Luxoft
A DXC Technology Company

Supply chain management in retail

Case study

Client:
A luxury department store chain operating over 100 retail stores in North America

Technologies and tools:

FVT | SIT | UAT | Java 11 | Javalin | Spring | Spring boot | Spring data dynamo

Created a robotic automated warehouse facility

Luxoft's engineering talent completed six projects

Challenge

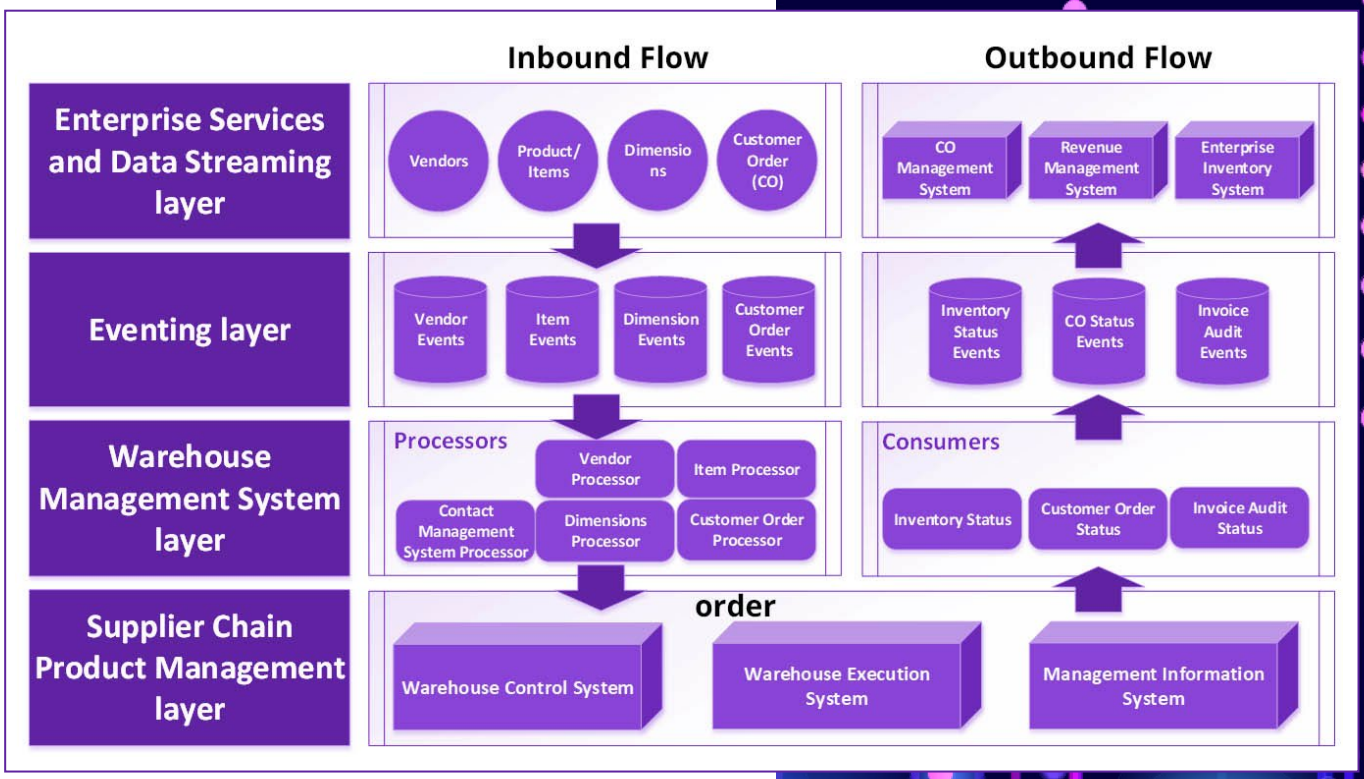
Our client is a luxury department store chain operating over 100 retail stores in North America. By 2019, against a retail landscape of widespread store closures and the rise of e-commerce, our client managed to keep their position as one of the market leaders. They set an ambitious goal to keep up and compete with the biggest market player in terms of delivery speed. The strategic goal was to provide sufficient capacity to meet customer demand, while significantly reducing shipping costs. So, the company initiated the creation of a huge robotic automated warehouse facility and chose Luxoft to address this challenge.

Solution

Luxoft engineering's talent capacity allowed us to wrap-up six projects within the first four months of cooperation. The scope included, but was not limited to:

- Warehouse management system integration
- Revenue management system integration
- Development of the systems that support freight transportation activities by external carriers from, to, and within the client's facilities (stores, fulfillment centers, distribution centers): Scheduling systems, carriers payments data processing systems, carrier management systems, supplier compliance systems, etc.
- Development and support for the process of order fulfillment as part of the supply chain platform layer between the enterprise and warehousing facilities
- Development of the software layer which would allow to deflect customer order transfers within the client's transportation applications to the drop shipper; tracking the status of each order during and after the transition, as well as secure error cases to allow the company to maintain a high level of service

- Development of a quality assurance framework and automating test scenarios for such testing phases: FVT (Functional Verification Testing), SIT (System Integration Testing), UAT (User Acceptance Testing). Reduction to a minimum or zero the manual testing and establishing of end-to-end automated testing



Results

The Luxoft team managed to become an integral part of the client's change and a reliable partner to share the challenge.

The robotic automated warehouse minimizes human involvement, the risk of errors, and speeds up order processing and delivery.

Automation speeds up the onboarding of stores and warehouses: Takes up to one month, instead of around a year.

The Luxoft team managed to adopt the client's values and their product engineering thinking. Thanks to this, Luxoft has become a reliable 24/7 support partner.

The client came up with the initiative to make the Luxoft delivery team more autonomous, putting more trust and responsibility on Luxoft as a software development partner. The program is growing and negotiations for more projects are underway.

Technologies

Java 11, Javalin, Spring, Spring boot, Spring data dynamo, Gradle, GitLab, k8s, AWS, AWS dynamodb SDK, Terraform, Kafka, Kafka streams, Reactor Kafka, Splunk, NewRelic, DataDog, Postgres, Apache Avro, Cucumber, Awaitility, Assertj, Jaxb, Ehcache, Wiremock

About Luxoft

Luxoft is the design, data and development arm of DXC Technology, providing bespoke, end-to-end technology solutions for mission critical systems, products and services. We help create data-fueled organizations, solving complex operational, technological and strategic challenges. Our passion is building resilient businesses, while generating new business channels and revenue streams, exceptional user experiences and modernized operations at scale.

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