



Regional Leader in PVC Window Production · Manufacturing / E-Commerce · Germany · Ongoing

Regional Leader in PVC Window Production: E-commerce platform rebuilt without documentation, delivering improved conversion rates and substantially higher organic traffic.

CLIENT CONTEXT

The client is a prominent producer of PVC and plastic windows, founded in 1980 and headquartered in Germany. As the largest manufacturer in its metropolitan area, the company operates from a production facility and showroom exceeding 5,000 square meters.

With a workforce of over 100 qualified staff, the enterprise produces up to 300 custom window units per day using high-quality industry profiles. To modernize its sales approach, the company launched a dedicated e-commerce platform. This digital channel serves as a specialized portal for the online configuration and sale of custom windows and doors, specifically targeting customers who wish to bypass the traditionally offline and cumbersome purchasing process.

THE CHALLENGE

When the company ended its relationship with its previous software vendor, it inherited almost nothing of operational value. There was no project documentation, no architectural diagrams, and no version control history in the codebase. For a live e-commerce platform handling custom product configurations and checkout flows, this was not a minor inconvenience; it was a fundamental risk to business continuity.

The existing e-commerce website compounded the problem. The user interface was severely outdated by contemporary UX/UI standards, particularly on the homepage and checkout pages. The antiquated design degraded user trust, suppressed engagement, and reduced conversion rates. Customers configuring and purchasing custom products, which involves a considered and higher-value transaction, expect a modern and confidence-inspiring digital experience. The existing platform delivered the opposite.

Performance issues amplified the damage. Slow load times and poor mobile responsiveness frustrated users, penalized the platform in search engine rankings, and created instability that undermined reliability. In a market where the digital channel's competitive edge depends entirely on making the purchasing experience simpler than the traditional route, a slow and unreliable platform negated the core value proposition.

The enterprise had lost visibility into its own system, lost trust in its vendor relationship, and was operating a platform that was actively impeding growth.

THE APPROACH

Gradion began where it had to: understanding a codebase with no documentation and no version history. The team undertook an extensive reverse-engineering effort, methodically analyzing the existing codebase to reconstruct the architecture, map the functionality, and identify the dependencies that needed to be preserved or replaced. This work was the precondition for everything that followed.

With a clear picture of the establishment of the existing system, Gradion executed a multi-track transformation.

On the design side, the team undertook a complete overhaul of the two most commercially critical areas: the homepage and the checkout flow. The homepage was rebuilt with multiple customizable sections designed to improve browsability and communicate the product range clearly. The checkout was restructured to reduce the number of steps, introduce clear progress indicators, and minimize cart abandonment at the point where custom-configured orders are most likely to be dropped. Mobile responsiveness was treated as a first-class requirement throughout, ensuring a consistent experience from desktop to smartphone.

On the infrastructure side, Gradion restructured the underlying platform to improve scalability, resilience, and stability. Advanced monitoring and alerting tools were integrated to enable real-time performance tracking and rapid incident response, a capability the client had not previously possessed. The result was a meaningful reduction in downtime and a more reliable platform.

Critically, Gradion rebuilt the company's relationship with its own technology. Comprehensive knowledge transfer, detailed documentation, and transparent communication channels gave the enterprise genuine ownership and understanding of its platform, a direct contrast to the opacity left by the previous vendor.

RESULTS

The transformed e-commerce platform delivered measurable improvements across traffic, conversion, and brand perception:

Significant increase in web visitor rate: This was driven by SEO improvements, including better site structure, technical SEO fixes, and the performance gains from a faster, cleaner codebase.

Improved conversion rates: The redesigned checkout funnel, with fewer steps and clearer progress indicators, successfully reduced cart abandonment.

Enhanced platform reliability: Infrastructure restructuring led to a meaningful reduction in downtime and improved overall stability.

Modernized brand perception: The contemporary design positioned the digital channel as a trustworthy destination for custom high-value purchases.

Full client ownership restored: Through comprehensive documentation, knowledge transfer, and transparent project communication, the client now understands and controls its own platform.

The combination of better performance, a more intuitive user experience, and improved search visibility created a compounding effect on business growth, resulting in more users arriving, more converting, and more completing their purchase.

SERVICES DELIVERED

- E-commerce platform redesign
- IT architecture and reverse engineering
- Frontend and backend performance optimization
- DevOps implementation and infrastructure restructuring
- SEO technical optimization
- Monitoring and alerting integration
- Knowledge transfer and documentation

TECHNOLOGY STACK

- E-commerce platform
- Mobile-responsive frontend design
- Advanced monitoring and alerting tools
- DevOps and CI/CD practices
- SEO technical fixes and site structure optimization

Ready to discuss a similar challenge?

Gradion works with software companies, fintechs, and industrial operators across DACH, Southeast Asia, and Africa. ISO 27001 certified. 23 years of delivery in regulated and high-growth environments.

sales@gradion.com