*instinctools

Ecommerce Ecosystem For an Eyewear Company

How developing a comprehensive ecommerce ecosystem helped an optical company withstand severe economic headwinds and grow their store chain from 8 to 24 eyewear boutiques across France.

Industry:
Ecommerce, Healthcare

MOBILE APP DEVELOPMENT

SOFTWARE PRODUCT DEVELOPMENT

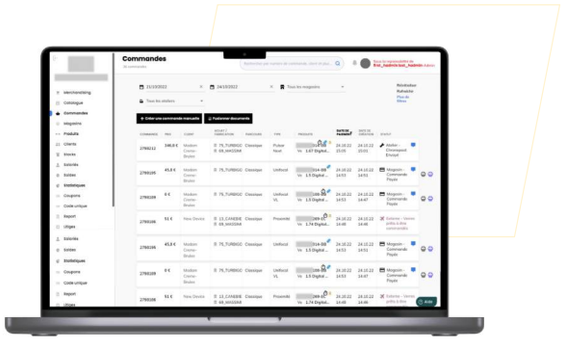
WEB DEVELOPMENT

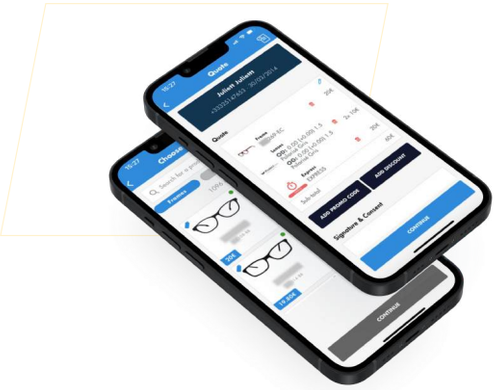
DATA VISUALIZATION

Business challenge

For highly competitive industries, such as ecommerce, being able to adjust to ever-changing market conditions in a blink of an eye is the only way to retain customers and win new ones. In this respect, COVID-19 became an inflection point at which only the most resilient companies could stay in the saddle, while others had no other choice than to ride off into the sunset.

When the pandemic began, companies were forced to rethink their business vision, look for new value and revenue-creation opportunities, and find ways to satiate consumers' needs in unanticipated circumstances. The situation was the same for our client – an **eyewear company with its own production and a chain of physical stores across France**.





The client first reached out to *instinctools to create a mobile app for sales assistants. However, the coronavirus meddled in their business strategy, forcing them to move at a rapid clip and **develop an additional sales channel aimed directly at consumers**. That's how the idea of a shopping app for customers arose.

When a company wants to drive revenue growth, banking only on a customer-facing solution isn't enough. Internal processes also have to be enhanced. In the case of our client, the necessity to adapt to the changing ecommerce realm unveiled **issues with order registration and processing, stock inventory, and logistics**.

After analyzing the market and gathering the client's requirements, we proposed developing **a comprehensive ecommerce ecosystem of mobile and web solutions with a shared back end and multiple front ends**.

Solution

As we've mentioned, the client initially approached *instinctools to craft one small application for internal usage. However, the retail industry upheaval, along with evolving consumer needs, forced them to reconsider an erstwhile firm view of ecommerce as a bolt-on to the main business. For over six years of cooperation, our dedicated team has developed **four apps for the company's staff, one customer-facing application, and a new website on Shopify**.

Why did we develop **niche applications one by one** instead of crafting one multipurpose solution? Such an approach provided several benefits:

- **Maintaining and updating**
  several small apps is much easier

  than taking care of a large-scale solution with complex business logic.

- **Ensuring ease of use**
  for the client's staff

  as each mobile or web solution is tailored to a specific role within the company.

- **Rolling out**
  new functions apace

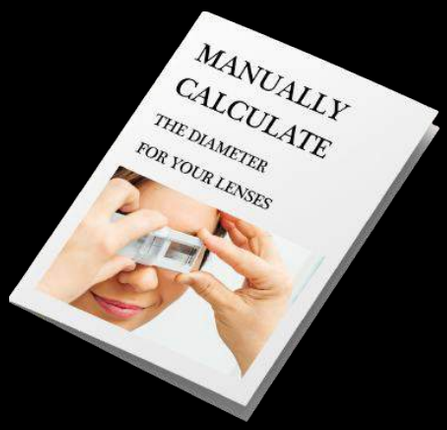
  to attract new customers and retain existing ones.

All the applications, except for the one related to the local insurance system, are written in **React Native.** That way, our **client isn't limited to devices with a particular OS and can reach a larger pool of potential buyers.**

Let's zoom in on each of the solutions in the order of their occurrence.

01 Eyewear measurements app for consultants in physical stores

When the client started the business, far from all processes were digitized. For instance, the in-store consultants used to mark out an eyeglasses frame for a buyer and then **manually calculate the lens diameter and fitting distance** to ensure that the glasses had the lenses at the correct distance from the customer's pupil.



With such an approach, the **probability of an error caused by the human factor increases manifold**. The problem became more evident as the client's store chain was expanding. Therefore, they decided to digitize and automate this task with a simple **mobile application for internal usage**.

Developing the app in React Native became the starting point of our cooperation with the client. How does it work?

After a customer chooses a frame in the store, a consultant finds it in the catalog in the app.

Then, the consultant opens the camera on the device and points it at the customer's face to determine control points – the center of the pupils, considering their vertical position.

Finally, the app automatically calculates the position of the optical center so that the geometrical center of the frame and the buyer's pupil coincide to ensure the glasses are comfortable to wear.

Besides eliminating the possibility of calculation errors, such automation has speeded up order processing by five minutes per order. It turned out to be a real breakthrough, as the client's business model focuses on serving many visitors in a short time – the speed of order-making is even mentioned in their slogan. Therefore, at the client's scale, even such a seemingly small improvement meant a **33% acceleration of order processing**.

02 Customer-facing mobile store app

Before 2020, the client launched new stores in several French cities and planned to develop new applications specifically for physical locations, such as kiosks for self-ordering of glasses.

However, the pandemic and the following quarantine with a strict ban on leaving home drastically changed the client's business strategy. Magnifying their digital presence and providing customers with **an app where they can select, order, and pay for the glasses** became the client's primary focus. That's why our team switched from developing software solutions for internal usage to crafting a mobile ecommerce eyewear store for customers. It was also written in React Native to be apt consumers with iOS and Android devices.

Given the impossibility of physical presence in the store, we added a **feature of a virtual frame fitting**. It gives a rough idea of how different frames would look on a person's face. Even long after the lockdown, this function remains popular among the app's users.

03 Custom ERP for internal usage

We **inherited the enterprise resource planning project from the client's previous tech partner** who hadn't been able to provide a no-fuss hiring process and unlimited scalability on demand.

After discussions with the client, it was decided to finalize the custom solution another team had been working on instead of adopting and customizing a ready-made ERP such as Odoo, SAP, etc., for two reasons:

- The client didn't need all the features that off-the-rack software provides, so it would have been unwise to overpay for it.
- Only a bespoke system could guarantee perfect alignment with the client's processes.

What roles does the web app cover within the company, and what functionality does it provide?

- **Sales person**
- **HR**

has access to the customers' database to create and edit consumer information.

- **C-suite**

  can leverage advanced statistics to back up their decisions with up-to-the-minute data. We created dashboards to visualize the data about the number of orders in general and by cities, customers' gender and age, lens type, and a raft of other parameters.

- **In-store consultant**

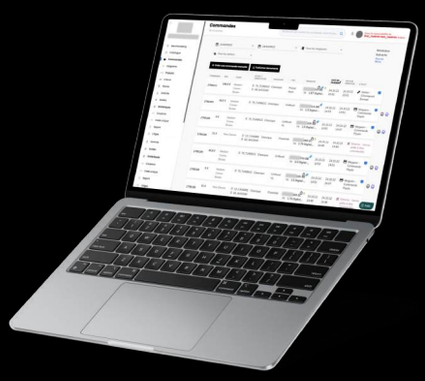
  registers orders made by customers in the physical stores.

can create and edit staff accounts to make managing employees whole-company scale easier.

- **Technician**

  the employee responsible for assembling glasses — signs in the ERP to see the list of orders to be produced, delivered, etc. Moreover, each technician is assigned to a certain store and can see only the data related to their location.

As the ERP automatically records status changes after each operation with an order, the client obtains a **fully-transparent production and delivery process**. And easy-to-grasp dashboards empowered them to **make well-informed decisions based on vast amounts of data and keep a laser-sharp focus on the changing customer demands to adjust production accordingly as fast as possible**.



04 Mobile app for inventory and logistics

As the number of the chain stores was growing, our client faced the palpable need for a solution that would ensure centralized and automated stock monitoring, logistics, and inventory. That's what became a driving force in launching a new project – a **mobile application on React Native integrated with RF and RFID scanners**, used for inventory, goods receipt, and shipping.

The app we developed **simplifies the tasks for employees involved in inventory management and in-store consultants who receive orders**.

It allowed the client to:

- Digitize inventory management and logistics and therefore speed up related tasks, such as order picking
- Automate stock and inventory management
- Get a detailed view of the stocks in near real-time

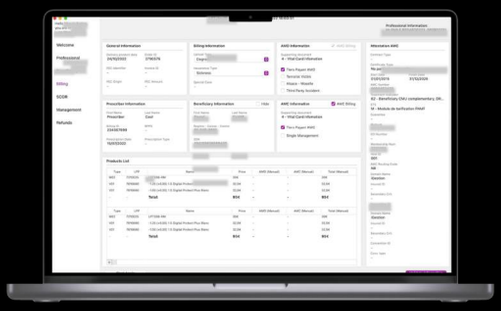
05 Healthcare software for simplified cooperation with insurance companies

One of the hallmarks of the client's business is the **direct cooperation with public and private insurance companies in France**. It's convenient for the consumers, but the client also wanted to facilitate the process for their employees. Therefore, our dedicated team developed an **insurance processing application for internal usage**.

There are physical terminals in the client's stores where consultants swipe customers' insurance cards. The

- what type of order the consultant can create for a client terminal reads the data and sends it to the app, which automatically matches this information with the data the insurance companies provide and displays:

- how much of the order's cost can be covered by insurance



Insurance regulations in France require choosing one OS for insurance processing with mandatory certification of the software before its rollout. As the client had already bought iMacs for their brick-and-mortar stores, we designed the healthcare solution for MacOS.

The app's implementation allowed the client to **automate the routine task of insurance processing and completely cut out the possibility of human error**.

06 Website on Shopify

The client's former website used to run on **WordPress, bolstered with the WooCommerce plugin**. The problem was that as the website was expanding and new plugins were being added, the solution became overly complicated to be managed efficiently.

Tons of spaghetti code **slowed down the pages' loading speed** — it could take up to six seconds — a parameter that, in 70% of cases, influences consumers' willingness to buy from an online retailer*.

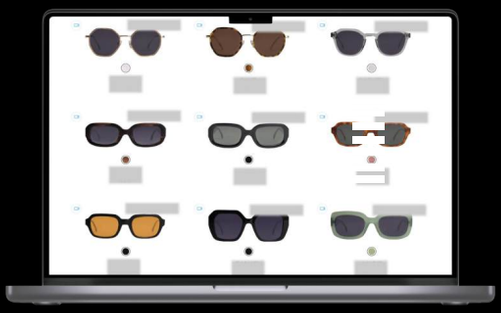
*Source: Unbounce, Think Fast: The Page Speed Report

Redesign and modernization of the old website would have taken too much time, so the client decided to **switch to Shopify** – a hosted SaaS solution — so that the provider would handle most of the technical issues and it would be easier to scale further.

Moreover, the out-of-the-box Shopify solution offers functionality that is missing in the off-the-shelf WooCommerce module:

- a multi-currency plugin
- a wide range of payment options
- an automatic country-by-country tax calculator

With the former website, all of that had to be either coded manually or achieved through installing additional modules, which slowed down the solution.

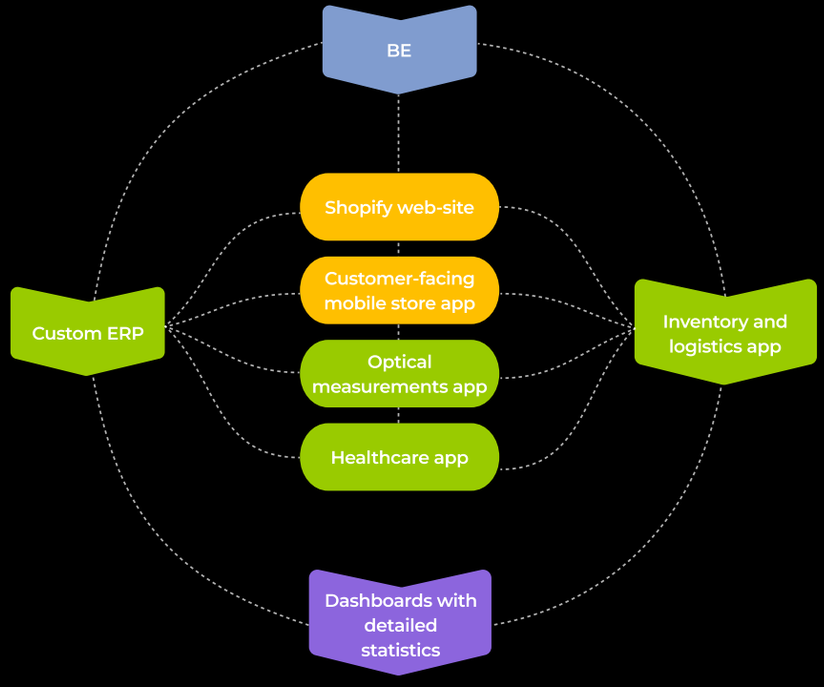


Shopify adoption has also allowed the client to **gather more detailed customer analytics** thanks to the connection with Google Analytics, Google Tag Manager, and Meta Ads.

However, despite Shopify being an all-in-one ecommerce platform, our team had to work through some of its limitations. For example, it was impossible to specify more than three product options in a description. Check how we solved these issues in a detailed case study.

By switching to Shopify, the client got a **user-friendly and easy-to-manage online store with 6x higher loading speed and access to detailed analytics**.

Here's the client's **final ecommerce ecosystem** with all the mobile and web applications we've developed for internal and external usage.



Before

- Unoptimized business operations
- Manual processes
- High influence of human factor
- Absence of an online ecommerce eyewear store for customers
- Lack of tools for efficient data collection, analysis, and visualization
- Draft version of a custom ERP that wasn't released
- Heavyweight and slow WordPress website with loads of spaghetti code

After

- Digitized order processing, inventory, and logistics
- Automated optical measurements and insurance-related tasks
- Minimized possibility of human error
- Eye-catching and user-friendly mobile app for online consumers
- Insightful dashboards with detailed statistics
- Full-fledged custom ERP
- Speedy and easy-to-maintain website on Shopify
- Transparent and flexible ecosystem of lightweight software solutions

Key features

Adaptability

A comprehensible suite of lightweight applications allows the client to remain flexible and swiftly respond to any market changes. Such an approach also simplifies apps' maintenance and support, not to mention the ease of use for the client's employees.

Extensiveness

The ecommerce ecosystem we've created encompasses software solutions that provide a seamless customer experience and streamline the client's internal processes.

Customizability

Custom software aligns with the client's business needs perfectly. Moreover, each solution for internal usage is targeted to a specific role within the company to simplify its management for the client's employees.

Business value

- **33%** faster order processing
- **6x boost** in page loading speed on the website
- **Fully digital** inventory management and logistics
- **Complete transparency** of the operations within the company
- **Automated** insurance processing
- **Eliminated possibility** of a human error

Multiplier effect

A well-designed e-commerce ecosystem **enhances your customers' experience and turns them into regulars**.

Any B2C or B2B software solution is often a part of a larger ecosystem that includes internal business tools and external channels of interaction with potential customers. To hit it big down the line, you should adhere to a **holistic approach** to building software for your company's needs.

This principle plays out in any industry, from ecommerce, entertainment and media to healthcare, fintech, and manufacturing. **Bank on comprehensive strategic solutions instead of one-off fixes** to stay ahead of the pack and win over more customers.

Do you have a similar project idea?

Contact us — and we will estimate your projects costs for free!

CONTACT US