

OFFSHORE NORGE



How Do Companies Achieve Tailor-made Success with Custom-Developed Software?

Read how successful companies build unique products, attract the right audience, and reach sustainable business goals through tailor-made IT solutions.



About Custom Development with Infopulse_

We do not want to proclaim anything “the best” including the bespoke solutions we create.

However, at Infopulse, we know the price of being among the market leaders. It takes creativity, persistence, and, of course, subject matter expertise to build something extraordinary – be it an end-to-end enterprise-level custom SaaS or a major reengineering of a legacy system.

See how we already helped some of the global players. Explore our approach to unique client requests from a different angle in a set of [case studies](#).

Our expert-led team offers:



Increased productivity through innovation



Intelligent long-term investment in tech



On-demand scalability as your business matures



Unique business identity with bespoke software



High reliability with Data Protection & Privacy by Design

Discover the full-cycle custom software development services from Infopulse.

[Learn more](#) ↗



A Modern Web Application for Bosch.IO Help Connect Service_

A 24/7 emergency call service that helps save lives

Industry: Software & Hi-Tech

Location: Germany

Employees: 800+



Client Background

Bosch.IO

Bosch.IO GmbH combines the full set of consulting and implementation skills to deliver AIoT and digital projects, focusing on the retail, energy, building, industry, consumer goods, logistics, and mobility sectors. Bosch.IO has 800 experts on board, including consultants, coaches, cloud software developers, digital marketers, UX and business model designers, solution architects, and project managers. The interdisciplinary team works together at locations in Germany, Bulgaria, Japan, China, and Singapore to serve customers around the world. Drawing on a broad base of industry knowledge and a deep well of software expertise, this Bosch company has proven its merits in more than 250 IoT projects.

Learn more at

www.bosch.io · www.bosch-iot-suite.com · www.blog.bosch.io

Business Challenge

The product area Connected Life at Bosch.IO was looking for a partner with profound expertise in web application development to delegate the implementation of the frontend of their Help Connect service application. Whether eBike, motorcycle, car, or smart home – in an emergency, sensors in products of Bosch.IO partners can automatically detect accidents and emergencies and call for help. [Help Connect](#) then organizes fast help around the clock in different situations – even when end-users can no longer do it themselves. With Help Connect end-users have a professional Bosch emergency call service at their side, which can directly inform the local rescue services.

The client chose Infopulse among other service providers in a competitive bidding process to develop the application for a number of reasons:

1. Infopulse has already successfully completed other projects for Bosch and had many positive references from other Bosch divisions.
2. Infopulse demonstrated top technical expertise and high professionalism in effort estimation.

3. In addition, our company demonstrated the ability to ramp up an engineering team in just a week and quickly embark on the project.

Since the goal was to develop the application from scratch, initially we were to run the Requirements Phase onsite together with the client and fix the scope for the MVP development. However, the start of the project coincided with the outbreak of the COVID-19 pandemic, which forced our team to interrupt onsite work on the client's requirements and the MVP scope and return home sooner than expected. Together with the Connected Life team from Bosch.IO, we adapted our collaboration methods to fit in with the new remote work reality.

The main business challenge was to develop the solution on a short timeline, collaborating in a large ecosystem of different teams and stakeholders.

Despite the tight deadlines, we had to ensure the high quality of the product – a life-critical service that should be free from defects or failures.

Solution

The high level of maturity of our client, well-written requirements, and our dedication to the project were instrumental to the successful development and implementation of the client-side of the web application.

We relied on a hybrid-agile methodology to ensure faster software delivery speed, better quality, and the needed flexibility to keep up with possible iterations. This approach included the following steps:

- We worked on business requirements that were aligned with mutual expectations and operational mode;
- Studied the initial business needs, added details and acceptance criteria to the features;
- Validated estimates, assumptions, and risks;
- Came up with the risks mitigation plan;
- Fixed the MVP scope.

After the requirements phase, we switched to scrum-based project management to ensure timely delivery.

As a result, Infopulse successfully developed the customer area where a user could add personal data, emergency contacts (relatives, spouse, children), medical records (allergies, blood type, etc.), and change miscellaneous app settings. All this data would be crucial for the agent of the Bosch Help Connect service ready to help a user in case of an emergency.

In addition to the user profile, our team also designed and implemented the subscription page of the app, which provides a view of the pricing plans for the customer.



Technologies



Light and easy UI library for building user interfaces, highly maintainable and widely used choice for small-to-middle UI applications



For application state management



Redux middleware for communicating with APIs (backend, environment)



Communication with REST APIs



Unit Testing framework



Utilities for Unit Testing

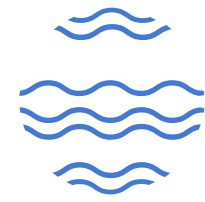


Business Value

Thanks to cooperation with Infopulse, the Connected Life team of Bosch.IO received a reliable partner in web application development and access to best practices and approaches in the development process. Our team successfully met the project requirements in the shortest term and managed to build a modern web app with a responsive and easy-to-use frontend for both desktop and mobile browsers. By selecting open-source frameworks and libraries (React.js, Redux, Jest, Axios), we helped our client to decrease development costs.

The web application now serves as a single contact point for the end-users allowing them to manage their profiles and get 24/7 access to the Bosch Help Connect service.

Upon the successful completion of two project phases, the Connected Life team of Bosch.IO has highly evaluated the results and further engaged Infopulse experts in the application backend development and testing automation.



OFFSHORE NORGE

Virtual Inventory Solution for Offshore Norge

Saving hundreds of millions, enabling an effective sharing economy,
and securing a sustainable future with consolidated inventory
management and search

Industry: Energy, Oil & Gas

Location: Norway

Employees: 50+



Client Background

Offshore Norge is a governing organization, connecting oil and gas sector companies. The association helps industry players find the most recent information about the equipment or spare parts in stock, excess materials, and suppliers of different industry-related products and services, using a modern e-procurement platform. The extensive portfolio of Offshore Norge solutions helps both operators and suppliers of the procurement process cut costs and time, improving operational efficiency and simplifying deal closing.

Website:

<https://offshorenorge.no/en/>

Business Challenge

Infopulse has a long history of collaboration with Offshore Norge. Our preceding project with the same client was to create a Critical Material Requirement (CMR) tool. This solution allowed 'coopetitors' to place common system requests for the required machinery in ad hoc and emergencies. Such situations can potentially turn into immediate production losses if there is no access to other operators' inventories to search for the necessary equipment across multiple databases.

Having adopted the culture of 'coopetition' – a mutually beneficial collaboration among competitors, oil and gas players utilize Offshore Norge offerings to minimize costs and create benefits for the whole pool of oil and gas operators. The lack of universal standards for efficient material management resulted in radical excess of inventory, extra expenses on warehouse and maintenance, environmental burden as well as regulatory non-compliance.

Without consolidated information in Material Master Data that would fall under one single standard, millions of euros could be lost due to production downtimes. For instance, if an operator had a piece of equipment broken that caused oil rig operational interruption, they had to manually search for this piece, using their personal connections – by calling or emailing associates of other oil and gas companies. Sometimes, instead of searching for equipment due to lack of transparency and visibility, an operator would instantly order a new piece of equipment, increasing equipment overhead on the continental shelf.

Holistic approach to collaboration



Thus, we needed to produce a **brand-new inventory management system** that would allow operators from the Norwegian continental shelf to share equipment from their stocks among other operator companies and reduce at least 1/4 of stock overlap.

- The client had earlier attempted to create such a system several times. However, none of the outcomes of such endeavors could meet their expectations and tackle the issue with SKU description matching. Infopulse introduced a modern technology that could solve the challenge of the client.
- Furthermore, the client wanted to fully capitalize on the 'economy of share', transforming its operations with an environmentally conscious approach to using equipment, storage optimization, and purchasing only necessary machinery.
- In addition, the client required a robust solution that would allow for incremental development and further scalability if necessary
- Finally, the solution had to address the issue of sharing data that comprised of both sensitive and non-sensitive information, circulating among operators

'Share today – invest in tomorrow' has become the motto of the new system as Offshore Norge was planning and executing the project with a revolutionary idea at its core.

Solution

Infopulse had the necessary subject-matter expertise to create a fully functional consolidated database, tackling the existing challenges of Offshore Norge. After several workshops, where our client explained their business requirements, the Infopulse cognitive team designed an effective solution.

Since it was impossible to search for specific equipment across the whole pool of operators, Infopulse had to consolidate and clean up the data. As stats indicated, only some parts of the data were ready-to-use, the rest were inaccurate records. On top of that, our team had to work on a tight schedule, obtaining files from operators and manually processing them as well as accommodating evolving project requirements due to the industry specifics.

Virtual Inventory was designed as a cloud-based portal, where operators upload inventory data presented in a structured way so that users can search and request inventory; the portal facilitates cross-license transfer.

Through Virtual Inventory operators can submit several types of requests:

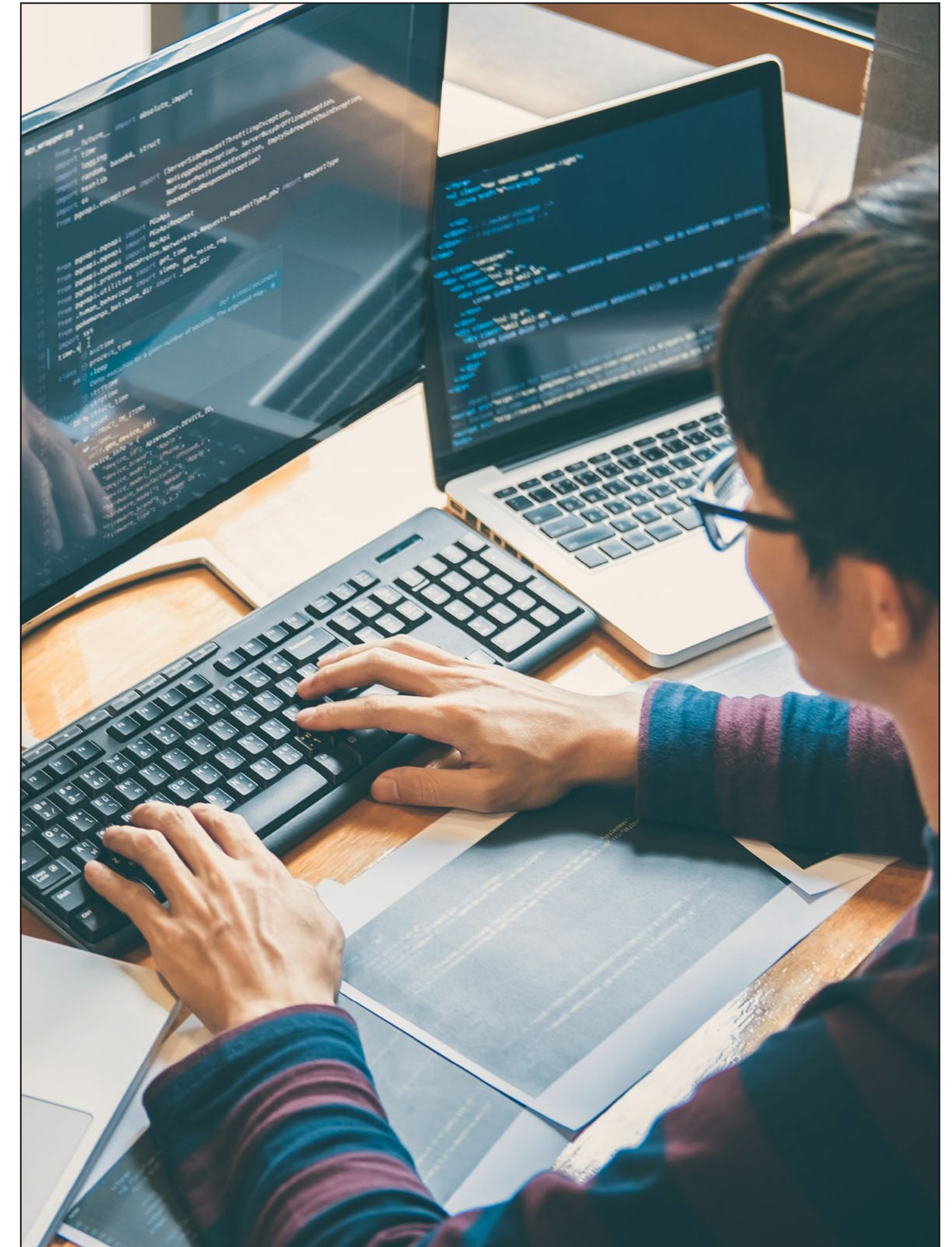
- Critical material request based on requester free input or inventory item from the VI system with high to highest criticality and multiple recipients
- General request based on requester free input or inventory item from the VI system with mid- to high criticality and multiple recipients
- Regular request based on inventory item from the VI system with any level of criticality and just one recipient.

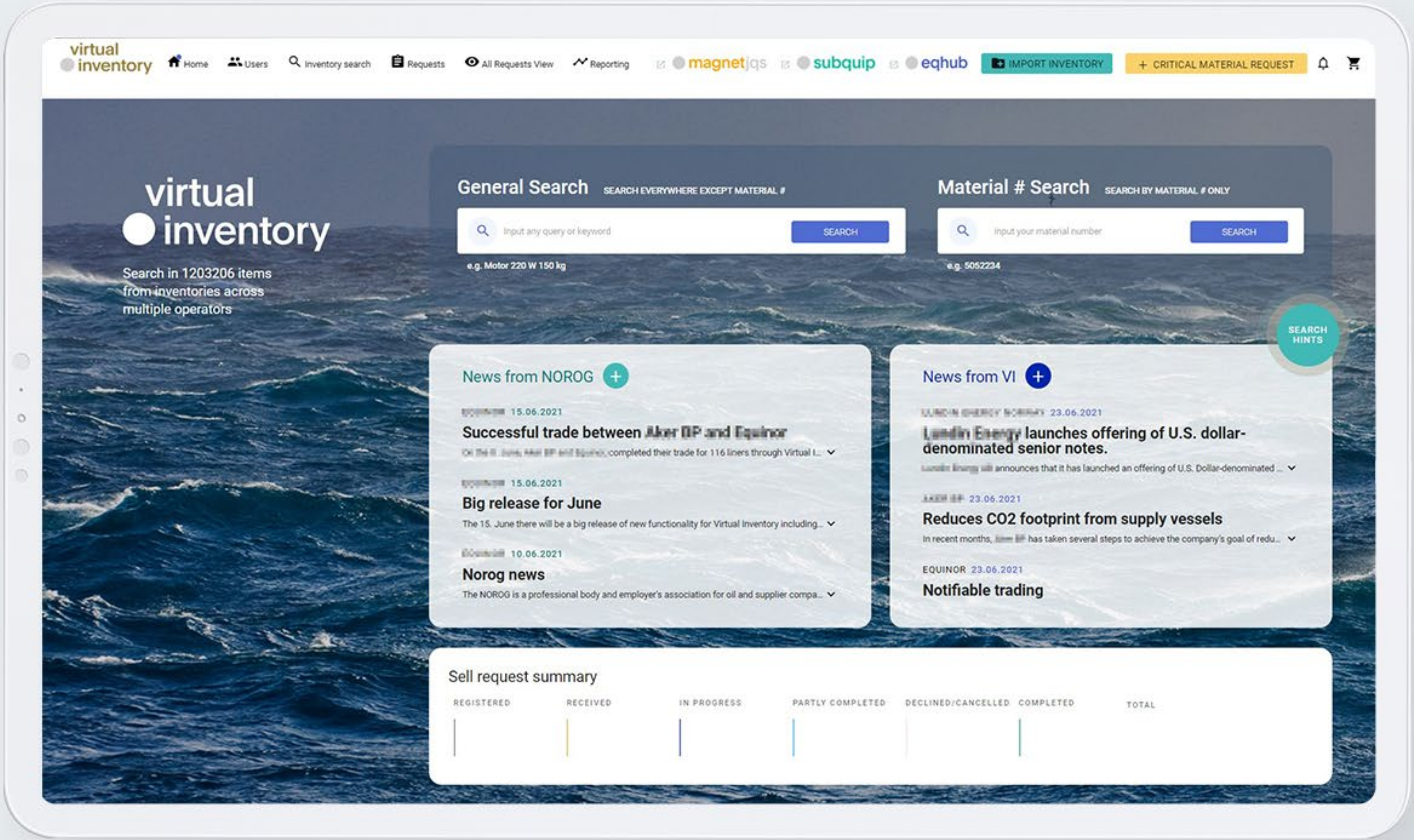
More information is available at

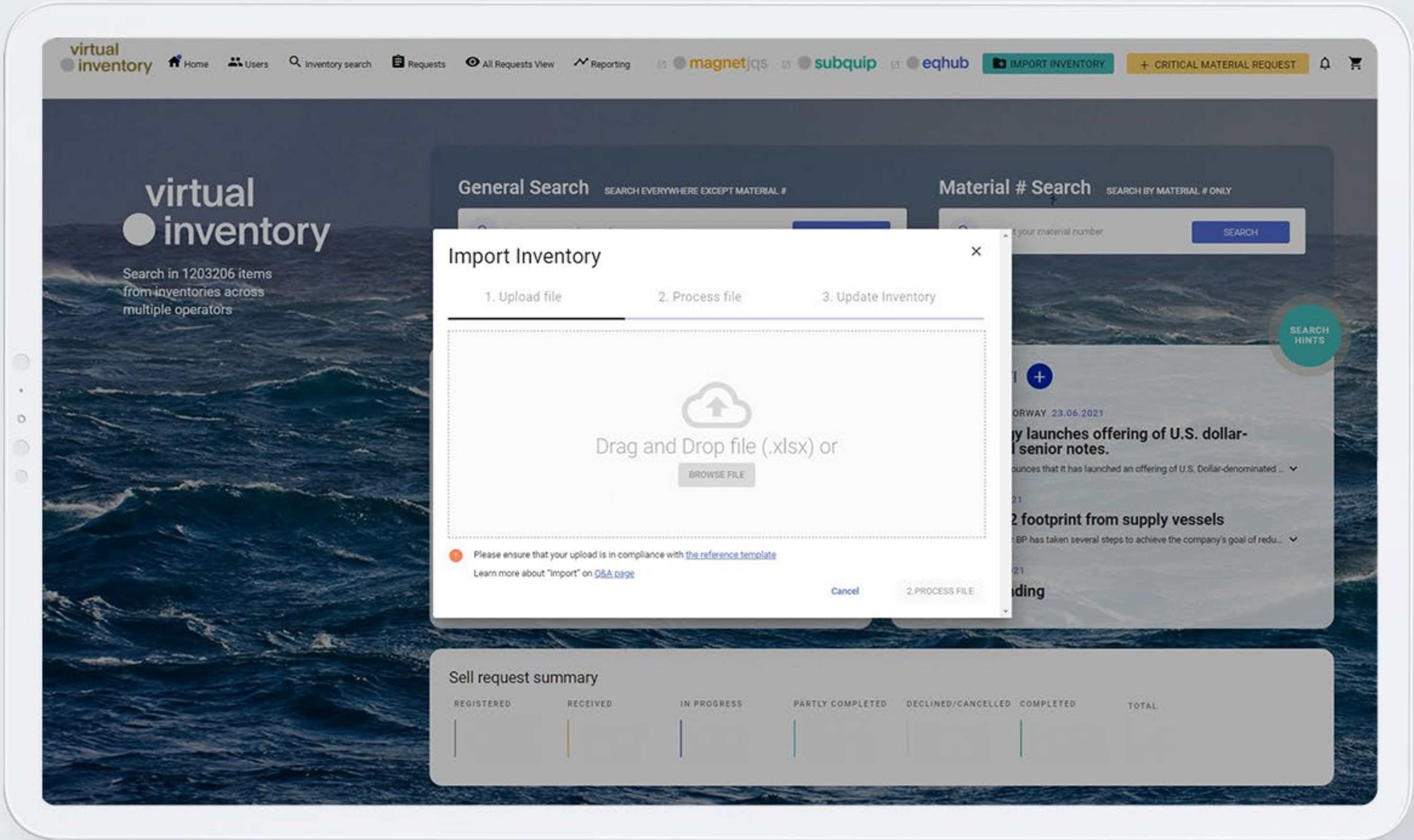
<https://collabor8.no/services/virtual-inventory/>

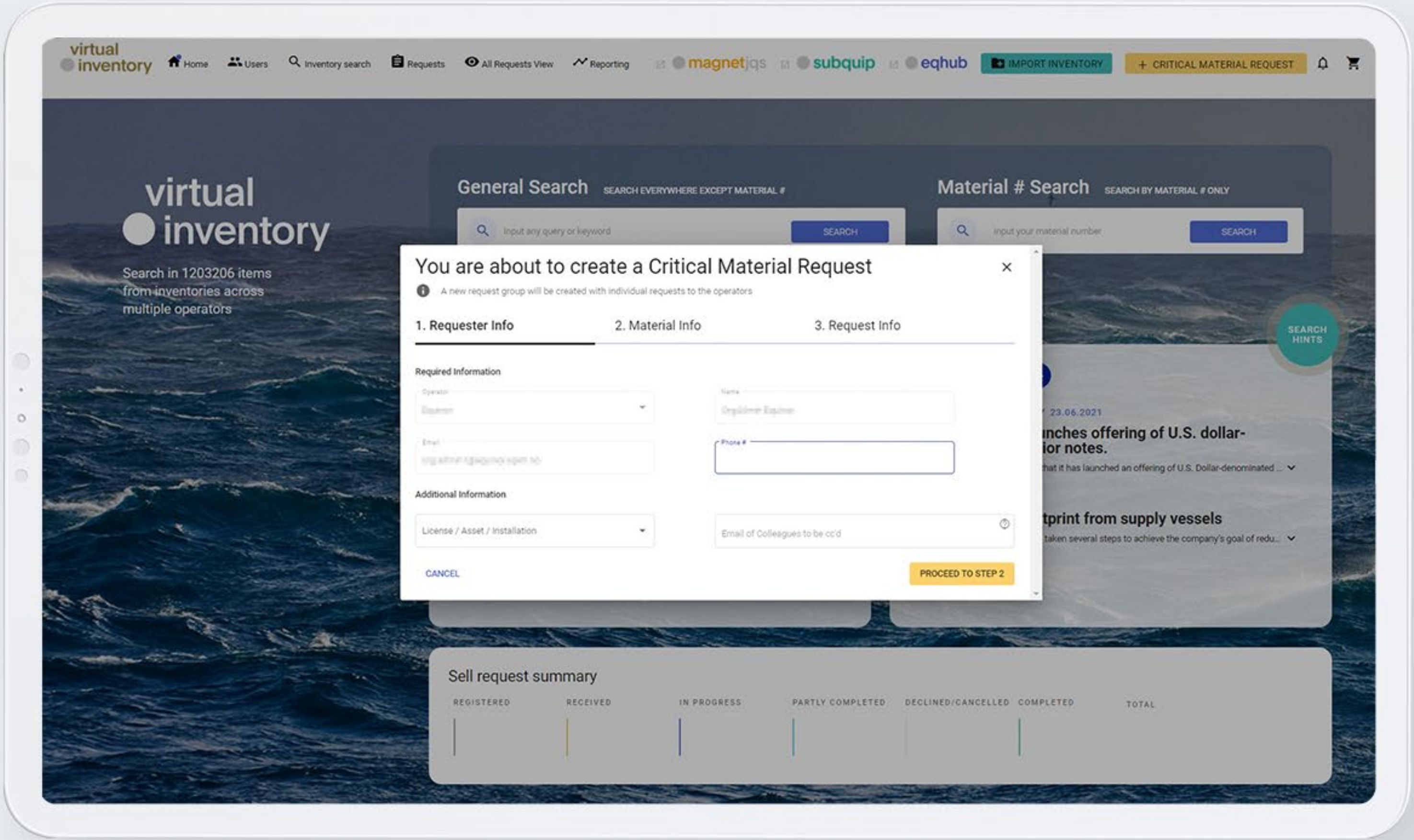
The long-term goal of the end-to-end system is to have:

- Seamless exchange of equipment: sharing economy
- New forms of collaboration
- Securing a sustainable future









Technologies

Programming languages:



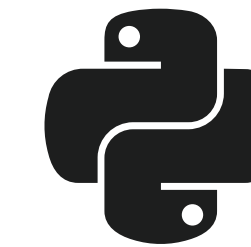
Node.js



Angular



Typescript



Python

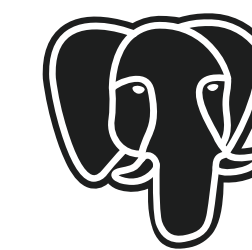
Technologies, Web Servers:



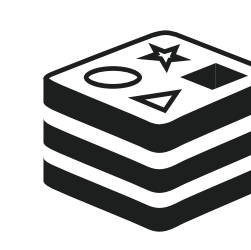
Elasticsearch



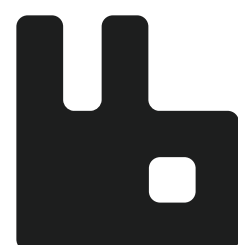
Nginx



PostgreSQL



Redis



RabbitMQ



Kubernetes



MongoDB

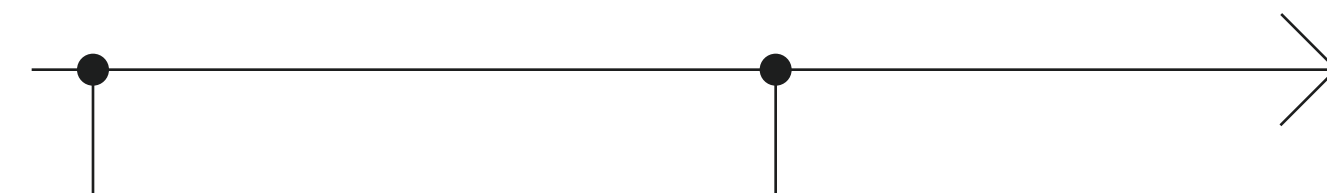


MinIO

Timeline

The Infopulse team delivered the project in modules:

Module 1



Jan – June (6 months), 2020 was the core development with a detailed discovery phase.

Module 2

The subsequent stage is an ongoing development and system improvement phase lasting until the end of 2021.

Business Value

The Virtual Inventory solution provided to Offshore Norge by Infopulse vastly improved material management for oil and gas operators:

- Since all databases are in sync now and the system works smoothly, the urgent search for equipment is no longer a challenge with aggregated data.
- 10+ major Norwegian shelf operators can, from now on, reuse the equipment and reduce the ecological footprint.
- Reduced stock overlap by at least 25%
- Costs and inventory size cut: the project saved up to hundreds of millions of Euros for oil and gas operators:
 - fewer inventory levels (reduced CAPEX) due to shared information on excessive materials and predefined processes for interaction and transaction among operators
 - lower OPEX reduction through reduced warehouse costs due to fewer inventory levels
- Platform engineers and asset managers at warehouses have access to the inventory of all companies operating across the continental shelf with the brand-new fully automated system, co-designed with the help of the Infopulse Cognitive Team
- Increased cross-sale of equipment and spare parts
- More efficient utilization of stored spare parts and materials resulting in reduced waste.



Robust Land Management App for a Market-forming Agri-Business_

Mobile application redefining farming and land ownership

Industry: Agriculture

Location: USA

Employees: 21,000+ globally



Client Background

Corteva Agriscience, one of the Fortune 500 corporations, is a global agricultural, chemical, and seed company based in the USA. To help farmers increase productivity and crop quality, the company offers an extensive portfolio of products and services that combine genetics, chemistry, and precision agriculture.

Website: corteva.com

Business Challenge

Corteva was on the lookout for an external IT services vendor who would be able to build a digital services platform for farmers and agronomists alike. With the smartphone app, the end-users would have a 360-degree view of their farms and fields, including land quality, ownership status, historical data on farmed crops, and more.

One of the most essential parameters to account for during the project planning was to consider the seasonality of the business and deliver the application in time for the start of the farming season.

The Infopulse team was engaged to lead the development of the two generations of the same app.

Solution

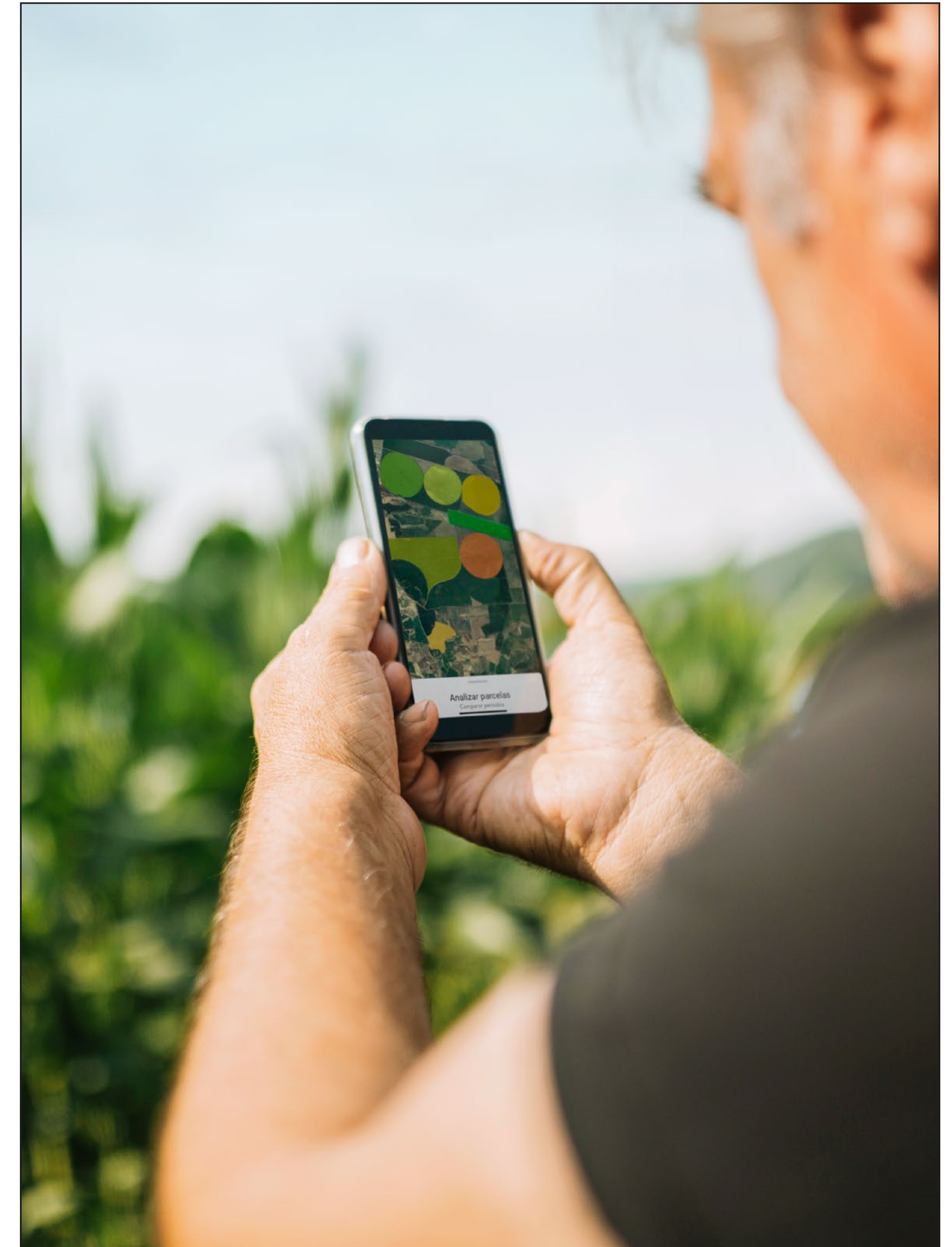
In close collaboration with Corteva, the Infopulse team came up with a solution that has all the necessary data for effective farming while bridging the informational gap between the two categories of end-users – farmers and Corteva agronomists.

Our engineers ensured the possibility to scale the country-specific product further across multiple geolocations in the future, where the client has its offices, and other locations.

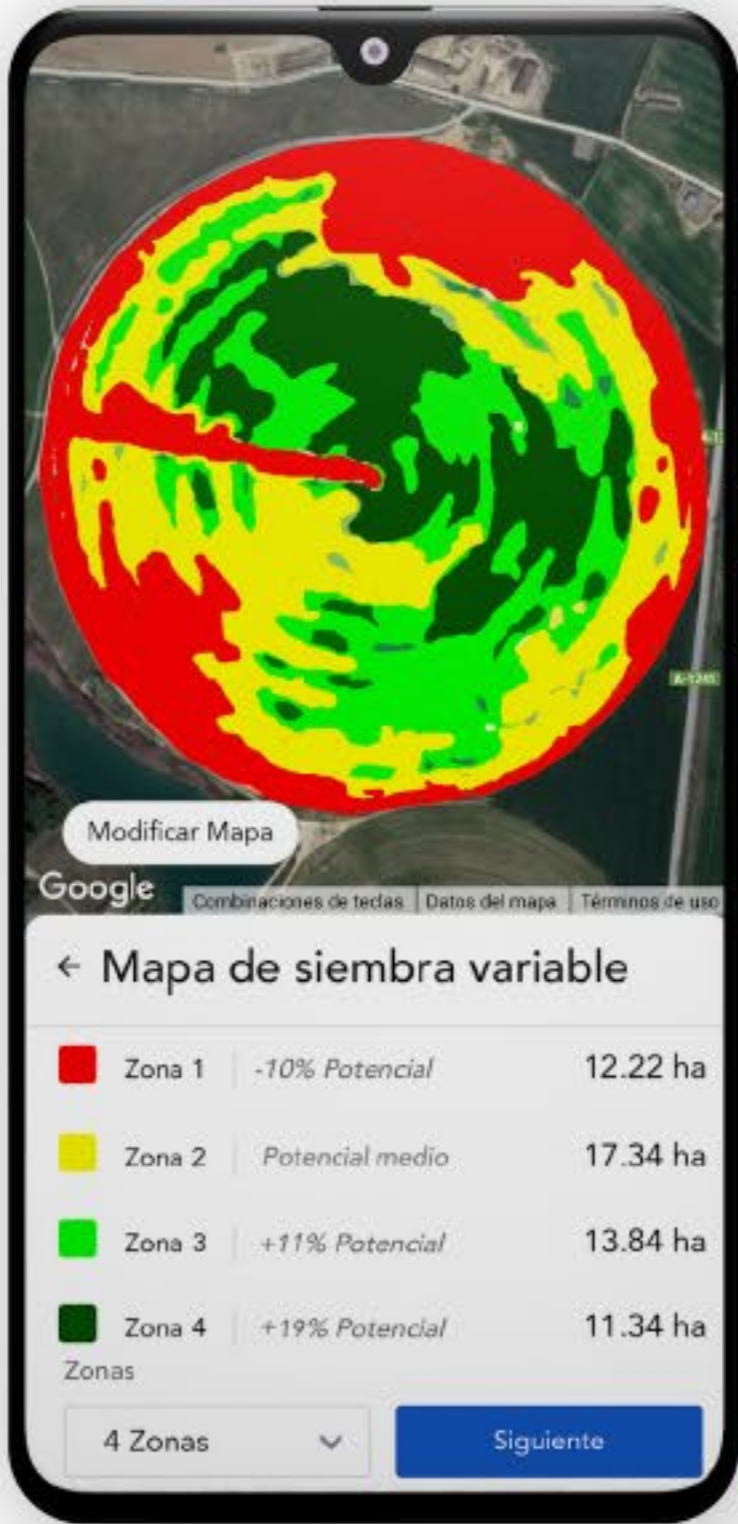
Finally, Infopulse orchestrated the feedback from multiple stakeholders and decision-makers at Corteva's regional branches, feeding it back to enhance the development process and refining the product after each demo.

As a result of the 1,5-year end-to-end development project, Corteva received an all-encompassing data aggregator app with which it is possible to:

- Create and manage farms from a smartphone or a desktop app.
- Use up-to-date information to enhance land management.
- Cover the seasonality of the business, as the app offers controls over full-cycle farming throughout the year.
- Check field health status leveraging remote sensing and AI features.
- Monitor hyperlocal weather forecasts, issue alerts to plan field irrigation, etc.



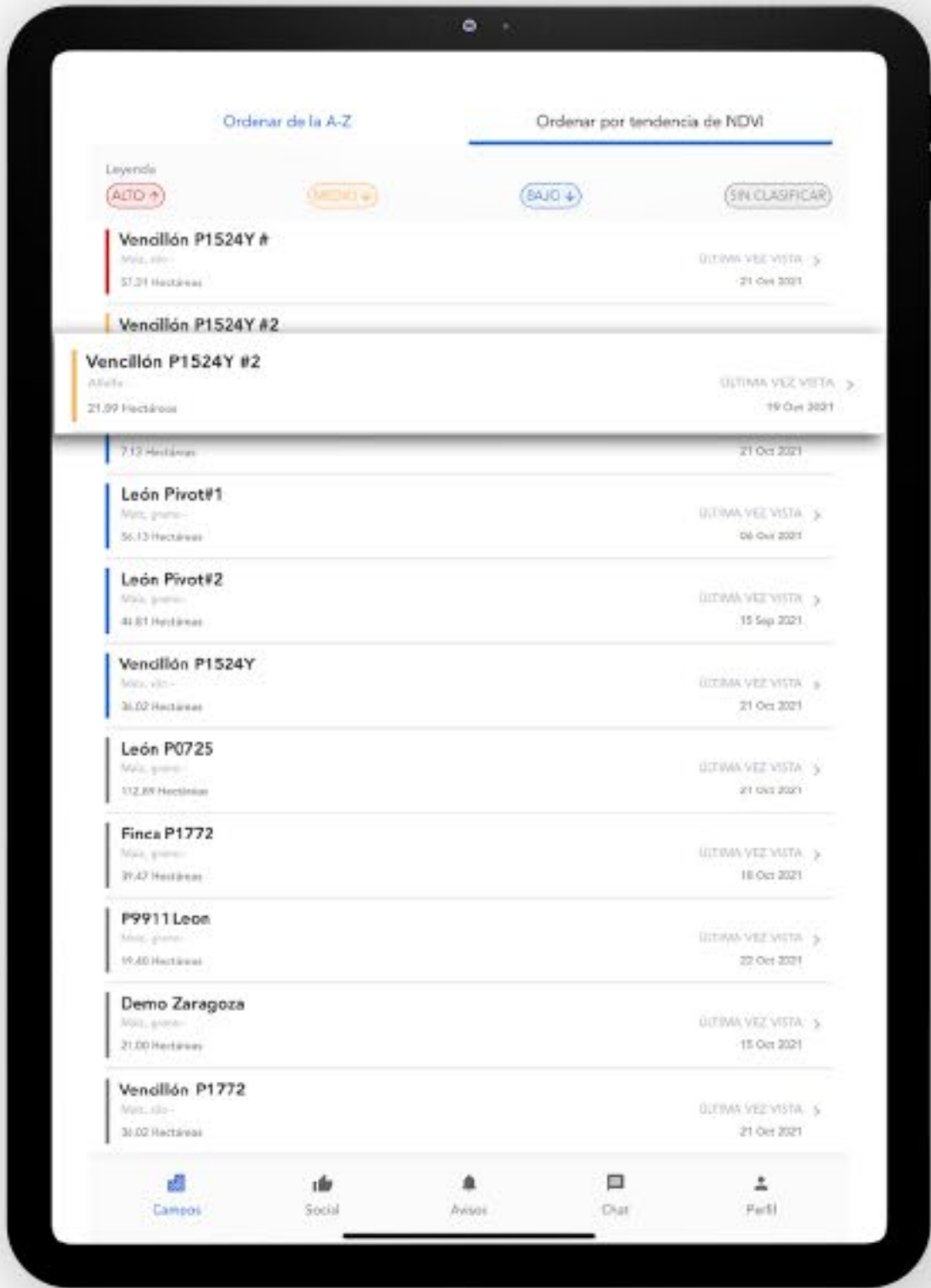
360-degree land and crops management



Make more accurate and sustainable decisions with up-to-date land data



Manage your fields easily



Prioritize the most important fields with crops



Check on the ploughed/sown fields in high resolution

Technologies



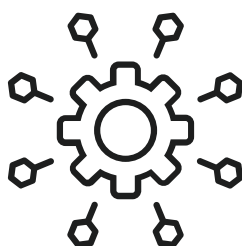
jQuery



HTML5



Apache Cordova



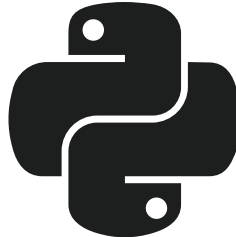
Microservices



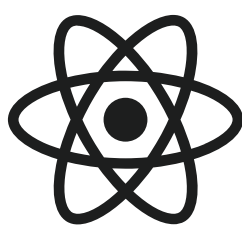
Azure SQL



Google Maps



Python



React JS



React Native



Business Value

The solution offered by Infopulse fully complied with Corteva's expectations. We met the tight deadlines and tackled the aspect of seasonality that is important for the agricultural business.

As a result of our collaboration, our client as a vendor can now offer a comprehensive mobile solution to the international markets that enables agrarians to plan and effectively manage their farms from A to Z: from fertilizing fields to harvesting crops. Corteva and Infopulse continue improving and supporting the solution.



About Infopulse

Infopulse, part of the leading Nordic digital services company Tietoevry, is an international vendor of services in the areas of Software R&D, Application Management, Cloud & IT Operations, and Cybersecurity to SMEs and Fortune 100 companies across the globe. Founded in 1991, the company has a team of over 2,300 professionals and is represented in 7 countries across Europe and the Americas.

Infopulse is trusted by many established brands, such as BICS, Bosch, British American Tobacco, Credit Agricole, Delta Wilmar, ING Bank, Microsoft, Offshore Norge, OLX Group, OTP Bank, SAP, UkrSibbank BNP Paribas Group, Vodafone, Zeppelin Group, and others.

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