



The Efficiency Vs. Experience Paradox

Securing the Brand Promise in the
Age of Retail Consolidation

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The Efficiency vs. Experience Paradox

Leading retailers are currently navigating two diverging pathways. On one hand, they are aggressively consolidating IT assets and cutting back on application development to reduce costs, while on the other hand, implementing strategic initiatives to expand digital experiences that require high-velocity innovation, including AI-based personalization and continuous updates to edge in-store devices.

The Conflict:

Data shows that retailers are decommissioning hundreds of applications to streamline operations. A negative side effect of this consolidation, however, is the resulting environment where Tool Sprawl and Custom Integrations threaten the stability of the very customer experiences that drive revenue.

THE SHIFT:

To win in a very competitive market, retailers must build a Platform Engineering foundation that allows them to cut IT costs without cutting corners on software quality and security. Retailers need a software supply chain that guarantees a more positive customer experience, whether it's on a mobile phone or at the point-of-sale.

Forces Reshaping Global Retail

1. The Consolidation Wave

- **The Trend:** Aggressive M&A and restructuring.
- **The Challenge:** Merging disparate tech stacks creates massive "Tool Sprawl." Teams struggle to maintain velocity while migrating legacy systems to new platforms.

2. Supply Chain Transparency

- **The Trend:** Consumer and regulatory demand for total transparency, not just in raw materials but in digital operations as well. For luxury leaders, this means proving the integrity of the digital 'thread' across the entire brand lifecycle.
- **The Challenge:** Proving the provenance and security of every software component to meet ESG and regulatory compliance.

3. The Edge of Commerce

- **The Trend:** Smart stores and "Express" formats, such as ASDA Express, relying on connected POS and IoT.
- **The Challenge:** Delivering software updates to thousands of distributed store locations reliably, despite bandwidth or connectivity limitations.

4. AI-Driven Personalization

- **The Trend:** Using GenAI for hyper-personalization, such as ICA Gruppen's "Klimatknuffen".
- **The Challenge:** Managing the influx of heavy AI models and protecting customer data from vulnerabilities in open-source libraries.

The Unified Commerce Stack

To successfully address the challenges facing the retail software industry today, DevOps leaders should adopt an architecture based on a Unified Commerce Stack that includes the following:

1. Experience Layer (Headless)

- **Inputs:** Mobile Apps, Web Storefronts, AI Personalization Engines.
- **Function:** Delivering the customer-facing brand experience.
- **Goal:** Zero Friction, High Availability.

2. Supply Chain Platform (The Backbone)

- **Inputs:** JFrog Platform.
- **Function:** The central logistics hub for software. It consolidates all artifacts (Docker, NPM, Maven, PyPI) from all brands and business units into a Single Source of Truth.
- **Goal:** Efficiency & Consolidation.

3. Physical Store Layer (Edge)

- **Inputs:** POS Systems, Digital Signage, Inventory Bots.
- **Function:** Secure distribution of updates to the physical retail fleet.
- **Goal:** Reliability & Uptime.

Priorities for Today's Retail Platforms

From a strategic perspective, bringing your organization's platform into the modern age of digital and in-store commerce requires addressing the following:

01 | Radical Consolidation

Action: Eliminate Tool Sprawl.

Stop paying for redundant tools across different brands and departments.

Consolidate 30+ package types into a single system to meet cost-saving mandates immediately.

02 | Brand Protection via Curated Code

Action: Secure the Software Supply Chain.

A security breach in your loyalty app is a breach of trust. Implement automated curation to block malicious packages before they enter your development lifecycle, protecting your customer data and brand reputation.

03 | Reliable Delivery to the Edge

Action: Modernize Store Operations.

Ensure that your "Express" stores and POS systems receive updates as easily as a smartphone. Use distributed repositories to push updates to thousands of locations without crashing the network.

Protecting the Brand Experience

Why JFrog?

Retail is high volume and high stakes. You cannot afford "slow artifact pull times" during Black Friday or a POS failure during peak hours.

JFrog provides the infrastructure that allows the world's largest retailers to **consolidate their IT assets** while accelerating their digital growth. We ensure that the software driving your sales is secure, available, and up-to-date, whether on the phone or in the store.

Take the Next Step in optimizing your retail software supply chain for efficiency and security.

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