box ^{UK}

Case Study

OKdo

Enterprise Ecommerce Platform

✔ Fully-functioning ecosystem to support the launch of a new global technology business

✔ Global flagship example of WordPress and WooCommerce in the enterprise

✔ Serving seven country sites in six languages from a single installation

Building an **enterprise ecommerce platform** for an **innovative global brand.**

OKdo approached Box UK with the brief of developing a fully-functioning enterprise ecommerce platform to support the launch of their new global technology business, focused on Single Board Computing (SBC) and the Internet of Things (IoT).

After a three-month bid process that saw Box UK demonstrate an innovative vision for the platform alongside extensive domain knowledge and technical expertise, we were engaged as OKdo's website partner – responsible for building seven country sites in six languages from a single technology platform, alongside coordinating the full technological ecosystem that would underpin the new business.

> **Thanks to the collaboration and transparency brought by the Box UK's product team approach, we've been able to consistently and rapidly deliver impactful changes on a global scale.**
>
> **Adrian Goodman**
> **Global Digital Product Owner, OKdo.com**

Given the timescales and flexibility required, the organisation was keen to take a lean approach to development. At the same time, the platform required a rich feature set, to fulfil OKdo's core aim of delivering an outstanding, engaging and seamless customer experience for all its SBC and IoT customers. Drawing on extensive bespoke software consultancy experience, our solution architects worked to craft an architecture that effectively balanced these requirements, employing a modular approach that supports service independence, while enabling communication via a robust API layer.

Our software consultants also selected WordPress VIP, the enterprise WordPress and WooCommerce offering from Automattic, as the underlying development platform for OKdo.com. Providing instant enterprise architecture as well as massive extensibility and flexibility, WordPress VIP powers sites for organisations including Dow Jones, the New York Times and CNN – while its e-commerce offering, WooCommerce, runs 20% of the world's top 1 million online stores.

Through the modular architecture, additional third-party applications were then integrated with the platform, to provide the complex functionality needed to manage the end-to-end ecommerce lifecycle. Not only did this approach facilitate rapid development and delivery (by leveraging existing services where possible), it has also helped future-proof the solution, as individual elements of the ecosystem can be scaled, swapped or added as needed.

Alongside payment mechanisms, tax and compliance solutions, customer communications and Third-Party Logistics (3PL) services, providing OKdo with a suitable Enterprise Resource Planning (ERP) solution was of vital importance. Working closely with OKdo, our team conducted extensive market analysis and assessment of available tools in this space, with Oracle's NetSuite identified as the most appropriate solution. Work was then undertaken to effectively integrate NetSuite with WooCommerce, including the mapping of information on OKdo's extensive product catalogue, for each regional variation of the site.

Having launched in April 2019, the platform already serves as a global flagship example of WordPress and WooCommerce working together at an enterprise level – demonstrating their capabilities in managing both complexity and scale as they underpin a multi-site, multi-language, and multi-currency ecommerce system

Complex project requirements

Box UK began by conducting a collaborative product vision workshop with the client, to establish the full scale and scope of the project, and capture the complex requirements of the OKdo platform.

For the Minimum Viable Product (MVP) alone this comprised seven separate country sites in six languages, all of which had to provide access to the OKdo platform, and enable users to purchase relevant products through an ecommerce offering tailored to the unique geographical considerations of each region:

• UK
• USA
• France
• Germany
• The Netherlands
• Italy
• Japan

The workshop also established that speed-to-market was a key concern for OKdo, to support them in their aim of transforming Single Board Computing and the Internet of Things – two of the fastest-growing markets in the technology space.

WordPress and WooCommerce

With its proven enterprise use cases, ability to deliver the utmost flexibility, and noted ease-of-use, WordPress VIP stood out as the appropriate technical solution from which to build the underlying development platform for OKdo. Additionally, as this enterprise offering supports multi-site development the Box UK team could build and run the different regional variations required from a single installation – making it easier for OKdo administrators to effectively manage their international presence.

A truly global service was also needed to provide OKdo with comprehensive ecommerce functionality, and for this WordPress VIP's well-proven worldwide commerce partner WooCommerce offered the ideal solution. Currently powering 20% of the world's top 1 million online stores, this service provides all the tools needed to support OKdo's international ecommerce requirements, as well as integrating fully with WordPress to deliver a seamless shopping experience.
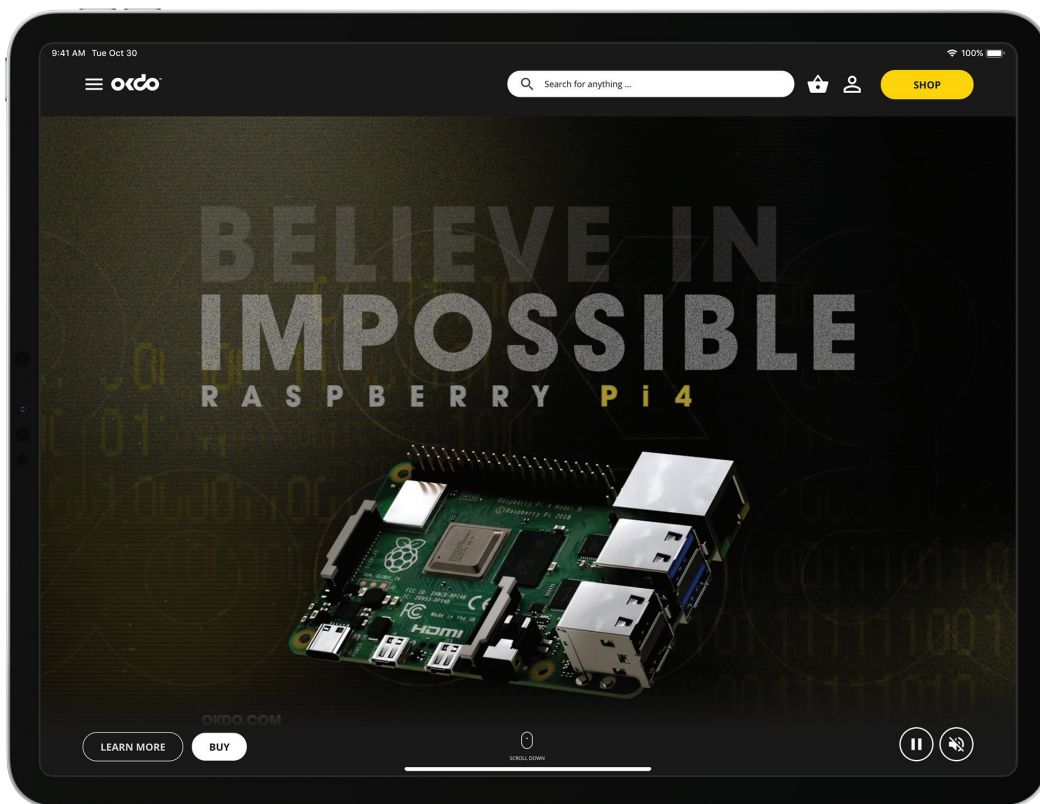
> ❝ **Box UK oversees our entire third-party ecosystem to ensure it delivers seamlessly against our business goals... giving us total confidence in the performance of our global ecommerce solution.**
>
> **David Duffy**
> **IT Delivery Manager, OKdo.com**

A rapid front-end build

Within the very first sprint of work, the Box UK development team was able to deliver working versions of all seven country sites – alongside a demonstration of the end-to-end customer purchase journey. Not only did this validate the ecommerce elements of the site but it also cemented WooCommerce's capability as an enterprise solution.

Throughout this first sprint, and all subsequent iterations, the assurance of quality was paramount and Box UK's award-winning development and test teams led the way here – with exceptional feedback from the WordPress VIP team who review all code.
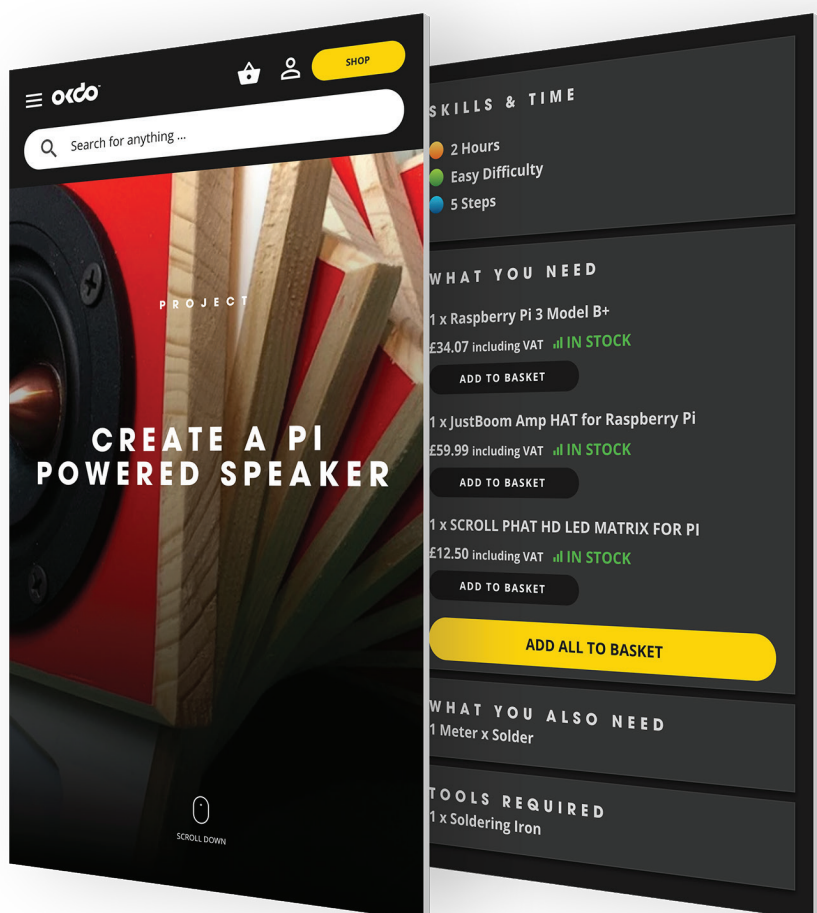
Lean and modular architecture

Box UK was also responsible for managing the complex back-office systems, processes and interactions that underpin OKdo's ecommerce offering – beginning with defining a suitable architecture to provide all of the features and functionality needed, while safeguarding rapid delivery.

The decision was made to take a modular approach here, with individual services provided through independent applications – enabling OKdo to benefit from best-of-breed third-party solutions and helping streamline development, while retaining the flexibility to scale and evolve the platform in line with future requirements and goals.
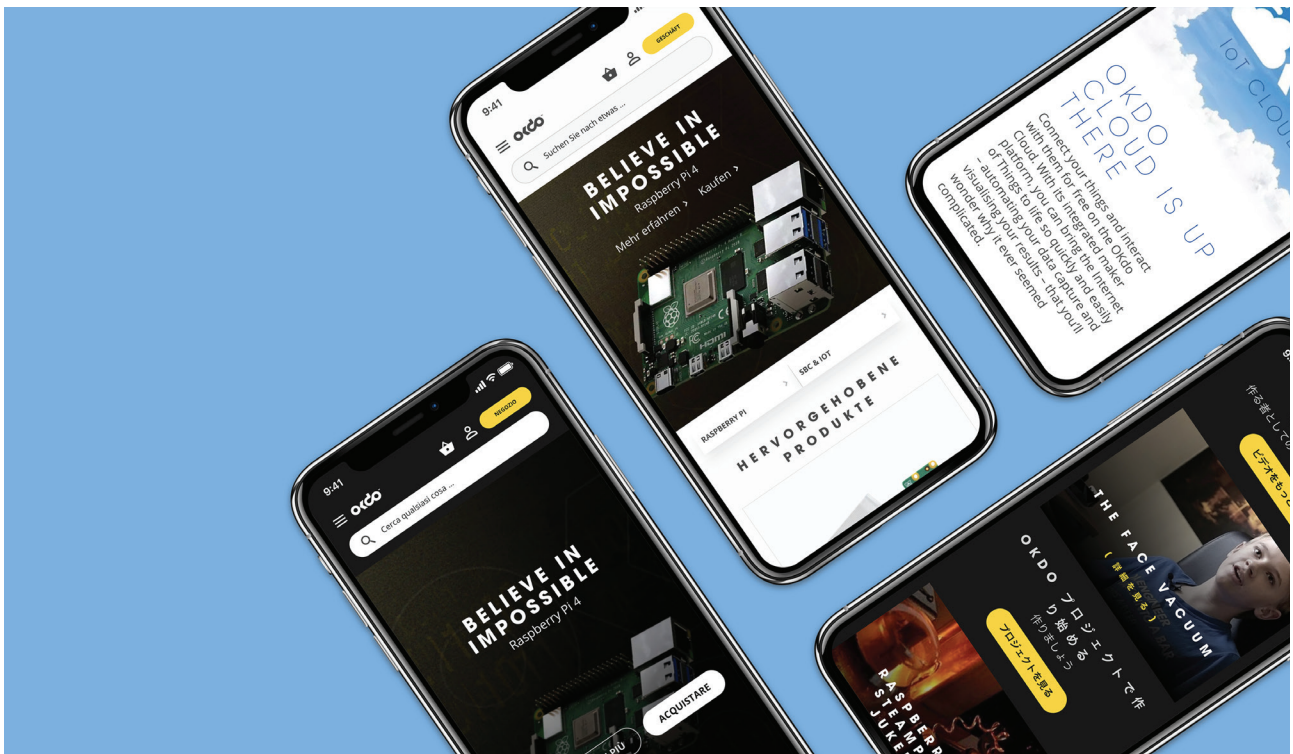
A vast technology ecosystem

With the architecture in place Box UK's business analysts, solution architects and technical consultants could then define the specific makeup of this vast ecosystem, bringing together the different services required to manage the full end-to-end ecommerce lifecycle, including payment mechanisms, marketing and transactional Email Service Providers (ESPs), and Third-Party Logistics (3PL) services.

After conducting extensive market research and analysis into available solutions, the team provided a list of validated technology recommendations that would deliver against these requirements, alongside the bespoke development requirements that would deliver the custom integrations, middleware and APIs needed to support seamless communication between the different services.

All coordination of third-party suppliers was managed by Box UK, from the initial engagement through to onboarding and ongoing project communications, with regular check-ins providing the client with complete visibility of progress throughout.

NetSuite Enterprise Resource Planning

Vital to the effective management of the extensive OKdo product catalogue was Oracle's Enterprise Resource Planning (ERP) software NetSuite, which provides the platform with industry-leading stock management, accounting and reporting capabilities.

Relied upon by over 16,000 customers across the globe, NetSuite also provides full support for multiple regional installations, each of which was integrated with WooCommerce through a custom connector to support OKdo's global ecommerce offering. With the ERP system also integrated with OKdo's 3PL solution (via custom middleware), the platform supports complete automation across the product lifecycle, with all product data mastered in NetSuite.

Trade compliance and tax considerations

Trade compliance was another crucial consideration within the OKdo ecosystem. As the platform handles requests from numerous geographical locations – each with their own trade agreements and legislation – multi-level checks must be performed for each transaction to ensure the necessary rules are being obeyed. This includes the application of appropriate certification that can vary based on the product, country and end-user in question, with these challenges further compounded by the fact that all checks need to be performed instantly.

To address these compliance requirements, Box UK worked with a third-party team to create an integration between NetSuite and Amber Road – a Global Trade Management software product – so that as orders are placed, the appropriate checks are run, certificates applied, and the relevant success/error message displayed to users – all in real-time.

Also vital was ensuring the correct tax was applied to each order according to the product being purchased, where the order was coming from, and where it was being shipped to. This involved analysing not only how tax laws and levels work in each of the countries OKdo serves but – for cases such as the USA – how these can differ at a state level too.

While external tax engine Avalara was integrated here to manage the different charges on the front-end, to meet accounting requirements Box UK's consultants and developers also had to calculate and define the different tax proportions for each region in the back-end – drawing on the domain knowledge they'd built up by working closely with the client from the very start of the project.

Integrated Design Thinking

Throughout development, keeping users at the heart of all decision-making was paramount and so the team employed an approach that combined the ethos of Design Thinking with the science of User Centred Design. All design workshops focused on creative ideation and iteration, and were further supported by hands-on prototyping as well as usability testing, ensuring that the solutions produced were driven by real-world user needs, motivations and contexts of use.

Box UK also worked to define the site's front-end appearance, augmenting all UX work with rich visual design assets. Having already completed a thorough Peers, Innovators, Competitors (PIC) assessment of the new marketplace OKdo was entering at the beginning of the project, the Box UK design team turned to luxury, high-end brands for inspiration on making the platform stand out from other competitors in the space, while applying User Experience (UX) and industry best practice to craft seamless journeys across all aspects of the platform.

A global, enterprise solution

A powerful, flexible and cohesive system that integrates content, projects, products and accessories, OKdo has now been launched to its B2C audience just eight months after kick-off, with the B2B version due for release later this year.

This new business unit has been able to start generating revenue without delay. Furthermore, OKdo represents a milestone for the WordPress VIP and WooCommerce technologies, as they power a rich ecosystem of unprecedented scale, sophistication and complexity.

Skills

› WordPress VIP Development

› Enterprise Ecommerce Development

› WooCommerce Development

› UX Design

› Visual Design

› Strategic Planning & Product Roadmaps

› Platform Management

Similar Projects

› RS Components

› Dexerto

› Sodexo

box UK

Simply brilliant thinkers
making software brilliantly simple

Strategy & Planning

User Experience & Design

Software Consultancy

Software Development

At Box UK our team of simply brilliant thinkers, consultants and application developers mastermind simply brilliant solutions to the world's toughest web and software projects.

It's why blue chip organisations around the world, from airlines to car manufacturers, international banks to global charities, choose to trust us with the execution of their digital strategies, from the development of enterprise-level custom software platforms to the delivery of award-winning multi-channel experiences.

So if you want an effective, compelling software solution, talk to us.

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