

Legacy Systems Modernization for **E-Commerce Companies**

Is your eCommerce **tech stack** holding you back?

You don't always need to rebuild from scratch – **modernization can reduce costs by 40–60%**

Our Offer Is Designed for E-Commerce Companies That:

- Struggle with **outdated, hard-to-maintain systems**
- Need **better performance, integrations, and UX**
- Prefer a **low entry threshold** – we start with **code analysis** and **PoC (USD 1,250–3,800)**

What Problems Do We Solve in E-Commerce Platforms?

- **Rising infrastructure costs** – peak traffic (e.g., peak traffic during promotional events) causes system overload and scaling issues.
- **Checkout and performance bottlenecks** – outdated UX and slow interfaces increase abandonment rates.
- **Rigid architecture** – tight coupling between frontend/backend makes it hard to improve conversion flows or integrate new tools.
- **Lack of standardization** – inconsistent order logic leads to inefficiencies in fulfillment and customer service.
- **Hardcoded workflows** – limits flexibility in launching new pricing, logistics, or promotion models.
- **Poor accessibility and compliance gaps** – outdated frontends often fail to meet modern accessibility standards like **WCAG 2.1**, required by law from **June 28, 2025**, as well as GDPR.

Why Trust Us?

We stand out thanks to **years of experience working with legacy systems** – we've completed over 100 modernization projects.

We've modernized core e-commerce systems for both D2C brands and B2B platforms.

Instead of pointing fingers, we focus on creating a practical action plan and **modernizing your existing systems step by step**.

How We Work,

Without Freezing Your Sales Operations



- **We don't start with refactoring** – we start with a conversation. Before touching any code, we talk with you and analyze your business needs. We only refactor when it's necessary – *not just because the code looks bad.*
- **We map the system and identify critical paths.** Instead of modifying code right away, we identify relationships between modules and define *critical paths* (e.g., cart, checkout, fulfillment) that must remain functional at all times. This helps us avoid a domino effect when modernizing.
- **We don't rewrite everything from scratch.** We reuse working parts of your code that already contain *valuable business knowledge*. We apply proven techniques like the *strangler pattern* to separate new components from the legacy system safely.
- **We audit with a clear purpose.** Using *static code analysis tools*, we evaluate code quality, detect dead fragments, and review change history. Even at this stage, we identify risks and quick wins that bring improvements with *minimal cost*.
- **We bring every project in line with our engineering standards.** From day one, we introduce *CI/CD*, clean up local environments, and organize documentation. This gives your project a solid structure, making further development *easier and more affordable*.

On the following pages we present selected e-commerce projects:

Legacy System Modernization for Wren Kitchens

Industry: E-commerce/Furniture Manufacturing

Technologies: PHP, Symfony, ReactJS, MySQL

Project scope: Modernization and development of a monolithic ERP (business management) system

RESULT:

A system ready to grow

- The update to **Symfony 5.4 and PHP 8.2** significantly boosted performance and prepared the system for future expansions.
- The implementation of the **API Platform** allowed end-point standardization, easier integration with external systems, and improved code readability.
- The **elimination of outdated code and transition** to modern frameworks reduced tech debt and sped up development.
- **Standardized order logic** reduced errors and shortened order processing time.

PROBLEM:

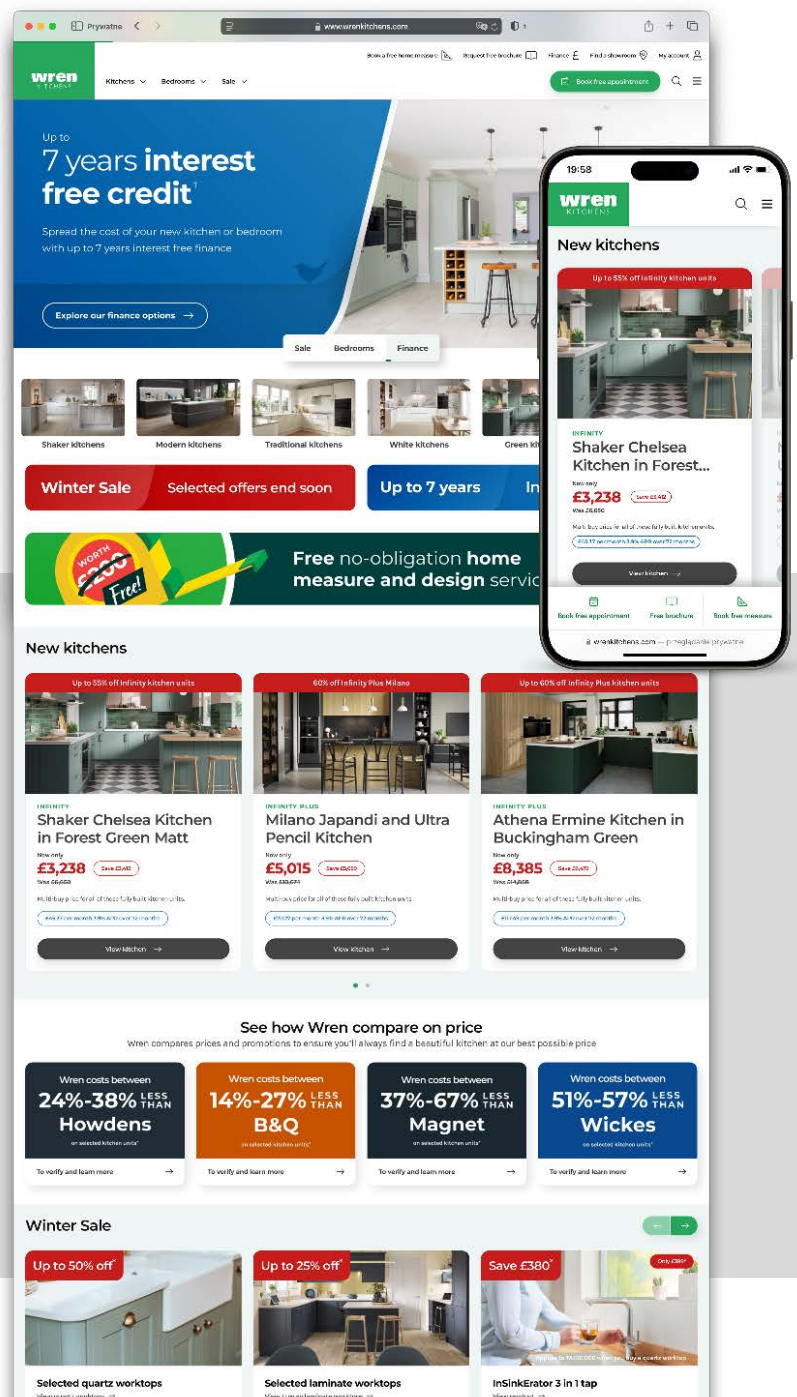
Legacy system limitations

- **Technical debt** – outdated software versions increased the risk of system failure.
- **Performance issues** – slow performance and order-processing limitations
- **Lack of standardization** – inconsistent order validation logic hindered operations.

KEY CHANGES:

Modernization and system optimization

- **Technology updates** – Symfony 4.4 → 5.4, PHP 7.4 → 8.2 for improved stability and performance.
- **Process standardization** – unified order logic, automated lead recovery, and improved workflows for designers.
- **Technical debt reduction** – outdated code removed, system quality improved, and new feature rollout accelerated.



Dungeons in a Box – Subscription Platform Redesign

Industry: E-commerce / Subscription

Technologies: Symfony, WooCommerce

Project scope: Transforming a legacy WooCommerce-based system into a modern subscription platform

RESULT:

Scalable and stable infrastructure

- **Safe modernization** – introduced a new model without interfering with ongoing operations.
- **Future-ready architecture** – modular structure allows further optimization and expansion.
- **Reduced dependency** – WooCommerce now serves as a front-end only, enabling easier future migrations without affecting logistics or fulfillment.

CHALLENGE:

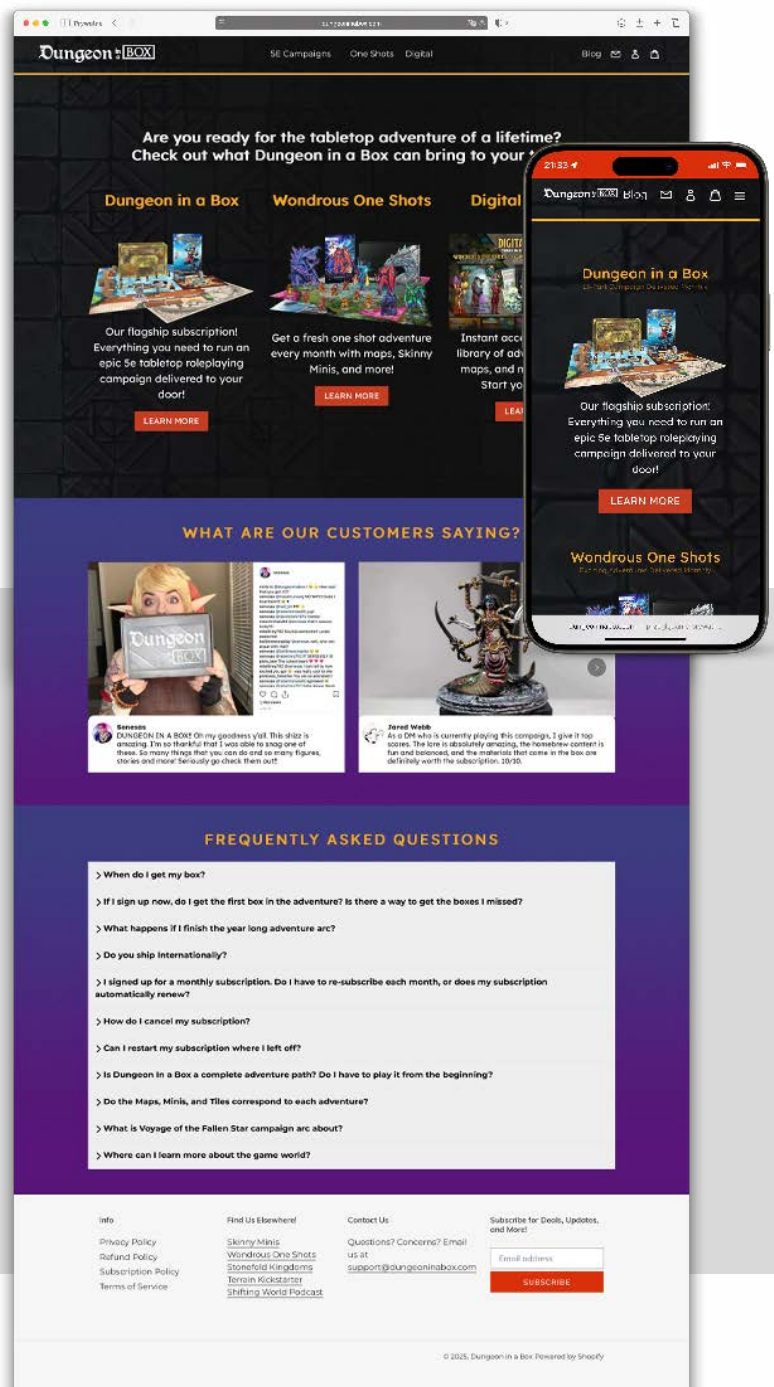
WooCommerce limitations

- **Infrastructure risk** – a new subscription model had to be implemented after the end of a Kickstarter campaign.
- **Platform dependency** – logistics and sales analysis relied on heavily customized WooCommerce code, making updates difficult.
- **Scalability issues** – the outdated tech stack limited future growth.

KEY CHANGES:

Symfony-based architecture

- **Isolated core logic** – built a dedicated Symfony module to manage the new subscription model independently of the legacy code.
- **Smooth integration** – connected the new module with WooCommerce and the shipping system to maintain operational continuity.
- **Preserved proven features** – after deployment and testing, essential subscription functionalities were migrated without disrupting user experience.



Velocity Motoring – Warehouse System Modernization

Industry: Automotive / Logistics

Technologies: Symfony 1.0.9 → Symfony 5.4, PHP, API Integrations

Project scope: Step-by-step migration of a legacy warehouse system to a scalable platform

RESULT:

Stability and readiness

- Faster order processing and smoother warehouse operations.
- **Lower maintenance costs** due to reduced technical debt.
- **Improved control** and readiness for business scale-up.

CHALLENGE:

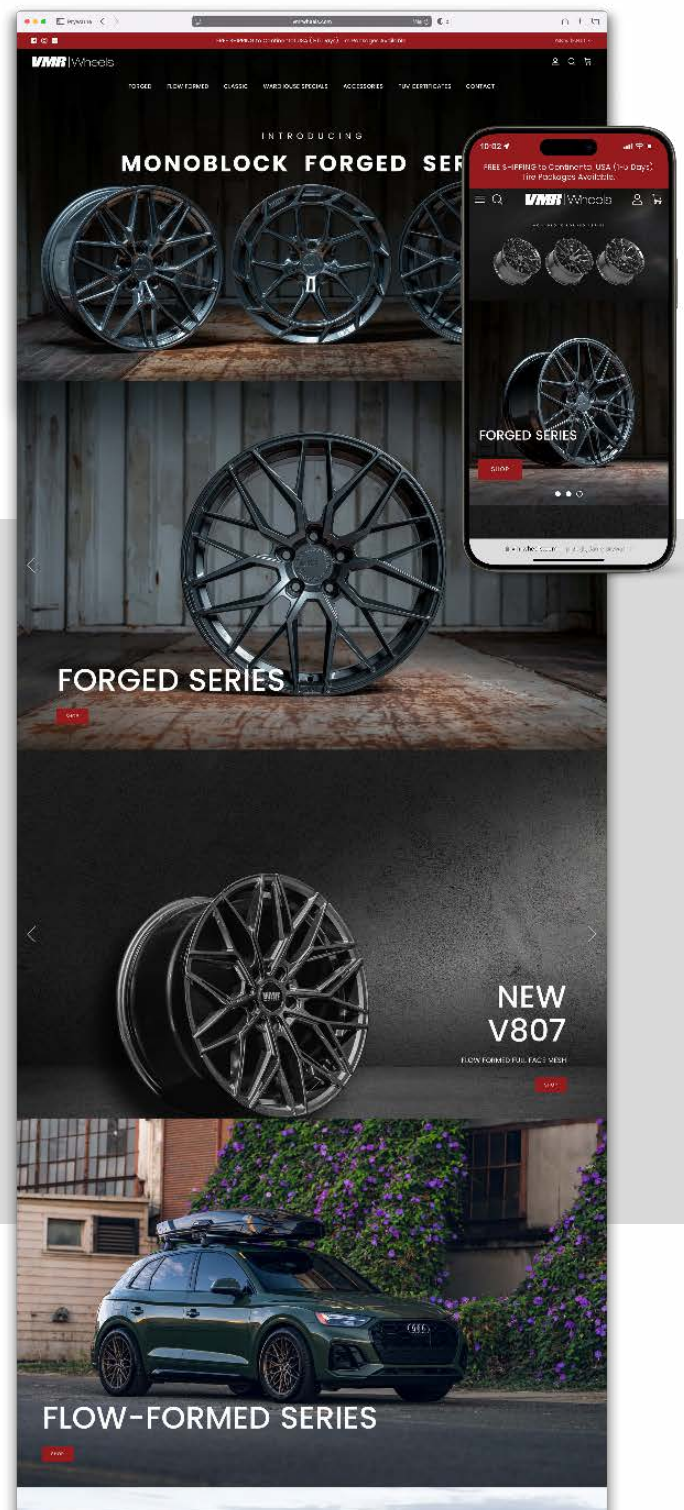
Outdated system blocking growth

- **Legacy limitations** – based on Symfony 1.0.9 and PHP 5, the system was hard to maintain.
- **Poor scalability** – growing order volume affected performance.
- **Integration issues** – workarounds were needed for eBay, Amazon, and Skubana.

OUR APPROACH:

Modern UI and usability improvements

- **System stabilization** – introduced Composer, PHPUnit, and optimized core processes.
- **Phased migration** – moved features to Symfony 4.4 and later Symfony 5.4.
- **API expansion** – built modern integrations with Extensiv Warehouse Manager and sales platforms.
- **Operations optimization** – automated warehouse and reporting workflows.





Our Approach That Works

REAL EXPERTISE

We specialize in legacy systems built for commerce, especially in PHP and Symfony, including complex Magento-based platforms, custom monoliths, and hybrid ERP setups. We bring structure, automation, and better UX to your platform without putting your sales at risk.

ACTIONABLE RECOMMENDATIONS

We look at your system as a whole, evaluating:



code quality, architecture, versioning;



performance under load and autoscaling potential;



UX and accessibility compliance (desktop + mobile, **WCAG 2.1**);



order logic and integration readiness (e.g., shipping, payments, CRMs).

Our Specialties



Pre-modernization consulting & analysis

identifying critical elements and priorities.



Modernizing PHP-based legacy systems

including systems built without frameworks or on older ones like Zend, Kohana, CodeIgniter, and Slim.



Framework upgrades

e.g., Symfony <4 → Symfony 6.x, Laravel <9 → Laravel 10.



WordPress modernization

optimizing performance and security, removing outdated plugins, refactoring code.



Frontend modernization

migrating to modern JavaScript frameworks (React, Vue.js), improving UX and design compliance.

How We Care for Our Code?

- **Consistent coding standards** – clean structure and easy scalability.
- **CI/CD automation** – testing, static analysis, and seamless deployment.
- **Security at every stage** – from authentication to GDPR-compliant data handling and secure APIs.
- **Accessibility & compliance reviews** – ensuring your storefront and checkout flows meet WCAG 2.1 requirements.



What We Don't Do?

- We don't provide quotes without **code access and clear business goals**.
- We don't work with **technologies outside our scope** or **closed systems that can't be modified or safely maintained**.

How Collaboration Works?

Tangible results within the first month

our QA and modernization efforts deliver noticeable benefits early on, providing a solid foundation for further system development.

We start with a Proof of Concept (USD 1,250–3,800), which includes a complete cost estimate and recommendations for next steps – with no obligation for long-term commitment. This phase gives you a clear analysis to help plan your next actions and budget.



Show Us Your Checkout Logic

If you're dealing with
**abandoned carts, high
infrastructure costs,
compliance risks, or
growing tech debt,**

we'll help modernize your system
safely, with no disruption to sales.

Contact:

E-mail: sales@polcode.com
www.polcode.com



Check our reviews on:

Clutch

upwork

twilio

 Adobe
Solution Partner
BRONZE

Resources

Learn More About Modernization

