



Checkout Disasters that Hide in Custom Ecommerce Flows

Lessons from real-world checkout customizations: where things break and how to fix them.

Many ecommerce enterprises rely on SaaS platforms to run their stores. But the core thing here is that no business fits neatly into an out-of-the-box solution. That's why companies arm themselves with the right expertise to add a personal touch — or, let's be honest, rebuild half the platform — to make it work.

And that's where things get messy. Custom discounts break checkout, loyalty perks refuse to sync, payments misfire, and suddenly, a simple tweak becomes a full-blown technical headache.

This whitepaper dives into real-world checkout customization challenges. We accumulate the cases from our practice to show you where things break, why they happen, and how they were fixed in practice, not in theory.

In the sections below, we'll explore the main five aspects where things can go wrong, illustrating them with real-life examples of challenges we faced. Let's dive in.

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The Price of Data Mismatches

Seeing incorrect information, such as prices, stock levels, or delivery details, makes customers feel deceived, and no one tolerates that. Large-scale ecommerce platforms rely on a vast network of third-party systems, making data integrity issues inevitable. And since syncing this data often means tweaking out-of-the-box flows, things get even trickier. Look at some cases.

We solve chaos like this daily.
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MISALIGNED CART AND STOCK MANAGEMENT

In typical out-of-the-box ecommerce setups, stock accuracy depends on proper integration with third-party inventory systems. But when customizing checkout flows, synchronization between stock updates, cart retention, and automated adjustments can get tricky. If not handled properly, outdated stock levels can lead to overselling, cancellations, and lost customer trust.

Example from Expert Soft's Practice

A global beauty retail corporation ran into a similar issue during a limited-time sale for digital products. After the sales ended and customer support manually set the product's stock to zero, customers were still placing orders. As customer support had no remaining inventory to fulfill them, this resulted in disappointed buyers and operational challenges.

OUR SOLUTION

- Root cause:** During the investigation, we found that despite customer support marking products as unavailable, an automated cart-cleaning function was mistakenly resetting availability of items.
- Solution:** We overhauled the cart-cleaning logic and developed custom scripts to prevent post-sale reactivation.
- Result:** Overselling was eliminated, ensuring checkout accuracy and a frustration-free experience.

PRICING INCONSISTENCIES

Customers expect the price they see while browsing to match what they pay at checkout. But behind the scenes, multiple factors hide. Is the system pulling prices internally or from a third-party provider? Are promotions, loyalty points, or discounts affecting the final cost? If these elements aren't perfectly synchronized, inconsistencies creep in, confusing buyers and disrupting the checkout flow.

Example from Expert Soft's Practice

When shopping on the beauty retailer giant's ecommerce platform, customers would add products to their carts from the product detail page only to find that the prices had changed. A product displayed one price on the product detail page (PDP) but appeared with a different total in the cart.

OUR SOLUTION

- Root cause:** A third-party system mistakenly applied promotions that should have been inactive, altering cart pricing unexpectedly.
- Solution:** We quickly identified the issue and led a deep-dive troubleshooting session with the third-party provider, pinpointing the misconfiguration. By working closely with their team, we deactivated the faulty promotion logic, restoring pricing consistency.
- Result:** The checkout process regained price consistency, eliminating customer confusion and restoring trust.

DELAYED DATA UPDATES

Customers expect their account details — loyalty points, discounts, and order statuses — to always be up to date. But when this data lives in third-party systems, this real-time synchronization requires a smooth technical approach to fit business flows.

Example from Expert Soft's Practice

The customers of a top 250 cosmetic brand frequently saw outdated customer info, such as loyalty points, when accessing their accounts.

OUR SOLUTION

- Root cause:** Customer data was stored in the CRM system, and synchronization ran asynchronously. Since updates weren't immediate, users often saw outdated information before the refresh process was completed.
- Solution:** We added a smart front-end trigger: a real-time back-end request to the CRM that refreshed data prior to the moment users accessed personal pages, ensuring loyalty points and other details were always up to date.
- Result:** Loyalty points and other critical info stayed accurate, eliminating confusion and keeping the checkout experience seamless.

LATE-STAGE CHECKOUT ERRORS

Out-of-the-box ecommerce platforms follow standard validation flows, but they're not always sufficient. If key checks aren't triggered at the right stages, errors can force customers to restart checkout or abandon their purchase. This becomes especially problematic when dealing with custom delivery methods that require real-time availability validation.

Example from Expert Soft's Practice

Customers of a leading jewelry brand frequently encountered errors when selecting the ship-from-store delivery method. The issue surfaced late in the checkout process, forcing them to restart or switch delivery options, leading to frustration and potential drop-offs.

OUR SOLUTION

- Root cause:** The system only validated ship-from-store availability at the final checkout step, leading to last-minute failures.
- Solution:** We added an early-stage validation step, immediately checking delivery availability before customers proceeded with checkout and providing instant feedback.
- Result:** Checkout interruptions were eliminated, customer frustration dropped, and overall satisfaction improved.

And we didn't stop here. Explore how we optimized every step of the customer journey for a leading jewelry brand. [Follow the link](#)

DATA MISMATCHES BETWEEN INTEGRATED SYSTEMS

Customizing an ecommerce platform is about ensuring every element functions as expected. When third-party systems change their behavior without notice, even minor discrepancies can disrupt checkout, leading to incorrect information.

Example from Expert Soft's Practice

Customers of a leading retail brand selected delivery time slots that turned out to be incorrect. The mismatch led to missed deliveries, unexpected delays, and increased support requests.

OUR SOLUTION

Root cause: The external system that provided the time slots changed its response format, misaligning the integration logic and causing incorrect delivery details.

Solution: We conducted a deep-dive analysis, reviewing the code, mapping flow diagrams, and testing in multiple environments to reveal the system's real behavior. By collaborating with business analysts, we adjusted the logic to reflect the updated response structure.

Result: Delivery time slot accuracy was restored, preventing checkout errors and ensuring customers received reliable information when selecting their preferred delivery options.

As you can see, even one wrong sync can crumble the checkout. What can you do? Test and handle errors. And explore some more best practices for [ensuring data integrity during checkout](#)

Cart and Fulfillment Logic Failures

A stable checkout isn't just about moving items from cart to payment, it's about handling complex transitions smoothly. Customizing ecommerce platforms often disrupts default cart merging, promotion handling, and fulfillment logic, leading to lost items, misapplied discounts, or delivery issues. Explore the examples.

CART PERSISTENCE ACROSS USER SESSIONS

A seamless checkout experience means customers should never have to rebuild their cart just because they log in. But in customized ecommerce setups, handling cart data between guest sessions and user accounts isn't always straightforward. If the system doesn't properly manage cart persistence, items can disappear, disrupting the purchase flow.

Example from Expert Soft's Practice

On a global retail brand platform, guest users lost their cart contents after logging in. Items vanished without warning, forcing users to start over and increasing the risk of cart abandonment.

OUR SOLUTION

Root cause: The system failed to persist cart data during the transition from guest to logged-in sessions, causing cart items to be lost.

Solution: Because of multiple user scenarios possible, the fix required precise control over data persistence. We developed a custom cart-merging logic, ensuring carts were safely stored and restored across sessions.

Result: Seamless cart transitions, zero lost items, and a frustration-free checkout experience.

MISAPPLIED DISCOUNTS IN PROMOTIONAL CAMPAIGNS

Promotional logic in ecommerce must be flawless, especially when dealing with Gifts with Purchase offers. If the system doesn't properly differentiate between promotional gifts and standard purchases, gifts may not apply correctly or pricing inconsistencies may arise, leading to revenue loss.

Example from Expert Soft's Practice

On a leading retail platform, customers faced incorrect Gifts with Purchase behavior. If they manually added a gift-eligible item before triggering the promotion, the system applied a 100% discount instead of adding an item separately as a gift. With no notifications, the checkout felt misleading, leaving customers unsure if they received their gift.

OUR SOLUTION

Root cause: If a gift-eligible item was added to the cart before being marked as a gift, the promotional engine incorrectly applied a 100% discount instead of treating it as a separate gift item.

Solution: We refined the logic, ensuring that the promotional engine accurately distinguished between manually added items and automatically granted gifts. By adjusting the processing sequence, we ensured that promotions applied correctly and the engine could account for these edge cases.

Result: Accurate promotions, no pricing inconsistencies, and a seamless checkout experience that maintained both customer satisfaction and business compliance.

A misplaced discount, a lost cart, a failed fulfillment – these are tiny errors with massive impact. Checkout needs engineering, not guesswork. See how [expert development ensures it works](#)

The Hidden Complexities of Payment Processing

Payments should be instant, seamless, and invisible — not a source of friction. But when customizing out-of-the-box platforms, rigid checkout flows, provider inconsistencies, and outdated processing logic may turn transactions into roadblocks instead of revenue drivers.

STATIC PAYMENT CALCULATIONS

Flexible payment options, such as installment plans, should be seamless for both customers and businesses. But when ready-made platforms rely on static payment structures for such options, maintaining accurate pricing becomes a nightmare, requiring constant manual updates.

Example from Expert Soft's Practice

A leading retailer's finance option allowed customers to split payments over several months, but the system stored fixed monthly payments per product instead of using a dynamic calculation model, requiring constant updates.

OUR SOLUTION

To deliver flexibility, we replaced static calculations with a dynamic finance coefficient model, where only a country-specific coefficient was stored. This allowed real-time installment calculations without manual adjustments when product prices changed.



SECURITY RISKS IN PAYMENT PROVIDERS

Seamless checkout relies on secure and reliable connections between an ecommerce platform and its payment providers. But when integrating third-party providers, outdated systems, flawed logic, or weak security protocols can introduce transaction failures, processing errors, and even financial risks.

Example from Expert Soft's Practice

Expanding a jewelry manufacturer into a new market – Turkey – required integrating iyzico, a payment provider that lacked compliance with modern standards, making secure implementation difficult.

OUR SOLUTION

Root cause: The provider's outdated encryption methods and flawed logic led to security risks and unreliable payment handling.

Solution: We developed two parallel implementations: one that ensured compatibility with iyzico's current setup and another built with stronger security algorithms, allowing a seamless switch when needed. By fine-tuning encryption, building smart workarounds, and working directly with iyzico's team, we secured transactions without compromising stability or flexibility.

Result: Payments now flow seamlessly and transactions stay secure, even when working with a less-than-ideal third-party system.

SEAMLESS ONLINE AND IN-STORE PAYMENTS

In modern ecommerce, customers expect frictionless payments whether they're purchasing on the website or finalizing transactions in-store. But ensuring seamless omnichannel payment processing, especially with the fixed checkout flow that a ready-made platform offers, is not as easy as may seem.

Example from Expert Soft's Practice

A luxury retail brand needed to integrate two payment modes – standard online transactions and a pay-in-store option – within a limited timeframe.

OUR SOLUTION

Root cause: Challenges arose in testing due to hardware constraints, handling inconsistent Adyen responses, and securely enabling saved payment methods for future transactions.

Solution: By collaborating with Adyen, we introduced a retry mechanism and secondary API response handling, allowing fallback mechanisms to ensure that payment processing remained stable. Additionally, we introduced SaferPay to securely store payment data, improving transaction flexibility.

Result: Payments now work seamlessly across all channels, allowing customers to transition between online and in-store payments effortlessly and ensuring secure and conflict-free transactions.

Payments should just work regardless of provider quirks or hidden complexities. At Expert Soft, we've seen it in practice and know how to make every transaction seamless. [See how we make this happen for an international luxury brand](#)

Risks of Relying on Manual Processes

Manual processes don't scale. When every discount approval or delivery issue requires human intervention, checkout speed suffers, and support teams get overwhelmed. Customizing out-of-the-box ecommerce platforms to automate these workflows eliminates bottlenecks, ensuring faster transactions and a smoother experience for both customers and businesses.

MANUAL ORDER ADJUSTMENTS

In ecommerce, manual discount approvals and custom pricing requests may slow down the buying process. Customers expect instant, seamless interactions at their fingertips, something that manual approvals can't always provide.

Example from Expert Soft's Practice

Previously, customers of a global medical tech provider had to request discounts through direct sales interactions, navigating multiple manual steps before finalizing an order. The process lacked visibility, often leading to delays and missed opportunities for faster conversions.

OUR SOLUTION

We developed a fully integrated online discount request feature, allowing customers to submit discount inquiries directly on the ecommerce platform. Sales teams could review and finalize quotes digitally, with real-time updates and automated email notifications keeping customers informed at every stage.

Result: Discounts get processed instantly, orders move faster, and customers stay engaged, while sales teams save time and effort.

OVER-RELIANCE ON CUSTOMER SUPPORT

When customers lack clear order updates, they turn to customer support for answers, adding friction and extra workload. Out-of-the-box ecommerce setups often lacked automated post-purchase communication, requiring manual interventions. The solution here is to customize these flows with automation.

Example from Expert Soft's Practice

On a global jewelry brand, customers flooded support over missed delivery updates and unclear next steps. Without automation, resolving failed deliveries meant endless back-and-forth, wasting time for both customers and support teams.

OUR SOLUTION

We introduced automated post-purchase email notifications and refined order management flows to ensure customers received real-time updates about delivery issues and next steps. Clear guidance reduced confusion and empowered customers to resolve issues independently.

Result: The solution reduced the load on customer support while making the customer experience smoother, as no one should have to call support just to know where their order is.

The best aid in automation?
We think almost everyone knows
the answer in the current realms —
this is Artificial Intelligence.
[Explore how ecommerce businesses
among Expert Soft's clients utilize AI](#)

Checkout Personalization That Misses the Mark

Large enterprises bet big on tailored experiences, and checkout is no exception: it should feel personal, not generic. But out-of-the-box platforms aren't always built for seamless personalization. Without smart customization, loyalty perks, user preferences, and dynamic content clash with the existing flow, adding friction instead of value.

CHECKOUT FLOWS IGNORING USER LOYALTY

Customers expect a checkout that knows who they are: VIP perks, exclusive offers, and rewards that feel seamless. But prebuilt checkout flows don't usually adapt within three clicks, requiring the development expertise to rebuild them according to business needs.

Example from Expert Soft's Practice

A top beauty products website needed to support a tiered VIP program with three customer levels, each requiring unique content. Managing separate loyalty pages for each tier wasn't scalable, making it difficult to maintain a personalized experience.

OUR SOLUTION

Leveraging SAP Commerce's personalization mechanism, we implemented a single loyalty page that dynamically adjusted based on the customer's segment. For this, we used mappers to ensure that each user saw the correct loyalty content in real time, without added complexity.

Result: The customers now receive a fully personalized experience, seamlessly integrated into checkout flows, ensuring that customers always see relevant offers based on their status.

Checkout Personalization That Misses the Mark

LACK OF SELF-SERVICE CAPABILITIES

Customers don't want to wait in line for answers, they expect to manage their preferences, rewards, and orders instantly. But when out-of-the-box platforms lack intuitive self-service options, even simple tasks turn into frustrating support tickets, slowing down experiences and overloading customer service teams.

Example from Expert Soft's Practice

For example, on a leading luxury jewelry platform, loyalty program customers couldn't update preferences or manage rewards independently, only through customer support. This slowed down processes for both customers and the business, creating frustration and inefficiencies.

OUR SOLUTION

We built a self-service portal that puts customers in control of their loyalty benefits. At its core, the solution seamlessly integrates with SAP CRM via API, ensuring real-time data access. Now, users manage preferences and bonuses effortlessly with no support calls.

As you see, nailing checkout personalization is crucial, but what about the rest of the journey? We brought you some examples of how brands extend tailored experiences beyond the buy button: [the first example is available here](#), [the second one here](#)

The Bottom Line

Customizing out-of-the-box ecommerce solutions, most of the time, is about building resilience in every click, sync, and transaction.

As real-life examples in this whitepaper showed, even small tweaks can lead to unexpected complexities, from checkout misfires to payment breakdowns. Some challenges are subtle and can be overcome with minor adjustments, while others are brutal, requiring deep investigation and complex engineering.

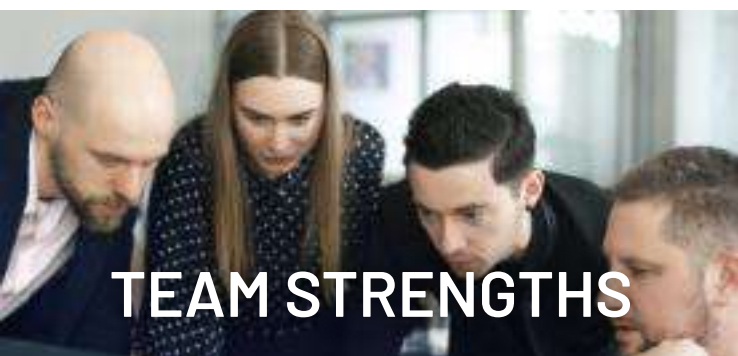
We at Expert Soft have tackled both, and that has taught us to never guess — only solve. And solve in a way that ensures a seamless checkout for users and reliable logic for businesses.

About Expert Soft

Expert Soft is a targeted ecommerce software delivery company, partnering with Fortune 500 companies and global corporations across the US and EU. With SAP Commerce Cloud and Java as our backbone, we know how to ensure scalable and high-performing solutions that can handle 1 mln requests per second, delivering a smooth customer experience.

Developing a payment engine that saved our client about \$100 million in operational expenses, ensuring multi-country platform support, adapting solutions for new market entry with tailored enhancements — these are just a few of the challenges our specialists tackle.

We aim to deliver more than a software system. We aim to deliver tailored solutions that maximize profitability within available resources. Our success is driven by:



TEAM STRENGTHS

- | All our engineers have a university background
- | Specialists excel their skills in our training LABs
- | Perfect English skills
- | Ready to help 24/7

CLIENTS

We work with corporations around the world with revenue of over \$20 billion and 150K+ employees.

APPROVALS BY AUDITS

Our ongoing work with corporations is consistently validated through rigorous audits, both by internal teams and Big 4 consulting firms.

HIGH-LEVEL SECURITY

Approved by assessments from global companies, who are leaders in their respective industries.

BUDGET EFFICIENCY

By carefully aligning technology investments with your business goals, we ensure optimal value and cost-effectiveness.

PROFESSIONAL TEAM

No offshore outsourcing and our team's average tenure of 4+ years means you get seasoned problem-solvers, not just coders.

EXPERT SOFT EXCELS IN

- | PAYMENT ENGINE
- | MICROSERVICES ARCHITECTURE
- | CONTENT MANAGEMENT
- | REDESIGN
- | E-COMMERCE PLATFORM
- | HEADLESS COMMERCE
- | MICRO UI FRONT-END
- | MIGRATION&INTEGRATION

OUR TECH CORE



FRONT-END

HTML, CSS, JavaScript (Angular, React, Vue, Next, TypeScript, JQuery), Spartacus



BACK-END

Java EE, Spring, SAP Commerce (Cloud), Node.JS.



DEVOPS

Docker, Kubernetes, CI/CD



UX/UI DESIGN

UX Research, UI Design, Figma, Adobe, Sketch



QUALITY ASSURANCE

Manual Testing, Test Automation

TARGETED DOMAINS



SHARED PATHS, LASTING ECOM VICTORIES



LET'S TALK SOLUTIONS!




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Let's connect 