



SOLUTION

Cold Chain Management

INDUSTRY

Life sciences

HOW A LARGE PHARMACEUTICAL PACKAGER TRANSFORMED COLD CHAIN COMPLIANCE

One of the largest contract packagers in the United States needed a reliable, proactive way to manage temperature-sensitive pharmaceutical products during internal processing. As they expanded their packaging operations to include more products requiring strict cold chain management (e.g. GLP-1 medications), it became critical to monitor temperature exposure at every stage. Products had to be maintained at specific temperatures or at ambient temperature for a controlled period before returning to refrigerated or frozen environments.

Previously, paper-based tracking made it difficult to ensure compliance, risking costly product losses if excursions went undetected. With operations expanding across five global locations and thousands of product batches moving through their facilities, the company needed a scalable, real-time cold chain monitoring solution. They turned to a digital system capable of tracking the full journey - from freezer storage to packaging lines to finished goods staging - to ensure compliance, safeguard profitability, and protect product integrity.



CHALLENGES

- Paper-based manual tracking prone to human error and non-compliance risks
- Increased complexity with growing volume across five global locations
- Risk of costly product destruction if temperature excursions went unnoticed
- No real-time visibility or proactive alerts for critical temperature thresholds
- Managing thousands of batches annually requiring precise compliance monitoring

SOLUTION

The company implemented a barcode-based cold chain management solution integrated with real-time dashboards and proactive alerting systems. Products are scanned as they move through different zones — from freezers. refrigerators, and ambient packaging lines capturing critical data points automatically. At each packaging line, status dashboards provide immediate visibility into product conditions, while message boards and automated email alerts notify staff when products approach critical temperature or time limits. The scalable system is designed to eventually incorporate RFID technology, further reducing manual scanning and expanding automation as operations grow.

BENEFITS

- Real-time monitoring and proactive alerts prevent costly temperature excursions
- Compliance assured without relying on manual record-keeping
- Increased operational efficiency with reduced product handling risks
- Comprehensive dashboards and reporting for process optimization and audit readiness
- Scalability to support five global sites and track thousands of batches annually
- Stronger protection of high-value products like GLP-1 medications, enhancing customer satisfaction

