services, Azure AI Document Intelligence, Content Understanding, Power BI

A leading electronics manufacturer partnered with Hitachi Solutions to transform how critical manufacturing processes were managed, modernizing decades of legacy systems and unlocking new capabilities through AI. Facing increasing complexity, reliance on manual processes, and growing organizational risk tied to tribal knowledge, the company sought a scalable, future-proof solution.

By combining application modernization with AI-powered document intelligence, Hitachi Solutions helped the organization move from fragmented, manual operations to a unified, intelligent system—enabling more consistent processes, improved user experiences, and a strong foundation for long-term growth.

CHALLENGE

The organization relied on a collection of legacy, homegrown systems, with some dating back over 20 years, to manage manufacturing operations. Core workflows were driven by a combination of outdated applications, spreadsheets, and manual processes, making it difficult to scale or adapt to evolving business needs.

Critical processes, such as production tracking and engineering change management, depended heavily on individual expertise and tribal knowledge. As the company grew and began to face workforce transitions, this reliance introduced operational risk and limited visibility into key processes.

Document-heavy workflows further compounded the challenge. Engineering changes were managed through templates and manual approvals, with little validation or structure, making processes time-consuming, error-prone, and difficult to scale.

SOLUTION

Hitachi Solutions delivered a modern, cloud-based application integrated with AI capabilities to transform how manufacturing processes were executed and managed.

1. End-to-End Application Modernization:

Legacy systems were re-engineered into a unified, cloud-based application running in Azure, consolidating multiple internal tools into a single platform. This created a single pane of glass for managing manufacturing operations while maintaining integration with existing systems.

2. Intelligent Workflow Automation:

Previously manual processes were redesigned to pull data from multiple systems and deliver structured tools for planning and scheduling, improving efficiency across teams.

3. AI-Driven Document Intelligence:

AI capabilities were introduced to transform document-heavy workflows. By leveraging Azure AI services, the system processes and extracts insights from decades of historical documents, converting unstructured data into structured, usable information.

4. Structured Process and Approval Management:

The new system replaces unstructured document workflows with standardized, data-driven processes that include automated approvals, notifications, and audit tracking.

5. Secure, Scalable Cloud Architecture:

Built on Azure with secure communication through gateways, firewalls, and VPN connections, the solution ensures data remains within the customer's controlled environment while supporting future scalability.

BENEFITS

Improved User Experience and Efficiency: Moving from legacy applications to a modern interface significantly improved usability and productivity.

Reduced Reliance on Tribal Knowledge: By embedding knowledge into structured systems and workflows, the organization reduced dependence on individual expertise and improved operational resilience.

Streamlined and Standardized Processes: Automation and structured workflows reduced manual effort, minimized errors, and ensured consistent execution across teams.

Increased Visibility and Traceability: Enhanced audit tracking and data capture provided greater transparency into processes and changes.

Foundation for Future Innovation: With modern systems and structured data in place, the organization is positioned to expand into advanced analytics and additional AI-driven capabilities.

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how we can help you!

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