

BUILDING BLOCKS

FOR TOMORROW'S E-COMMERCE PLATFORM

The e-commerce market is growing relentlessly and fundamentally changing how customers make their purchases. In a world where speed, availability, and flexibility make the difference, modern e-commerce solutions are more than just shops – they are complex ecosystems that seamlessly orchestrate orders, payments, deliveries, and inventory.

Posedio took on the development and implementation of key components for the client, enabling reliable order processing and punctual, dependable delivery to customers.

CHALLENGE

Customers today expect their online orders to arrive as quickly and conveniently as they're used to from Amazon or brick-and-mortar retail – negative experiences are rarely forgiven.

Especially with fresh or perishable foods, complexity increases: short shelf lives, strict cold chains, the mix of packaged and weighed items, and precisely defined delivery windows set by the customer require a high-performance IT solution that can predict product availability in real time. The precise coordination of delivery windows and inventory, real-time processing of large data volumes, dynamic load peaks, and seamless monitoring of business processes place the highest demands on the system.

APPROACH & IMPLEMENTATION

1 FLEXIBLE DELIVERY WINDOW

To offer customers maximum flexibility in choosing their delivery time, Posedio developed a rule-based system where delivery windows can be configured like an Outlook calendar and centrally managed. A backoffice application allows the business unit to define available time slots, which are automatically checked for consistency. The system provides real-time access to delivery window data, enabling precise capacity planning as the basis for on-time deliveries.

2 MODULAR BACKOFFICE UI

A modular user interface was developed for efficient management of delivery windows, capacities, and substitute items, aligned with the client's corporate design. It integrates the existing authentication system and enables role- and rights-based navigation for different business units. The chosen vertical architecture also allows independent implementation of new features – from frontend to backend.

3 REAL-TIME ARTICLE AVAILABILITY

Precise product availability across various distributors, warehouses, and points of sale is critical. The developed system aggregates inventory, replenishment, and order data and determines in milliseconds whether an item will be available at the delivery time at a specific location for the customer's delivery address. The service processes an average of 15 million data records daily, ensuring high accuracy of inventory levels.

4 BUSINESS PROCESS MONITORING

To ensure the stability and performance of the e-commerce solution, Posedio implemented a monitoring system for business rules that detects deviations in the order process in real time and generates alerts. Without interfering with existing services, this system provides a comprehensive overview of the order cycle, facilitates error analysis in the distributed architecture, and supports continuous process optimisation.

RESULTS

PROACTIVE MONITORING

Early error detection minimises downtime and sustainably optimises business processes.

INCREASED EFFICIENCY

Central management and automation lead to significantly more efficient operational processes.

CUSTOMER SATISFACTION

The modular next-generation e-commerce solution increases satisfaction through flexible delivery windows and reliable availability information.

This technical transformation is more than just a modernisation of IT infrastructure. It forms the backbone of a customer-centric e-commerce experience that combines speed, precision, and scalability. Posedio has laid the foundation for sustainable success in the competitive European e-commerce market – an impressive example of how technological innovations foster sustainable growth and future-proof business models.

