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Case Study

Modernizing Manufacturing Verification Through Automation and Cloud Scale

The Client

The client is a leading manufacturer of reusable plastic packaging systems serving large-scale distribution, logistics, grocery, food and beverage, and e-commerce fulfillment environments. Its products include reusable totes, pallets, bins, and custom injection molded solutions designed to improve material flow and reduce single-use waste across supply chains.

These systems support storage, picking, transport, automated conveyance, and return flows. The company helps enterprise supply chain operators increase throughput efficiency, support automation initiatives, and meet sustainability goals through durable, standardized packaging built for long-term

The Challenge

The client needed a robust, scalable application platform to support high-volume packaging manufacturing and production operations. Legacy stability constraints, fragmented data, and workflow inefficiencies limited throughput and slowed automation.

Manual decoration checks, limited operational visibility, and decentralized controls also made consistent validation and traceability more difficult.

- ✔ **Platform Stability:** Resolve defects, rule conflicts, data-flow issues, validation delays, and reporting bottlenecks.
- ✔ **Manual Verification:** Reduce repeated checks for tray and container decoration specifications before production.
- ✔ **Operational Visibility:** Provide near real-time insight into verification events, exceptions, failures, and production readiness.
- ✔ **Security & Governance:** Centralize rules with SSO, role-based access, traceability, and manufacturing audit controls.



Technology Environment

Telliant worked with the client to modernize the technology stack & support reliable, scalable verification workflows:

BACKEND

- .NET Core Web API

FRONTEND & DATA

- Blazor Server Application
- MongoDB with Azure Cosmos DB

CLOUD & INTEGRATION

- Microsoft Azure and Single Sign-On
- Azure Repos with automated CI/CD
- On-prem Windows application data ingestion

About Us

Telliant Systems, offers a diverse selection of custom software product development services, such as product strategy, software design, application development, QA/Testing, & application management services. Expert teams are available to develop web, enterprise, & mobile app, including iOS & Android development.

Solution Highlights

Telliant was engaged to rescue, stabilize, and enhance the Decoration Verification System. The modernized platform combines workflow stabilization, automated rule-based verification, high-volume data processing, secure administration, and Azure cloud infrastructure to support reliable manufacturing operations at scale.

- ✔ **Platform Stabilization:** Identified bottlenecks, corrected verification logic, optimized queries, and improved end-user workflows.
- ✔ **Automated Verification:** Built a rules-driven engine to validate incoming tray and container decoration specifications automatically.
- ✔ **Centralized Rule Management:** Developed a secure Blazor portal for configuration, rule control, and administrative oversight.
- ✔ **Operational Dashboards:** Enabled teams to track millions of verification events, exceptions, rule failures, and production readiness.
- ✔ **Secure Cloud Access:** Implemented Azure hosting, SSO, role-based controls, traceability, and auditability for multi-site use.

Insights and Results

The Decoration Verification System was stabilized, modernized, and scaled to validate decoration designs faster & more consistently.

- ✔ **Reduced Manual Effort:** Automated rule checks lowered inspection work, minimized opportunities for human error.
- ✔ **Faster Production Readiness:** Automated decisioning accelerated decoration approvals and moved compliant specifications forward sooner.

