

# eCommerce solution for WASI Nautical store, brand under the German Würth Group



## Customer info

 Wasi d.o.o. (WÜRTH Group), Franje Lucica 32, 10 000 Zagreb – Hrvatska

**Wasi d.o.o.** is part of the international concern **Würth**, based in Germany, and is a leading trading company in Croatia for wide range of nautical equipment. Founded in 2002, WASI d.o.o. has operated exclusively as a wholesaler, and since 2010. it has been opening retail stores on the entire Croatian coast, with the aim of providing the end customer with quality, fast and professional service.

## Challenge

Wasi d.o.o. was not satisfied with their existing eCommerce solution, it was a custom-made application, quite old made in 2013. which was very hard to maintain or update, it was very complicated to develop new features or functionalities, it was not synced with company ERP application or any other outsource system.

Since they started to open retail stores, they were very much aware of the huge potential laying in online retail, which they could not accomplish with their eCommerce solution and current “online sales” organization.

## Their goal was to:

- Find an experienced team to help them to get modern and scalable eCommerce solution, as well as to consult and support them during and after the project.
- eCommerce solution must be synced with company ERP application.
- eCommerce solution must be synced with stock from all retail stores as well as with two warehouses, and can flawlessly work with more than 10.000 products.
- eCommerce solution must be synced with online payment processor.

- eCommerce solution must be synced with Overseas delivery service.
- eCommerce solution should include all modern features today's customers expect (newsletter, wish list, product compare, availability notifications, push notifications, etc.).
- All products information should be imported from their existing eCommerce application.
- Design and layout must respect company visual standards and should be "clean" with any unnecessary information's.

### **Why did they choose us?**

After some challenging meetings, proposal, conversations and communication with the client, they decided to work with us, because of the following reasons:

- We have long time experience in developing digital solutions with other system and application integrations.
- We have long time experience in developing eCommerce solutions.
- We have quite enough clients and references they consider as a high-quality solutions.
- They find nopCommerce administration very simple and easy to use and also believe in us and our expertise to nopCommerce application.
- We managed to explain more clearly all the things they will have to do in a project, based on their requirements and wishes.
- We managed to explain all the things and tasks they have not be aware but are mandatory to accomplish their requirements.
- Together with all the mentioned meetings, we wrote all of this in our proposal and project specification, so they were able to get all major and most important information what they will get from us, and what they will not get from us.
- Two members of our team are also sailors and are very familiar with navigation, sailing and variety in nautical equipment, so the client felt more comfortable when we showed knowledge in such a specific branch.
- We had a recommendation from the company they worked with before.

### **Project**

1. Project started with **five workshops**:
  - We need to get more in detail with client sale organization and technical conditions.

- We manage to define content and products range priority, product features and possible combinations, and the client's ability to create some additional content that is important for them and as well to SEO.
- We manage to define the most important visual and UX guidelines.
- We got more details about the client ERP application and how it works in real life with products updates to all retail stores.
- We managed to explain to the client what we expect from them and what tasks and information's will be required during the project and how important this is, and how this could impact the project.
- Through all workshops, we discovered all possible bottlenecks, all things that are not possible due to clients technical or organization procedures, but we also solved some potential problems without even starting to write a single letter of code.

## **2. Project plan, technical documentation, milestones and delivery timetable**

Now, after we “knew everything” and had all information about the project scope, it is a time to sit down for couple of days and concisely distribute project to user stories and tasks, define delivery phase and milestones and write required technical documentation for the dev team.

- Based on the written US and tasks, we precisely knew who is required to work in project (dev leader, backend developers, UX/UI designer, theme and frontend developers, analyst, QA and testers, project leader.)
- Delivery time was 3 months from finished workshops.
- Our dev leader made detailed technical docs for all required integrations.
- Our design team made a discovery process and defined a strategy for the design process.
- Based on team members availability and project delivery time, we made a project delivery timetable.
- We presented all of this to a client, so they knew all the project delivery phase, key milestones so they knew when they should provide us with necessary information during the project.

## **3. Solution**

Core application we are using for developing eCommerce projects is nopCommerce application as we are also nopCommerce silver partner.

**The solution was developed and delivered as follow:**

- All products, product descriptions and information's were imported from the previous eCommerce application.
- All categories, manufacturers and images we imported from the previous eCommerce application and then mapped to already imported products.

- During this task, we developed a plugin (**connector to client ERP application**) using API web service, providing all products from client web shop warehouse.
- So now we have products in our database imported from the previous version (previous web shop), and we have information from API web service about the products that should exist in the “new” web shop. There was **a big difference** as we already knew from the workshops, because their old web shop was not well maintained and had plenty of old products that do not exist anymore.  
It means, there are a lot of products that should not exist in new web shop application.
- Ok, we developed a program logic that **compare product SKU** from client ERP application (API Web service), and product SKU in application database (since the product SKU is unique identifier) and delete all products from nopCommerce database that do not exist inside ERP application.  
After this was done, we had the same products in our database and in the client ERP application.
- That means we could now turn on **data synchronization** (stocks, VAT and prices), and start to develop **order export** from web shop, back to ERP application, using also ERP application API web services.
- In the meanwhile, the client started to add some additional product information's that does not exist in ERP application.
- While all this was developing, our design team made **completely new visual solution**, starting from UX and wireframes and ending to mobile oriented easy to use eCommerce experience, expanding to a desktop and tablet views.
- After visual solution was accepted, our theme and front-end developers started to build a completely new application theme.
- “On the other side”, our backend dev team, started to develop **integration with Overseas delivery service** and it includes:
  - i. Automatically or manually sending address books info for creating shipments.
  - ii. Automatically getting shipments tracking number, creating shipments and optionally sending email notifications.
  - iii. Automatically getting shipment status and updating shipment and order status.
- Connector to **Monri WSPay payment processor** we already developed, so it was only required to install it and test transactions. Payment processor plugin includes:

- i. Sending client to payment form.
  - ii. Getting back payment and order status.
  - iii. Automatically updating payment status, using Callback URL (Authorized, Paid, Voided, Refunded, Pending).
- When all above mentioned parts were finished, our **testers and QA team** started to work, sending bugs to bug fix team until all functionalities and theme layouts did not work as an orchestra.
- While testing and bug fixing, our analyst organized education for clients, how to use nopCommerce administration in detail, how sync is working, how to find possible solution in case of the problem, before calling our support team.
- After all of this was done, web shop is published to production environment.

#### 4. Caching

For a much better nopCommerce performance, we turned on **Price caching**, so we had to deal with refreshing prices and discount prices. Since all stocks and product synchronization are “basically happens” within nopCommerce database, we made as follows:

- When there is some change with product data in nopCommerce database, our sync plugin (connector to EPR) is updating field `Product.UpdatedOnUtc`.
- We made another plugin called “**Price re-caching plugin**“, that has two schedule task:
  - i. **Clear product cache**  
This task deletes Product Cache key and all belonging prices cache keys, to only updated products from last task start date (products where `Product.UpdatedOnUtc > Clear product cache task start date`).
  - ii. **Clear cache for discounts**  
This task deletes complete nop Cache, if Discount Start date and Discount End date are greater than the last task start date.

#### 5. Integration to retail stores

Two months after web shop was launched, client provide us with new API request with the response for stock information from all retail stores.

- We made some modifications within our ERP Connector program logic, and saved all product SKU, stock quantity and warehouse in a new database table.

- When updating information, we also update only changed records, so we have precise information about the availability of each product in each retail store, every five minutes.
- **Ok, now we must somehow show this information. Where and how?**  
This is again task for our design team, to find the most suitable visuals for such information's, keeping in mind to suit all products variety (Simple product, Grouped Product, and Product with attribute combinations) as well as to suit all devices, especially mobile devices.
- After some brainstorming, sketches and UI design, and after client has approved, it was finished with our back-end dev and front-end team by implementing all of this into the developed theme.
- Of course, it was not finished without our testers who always somehow managed to find some issues or bugs.
- After this feature was launched, we have also turned on and implement **“Pick up in Store”** as delivery option, so users have information about the closest retail store (contact info, address and map), and can choose the closest store to pick up the products.

## Result

The website was launched at the end of November 2023, on time as we planned. Launch time was a client's idea, so they will have couple of months to add some additional products, train and organize internal procedures for incoming nautical season that starts every year in April.

- Until today when we are writing this case study, they increased online sales by more than 400% in relation to the same period last year.
- Web shop has more than 30 orders every day (900 + orders/month), which is excellent result for such a specific merchandize.
- Web shop has more than 10.000 users/month.
- Web shop is synced every 5 min with more than 10.000 products.
- Every order is automatically sent back to client ERP applications, so they have all info required for creating invoice.
- Payment, shipment and order status are updating automatically.
- The client and his owner (Würth Group) have strengthened their position as a leader in the nautical trade business.
- The client is finally able to invest in digital marketing and online advertising.
- The client announced a B2B online solution project.

### **Reducing the costs of managing on-line sale**

All of this made possible to client to administer and manage the web shop, with only one person, who is basically working in company and this a separate job for an hour or two each day.

- The client reduced a lot of everyday costs compared to the previous eCommerce solution.
- Automation that is implemented into this solution allowed the client to make plans for promoting and advertising.
- The client is now focused on organizing internal procedures regarding warehouse, packaging and sending online orders.
- The client is now focused on organizing packaging procedures in retail stores.
- The client is using an online store to also encourage users to get into a retail store.
- The client is now using scalable, secure and easy to use eCommerce solution as nopCommerce truly is.
- The client is now starting to use full potential in online sale.

### **Mr. Ivan Kranjec said:**

*Managing and administrating this new web shop is so simple and so easy to use. Every process is so well planned and realized and finally we are collecting online users and bounding our brand as the right solution for all nautical lovers.*

*Sistemi.hr are a professional team gathered by highly experienced project leaders and consulting managers, as well as an excellent development squad.*