

TRANSFORMING RETAIL COMMERCE THROUGH ACCESSIBILITY, CHECKOUT, SEARCH & 3D PRODUCT VISUALIZATION

The Bernie & Phyl's Adobe Commerce Modernization

Simplifying a complex furniture retail journey into a more stable, accessible, and customer-friendly Magento experience, we helped Bernie & Phyl's improve checkout usability, product discovery, platform security, and online shopping confidence. The store needed to support furniture-specific order logic, ERP-connected workflows, 3D product visualization, and accessibility improvements without disrupting core business operations.

Magento 2 Development

Checkout Optimization

ADA Compliance

Product Discovery

3D Visualization

ERP Integration

Technical SEO

Performance Optimization



Key Highlights



5-Step → 2-Step
Checkout Experience
Simplified



70+
High-Risk Accessibility
Issues Fixed



Magento 2.4.7-p9
Platform Stability
Improved



3D & WebAR
Product Visualization
Enabled

The Strategic "Pain Point" Map



The Challenge

- ✔ **Complex 5-step checkout** created friction for shoppers
- ✔ **Furniture orders** required **mixed delivery** and **payment workflows**
- ✔ **Accessibility overlay tools** did not solve root **compliance issues**
- ✔ **Third-party search** created recurring **platform costs**
- ✔ Customers needed more confidence buying **furniture online**
- ✔ **Magento platform** required **security updates** and **version upgrades**
- ✔ Heavy **frontend assets** affected **site experience**
- ✔ **Marketing** and **customer data** required **manual handling**
- ✔ **Custom code** created **maintenance** and **upgrade risks**
- ✔ **Legacy ERP** and **Oracle systems** needed reliable **order flow**



The Objective

- ✔ Simplify the **checkout journey** while preserving **key business rules**
- ✔ Support **split-order logic**, **partial payments**, and **service-related cart items**
- ✔ Improve **ADA** and **WCAG** readiness through **code-level accessibility fixes**
- ✔ Move toward **Adobe Commerce Live Search** while preserving **product discovery quality**
- ✔ Add **3D** and **WebAR** **product visualization** for better **room-fit decisions**
- ✔ Strengthen **platform stability** with **Magento 2.4.7-p9** and **security patches**
- ✔ Improve **performance** by reducing **JavaScript** and **CSS bloat**
- ✔ Identify **integration gaps** and improve visibility across **business systems**
- ✔ Clean up **code quality issues** and reduce long-term **technical debt**
- ✔ Keep **Magento** connected with **core business operations**

The Solution: Modernizing Furniture eCommerce for Better Shopping and Operations

Pillar 1				Pillar 2				Pillar 3				Pillar 4			
Advanced Checkout Experience Optimization				Furniture-Specific Order Logic Management				Accessibility & Compliance Improvements				Search & Product Discovery Optimization			
Simplified online purchasing while maintaining business rules intact.				Supported real furniture retail workflows within the online purchase journey.				Moved beyond basic overlays to improve the actual website experience.				Reduced search platform costs while keeping product discovery strong.			
<ul style="list-style-type: none"> Replaced the complex 5-step custom checkout Moved to a cleaner Magento checkout flow Reduced unnecessary checkout steps Preserved split-order and partial payment logic Improved usability for furniture shoppers 				<ul style="list-style-type: none"> Supported mixed carts across product types Maintained delivery and fulfillment rules Added furniture removal as a cart item Improved order data flow to backend systems Preserved operational flexibility across complex workflows 				<ul style="list-style-type: none"> Partnered with Allyant for accessibility auditing Resolved high-risk accessibility issues across key pages Improved homepage, PDP, cart, and checkout access Addressed visual, structural, and navigation barriers Strengthened ADA and WCAG readiness 				<ul style="list-style-type: none"> Planned migration from SearchSpring to Live Search Preserved fuzzy search and auto-correct support Supported zero-result search visibility Maintained merchandising flexibility and search control Aligned search with the Adobe Commerce ecosystem 			
Faster path to purchase	Lower checkout friction	Better customer experience	Business workflows preserved	Efficient order handling	Better operations alignment	Fewer workflow conflicts	Easier customer ordering	Better usability for all shoppers	Reduced accessibility risk	Stronger compliance posture	Inclusive shopping experience	Reduced third-party dependency	Lower platform cost	Improved search control	Seamless product discovery

Pillar 5

Immersive 3D Product Visualization & WebAR

Helped shoppers evaluate furniture online with greater confidence.

- ✔ Enabled interactive 3D product viewing
- ✔ Enabled "View in Room" WebAR functionality
- ✔ Connected product data with 3D assets
- ✔ Improved room-fit and product scale confidence
- ✔ Improved engagement across product pages

Better product understanding	Higher buyer confidence	Engaging product pages	Stronger digital showroom
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Pillar 6

Magento Security & Platform Stability

Upgraded Magento for stronger security and long-term stability.

- ✔ Upgraded Magento platform to 2.4.7-p9
- ✔ Applied critical Magento security patches
- ✔ Resolved major platform vulnerability risks
- ✔ Improved production monitoring visibility
- ✔ Supported safer platform maintenance

Stronger platform stability	Better security readiness	Reduced operational risk	Improved upgrade foundation
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Pillar 7

Performance & Frontend Optimization

Improved storefront speed by reducing unnecessary frontend weight.

- ✔ Compressed and minified JavaScript and CSS
- ✔ Reduced frontend asset and code bloat
- ✔ Improved caching for stronger performance
- ✔ Removed unused extensions where needed
- ✔ Added monitoring for slow backend processes

Smoother browsing experience	Better Core Web Vitals foundation	Cleaner frontend performance	Improved bottleneck visibility
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Pillar 8

Business System & Data Flow Alignment

Improved clarity around how Magento connects with core business systems.

- ✔ Mapped online orders into business systems
- ✔ Reviewed manual marketing data movement
- ✔ Identified critical integration gaps early
- ✔ Improved reporting and operational visibility
- ✔ Preserved Magento-to-ERP order handling

Clearer system ownership	Better automation planning	Reduced data confusion	Stronger operational foundation
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Key Capabilities Delivered for Bernie & Phyl's



Streamlined Checkout Experience

- **Simplified Magento Checkout** – Replaced 5-step React checkout with a cleaner flow
- **Faster Purchase Journey** – Reduced checkout steps to improve shopper usability
- **Sticky Order Summary** – Added clearer order visibility during checkout



Furniture-Specific Buying Workflows

- **Mixed Cart Handling** – Supported regular, outlet, and drop-ship furniture items
- **Split-Order Logic** – Preserved routing for different fulfillment types
- **Furniture Removal Add-On** – Added removal service as a separate cart item



Payment & Order Flexibility

- **Partial Payment Support** – Maintained payment logic for eligible services
- **Gateway Compatibility Planning** – Reviewed payment options for checkout flexibility
- **Accurate Order Processing** – Improved totals, pricing, and order data accuracy



Accessibility & Compliance Readiness

- **Code-Level Accessibility Fixes** – Resolved issues beyond overlay tools
- **High-Risk Issues Fixed** – Deployed critical accessibility improvements
- **ADA & WCAG Support** – Improved usability for assistive technologies



Product Discovery & Merchandising

- **Search Platform Optimization** – Prepared Adobe Commerce Live Search migration
- **Fuzzy Search & Auto-Correct** – Preserved support for spelling and generic searches
- **Merchandising Continuity** – Maintained boosting, visibility, and discovery workflows



Immersive Furniture Shopping

- **3D Product Viewing** – Enabled interactive product visualization on PDPs
- **WebAR Room Preview** – Helped shoppers view furniture in their own space
- **Product Asset Mapping** – Connected backend product data with 3D assets



Platform Security & Stability

- **Magento 2.4.7-p9 Upgrade** – Upgraded the platform for stronger security
- **Critical Vulnerability Fixes** – Applied production security patches
- **Production Monitoring** – Improved visibility into platform health after updates



Performance & Operational Efficiency

- **Frontend Asset Optimization** – Reduced JavaScript and CSS bloat
- **Backend Monitoring** – Added visibility into slow queries and bottlenecks
- **Module Cleanup** – Removed unused extensions and improved maintainability

Performance Drivers Behind the Growth



Turn Furniture Browsing Into a Better Digital Buying Experience

Bernie & Phyl's needed more than a website update. The business needed a stronger Magento foundation that could support furniture-specific shopping behavior, complex operations, accessibility requirements, product visualization, and long-term growth.

By simplifying checkout, improving accessibility, modernizing search, strengthening security, and enhancing product visualization, the platform became easier for customers to use and more manageable for internal teams.

[START YOUR MAGENTO AUDIT TODAY ↗](#)

Learn how to simplify checkout, improve accessibility, strengthen product discovery, and build a more scalable Magento commerce experience.