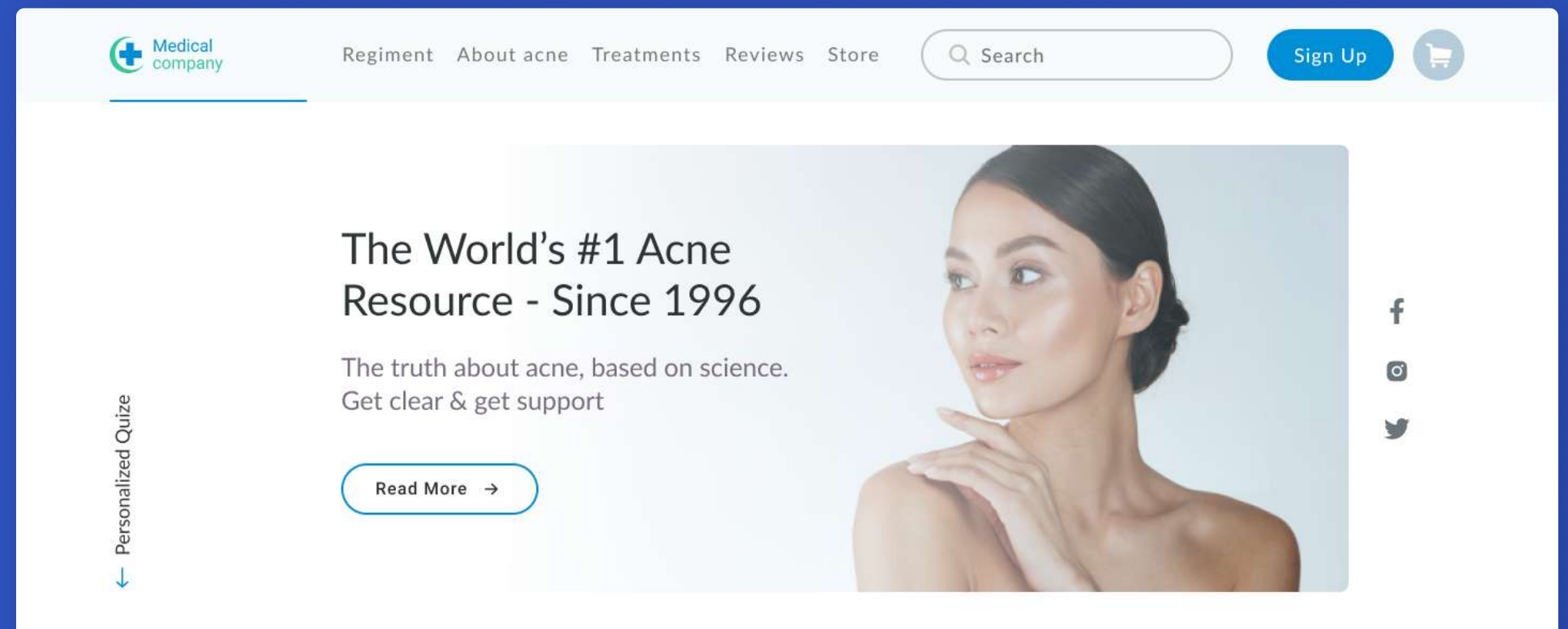


CASE STUDY

Website optimization and support for a famous acne treatment store



Industry	Engagement Model	Duration	Effort
Health Care	Time & Material	8 months	10 man-months

About the Client

Our Client is a very popular community website on acne. The platform was set up in 1996 and today attracts a monthly audience of over 60000 visitors making it the most credible and popular service on this subject.

Project Context and Objective

The Client contacted us with the problem that their existing website built on a customized Magento 1 platform was malfunctioning because its code didn't meet the Magento standards. While this needed immediate attention he was also looking to achieve the following:

- Optimize the performance of the site and improve security
- Optimize the integration with 3d-party shipping services to provide a seamless shopping experience
- Improve user experience by enhancing the interactions with the site

Technologies

Platform: Magento 1

Programming Languages: PHP 5, 7

Framework: PHPUnit

Web server: Apache 2

Database: MySQL

Testing tools: JMeter, Browserstack

Frontend: Bootstrap, jQuery

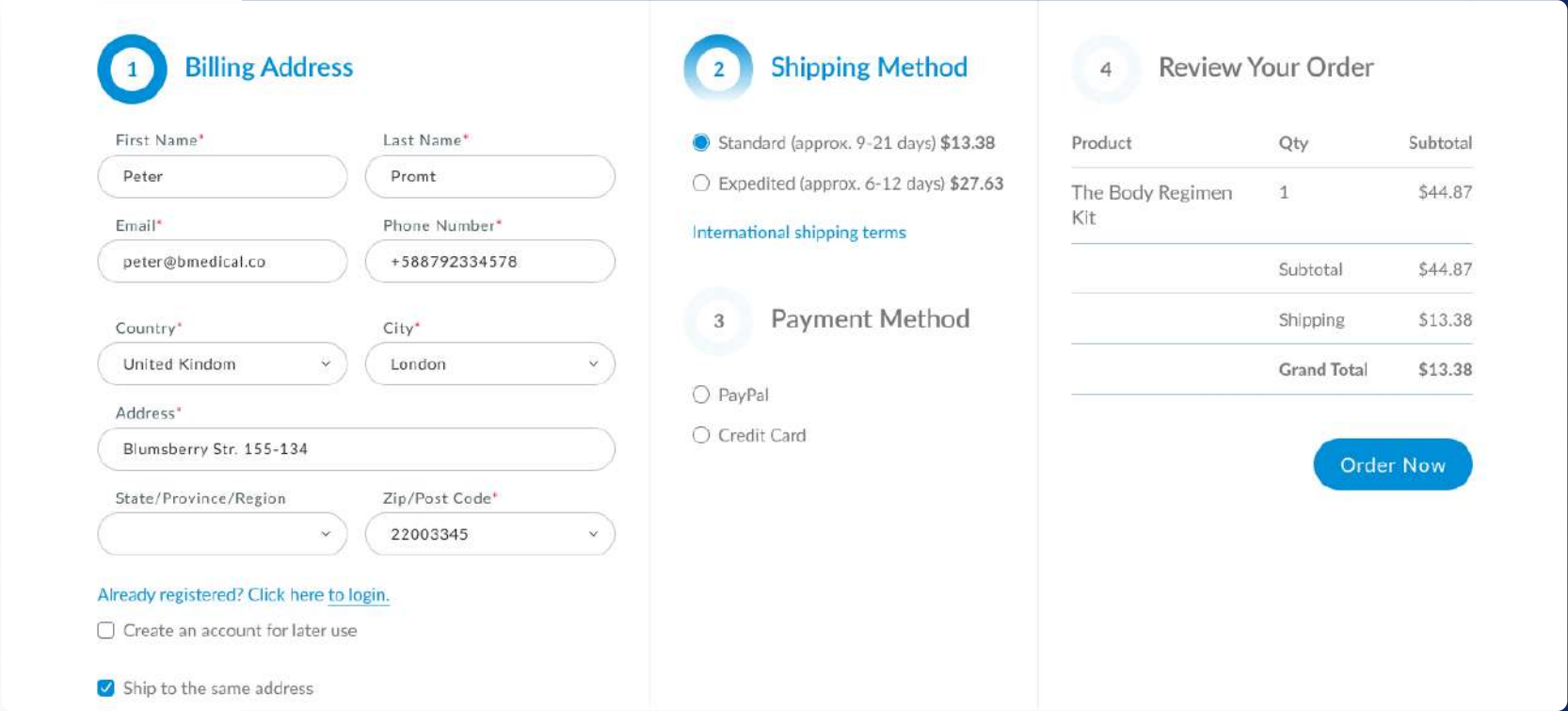
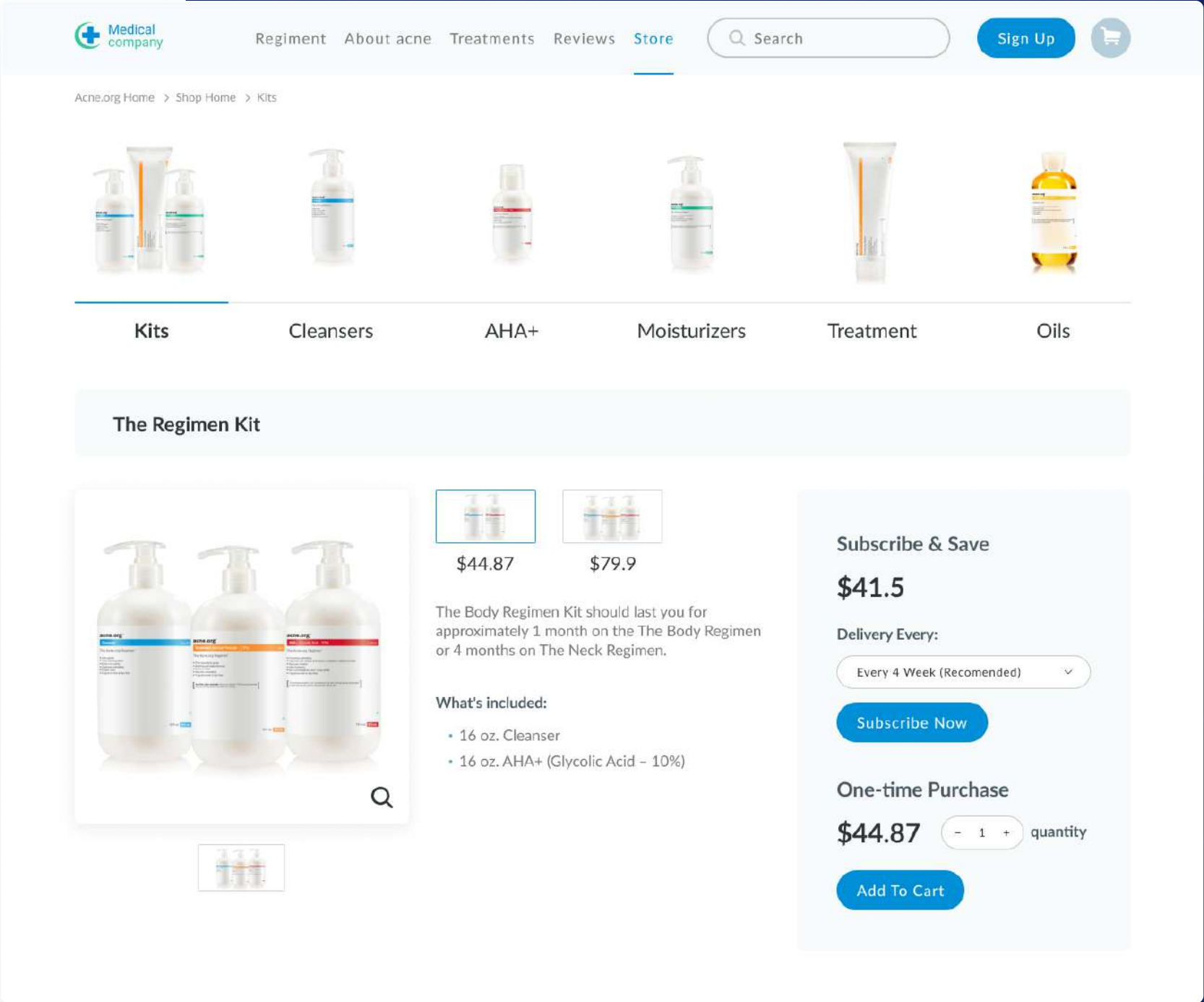
Other Technologies and Tools: Redis, Logz.io, Newrelic

Project Challenge

- The website had **an outdated and unsupported code** that did not meet Magento standards. This resulted in frequent site crashes and bad user experience.
- **Problems with 3rd-party integrations** (especially with the shipping service). The website faced regular problems in the transfer of order data to the US shipping service Fulfillco which was responsible for order fulfillment locally in the US.
Fast delivery across the United States was one of the main competitive advantages of the Client and the disruptions in work between the client's site and the delivery service greatly damaged the company's reputation and reduced customer loyalty.
- **Website performance issues.** Every effort was taken by the Client to enhance the end-users interaction with the site and make it as convenient and smooth as it can be. For this, the Client used various analytical software to analyze the time a customer was spending on the site, the duration of his/her stay on each page – the product page, check-out page, etc. From the various studies done, it was derived that the average session duration was too long and the Client wanted us to determine the cause for this and come up with a solution to fix it.

Solution

- **To troubleshoot the website issues** we initiated our work by doing a complete research and refactoring of the existing code, and then proceeding to find and fix the bugs. Being Magento experts, we are competent in detecting problems in the code and adept at fixing them quickly meanwhile knowing what is the first thing to pay attention to when something goes wrong.



● Optimization of work algorithm with 3rd-party shipping service Fulfillco

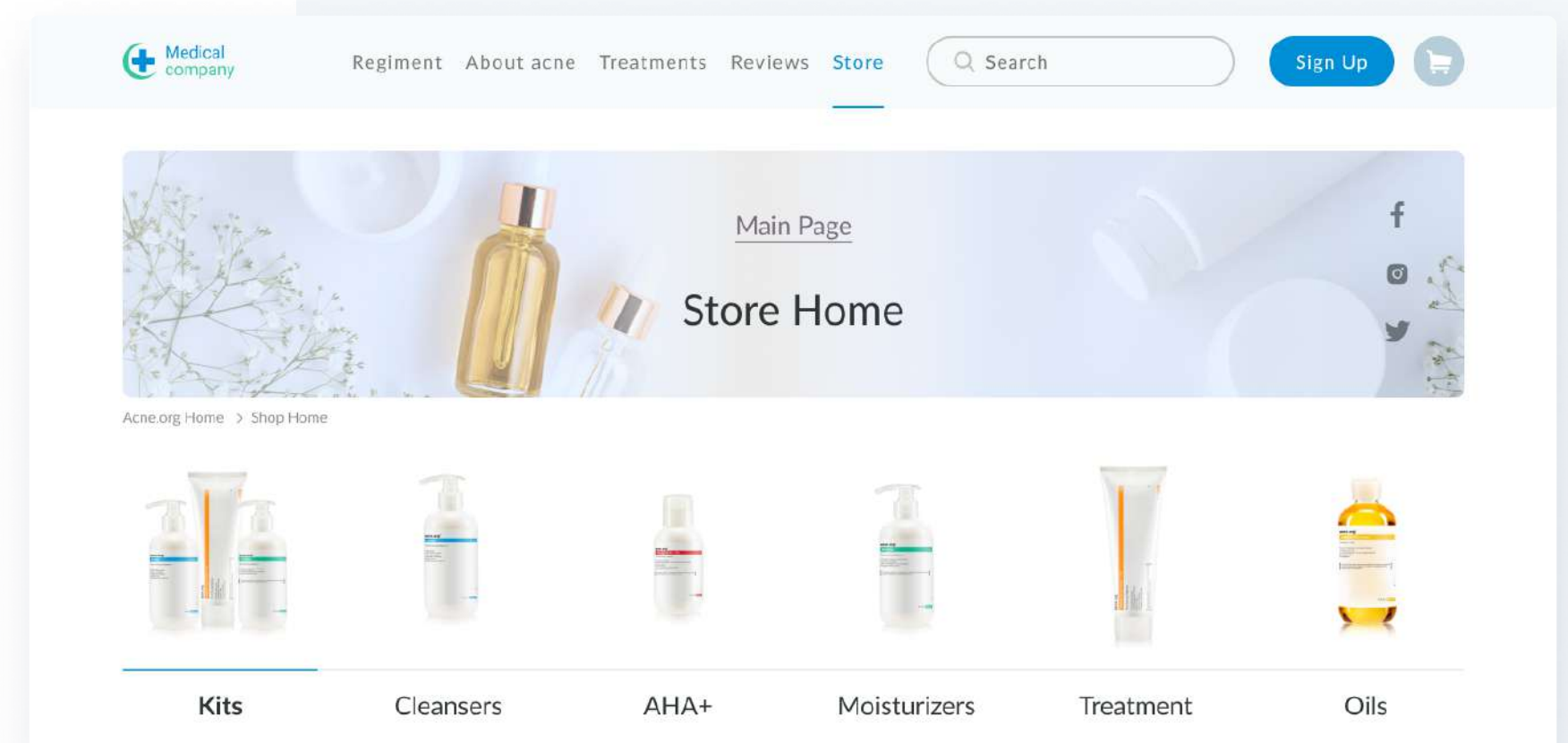
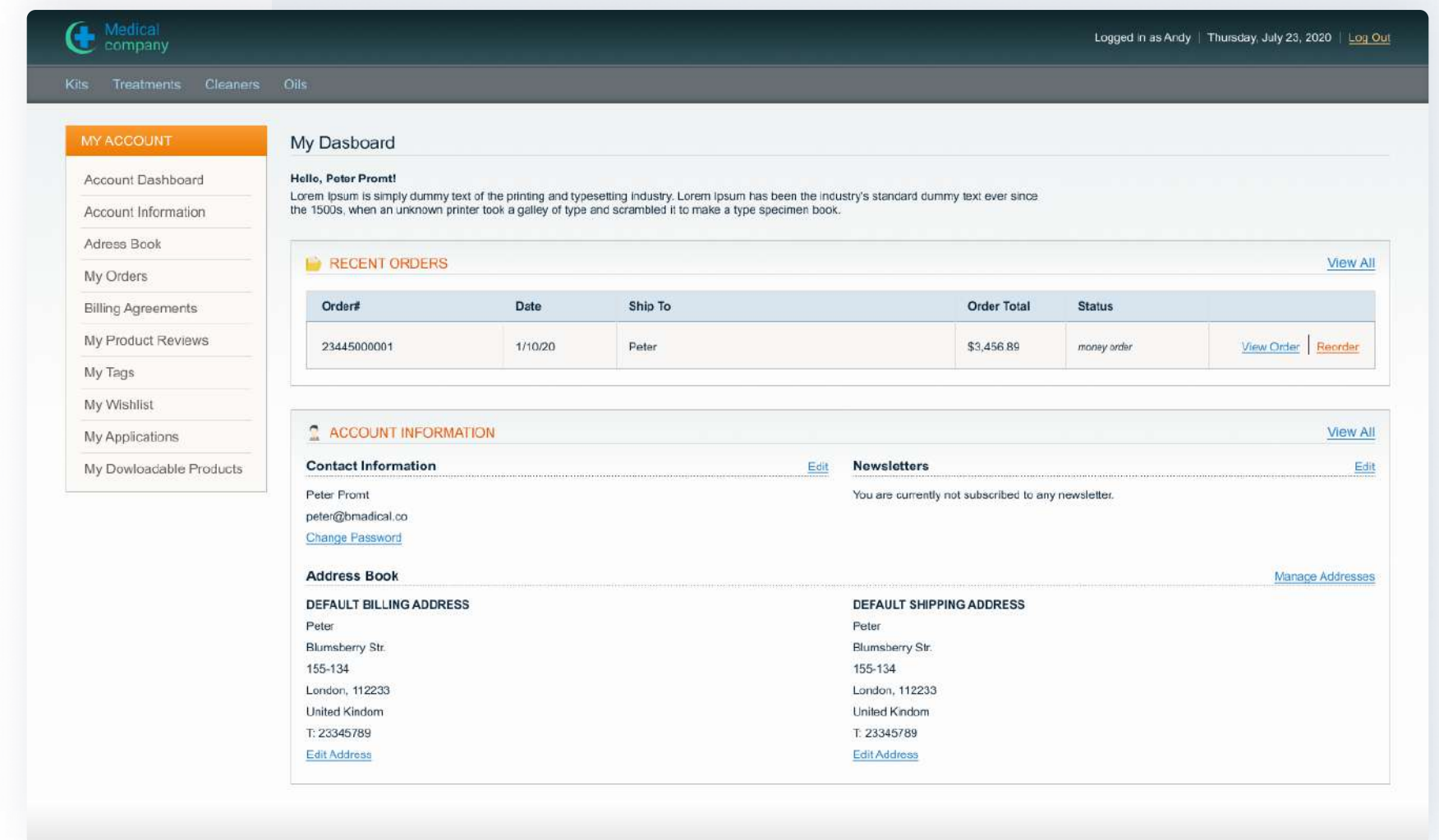
To optimize the interaction algorithm with the Fulfillco system, a health check service was developed and deployed as a background process to validate the tables formed for order fulfillment and the data being sent to Fulfillco for order processing.

Before this verification system was developed, the information that an incorrect request was sent to the shipping service, reached the client only after 1-2 days. This issue interrupted the Client's order fulfillment system and the result was late deliveries and unhappy customers.

To correct this an automatic retry mechanism was developed that worked in such a way that if a request with the list of orders to be dispatched could not be sent via the API to the Fulfillco service, this mechanism performed about 20 more attempts. This ensured that the data was eventually sent to Fulfillco system.

Fallback programs were also written to check whether the table with data could be filled in automatically - without involving the Client's employees. In addition to this logging was performed for such fallbacks so that the tables could be manually checked after filling.

- **Website optimization:** Various performance tests were undertaken to determine factors affecting the functioning of the site and the reduction in conversions. For these purposes, performance evaluation tools like Google Page Speed Insights were used, and eventually, issues that were slowing down the site were identified. Once the results came in we began to eliminate the detected problems: we reduced the size of images, conducted css scripts minimization, optimized the work of dynamic queries on the site, etc.

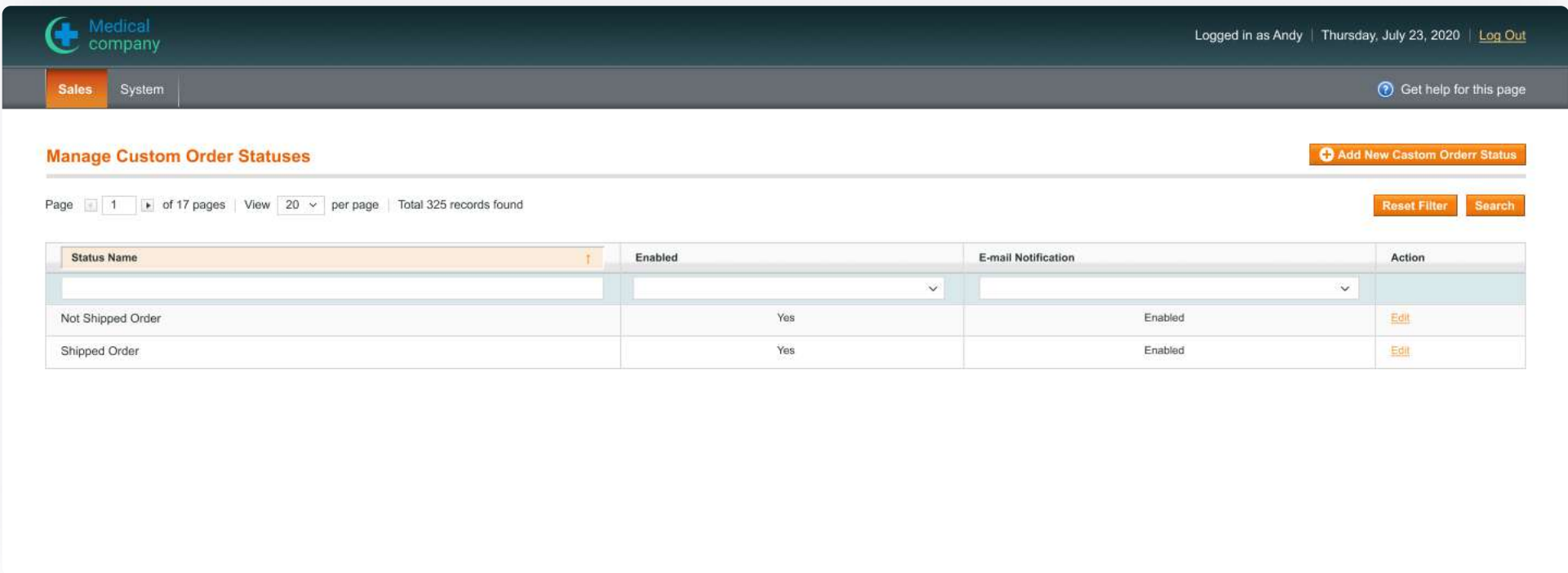


Project Process and Methodology

Magedia assigned 2 Magento developers for the project. They worked along with the client's IT team under a Project Manager who coordinated the project and set the priority for tasks. After analyzing the Client requirements, we decided to use the Kanban methodology which allowed for flexible planning on the project and facilitated the Client’s cost reductions. Moreover, thanks to this methodology, we could shorten the iterations and the Client was able to see quick results on the various tasks.

To collaborate effectively and work towards the same goals an effective communication process was put in place. Daily meetings, regular progress reports, and the usage of Jira, an effective tracking and project management tool, ensured that the teams were aligned and highly involved throughout the development process. The close collaboration and information sharing between the teams also helped to bring in transparency which was essential for the success of the project.

To ensure proper quality, our team carefully tested the solution before handing it over to the Client. Subsequently, we proposed and successfully created automated tests for the Customer. Automated testing not only helped us shorten the development cycle but also helped the Client to significantly simplify the testing process of his software.



Project Results

- The Client got a devoted team of Magento experts
- Improved site performance
- Improved site security
- Integration with custom payment systems
- Improved the quality of customer service (by streamlining 3-rd party integration with shipping services the Client was able to fulfill orders without any interruption or delays)
- Customer order processing was accelerated
- The website’s internal processes were optimized
- Identified and fixed the bugs (as part of the development and optimization process)
- Automated testing practices were applied which helped the Client to facilitate software testing
- Increased profits

Project Conclusion

On completion of the project, the Client was able to significantly improve the performance of his site and ensure timely and uninterrupted delivery of goods to customers. The improved user experience allowed the customers to navigate the site easily resulting in customer loyalty, an increased number of orders, and profit for the Client. The improvements and optimization steps undertaken by the Magedia team helped the Client to further strengthen his position on the market and significantly increase his financial indicators (ROI, net profit).