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Transforming Software Solutions

How Galvia Digital Transitioned ASM (UK) from a Desktop to Browser-Based Front-End Application

asm
agency sector management

v.2

At a glance

Agency Sector Management (UK) Limited (ASM) required Galvia Digital's help to transition their outdated Microsoft WinForm desktop application to a modern browser-based Vue.js framework application. With their current setup, every ASM user required an on premise installation of a client/server instance of the application. Every time an update to the application was required the customer would need to be informed to update their server application. Issues with incomplete updates required ASM to spend time and money visiting companies for server installations or updates. They sought assistance and initiated a Proof of Concept (PoC) to explore the project's potential.

They faced challenges such as requiring additional resources to update their system, maintaining consistent branding, and ensuring staff could independently continue development. Galvia Digital provided high-quality software solutions, including Kubernetes deployment automation, automatic browser updates, and staff upskilling. These solutions streamlined ASM's operations, enhanced scalability, improved user experience, and empowered the team to manage the application independently, ultimately driving efficiency and growth for ASM.

Client Company Introduction

Agency Sector Management (UK) Limited (ASM) is renowned as the UK's leading provider of Customs and forwarding software to global freight forwarders in the UK. Their Sequoia Customs Clearance and Freight Management Platform provides unparalleled productivity, connectivity, compliance, and reliability.

Sequoia empowers their clients to streamline everyday operations, saving valuable time and resources. Its user-friendly yet extensive Web Services API effortlessly integrates with third-party systems, eliminating the need for users to complete redundant data entry.

ASM's dedication to innovation has established them as a trusted partner in the logistics and freight forwarding industry, ensuring their clients achieve operational excellence and competitive advantage.

Challenges

The client company was eager to begin the project but needed clarity on what could be accomplished. Therefore, Galvia Digital conducted a two-week sprint scoping to define the ASM's requirements. We identified several challenges for ASM, including the need for additional resources to complete the project. The company utilised Winform libraries, initially built in C# in 2007, to develop their business applications. Their main product, designed with these libraries, required movement to the cloud to enhance scalability as the company acquired more clients.

ASM faced several challenges in their quest to transition from a Microsoft WinForm desktop application to a modern, browser-based Vue.js framework application:

1. **Resource Constraints:** Updating an ageing system amid rapidly evolving customs requirements demanded additional resources. The need to support a growing customer base compounded this challenge.
2. **Consistency in Branding:** Maintaining the familiar appearance and branding of the existing desktop application in the new browser-based version was crucial to ensure a seamless user experience for existing clients.
3. **Staff Capability:** Ensuring ASM's staff could continue development independently post-migration was essential to reduce dependency on external support and foster long-term self-sufficiency.

Addressing these challenges was vital for ASM to:

1. **Enhance Scalability and Efficiency:** Transitioning to a cloud-based solution would significantly reduce the need for manual hardware updates and interventions, allowing ASM to scale more efficiently and serve a more extensive customer base without additional resources.
2. **Improve Customer Satisfaction:** Automatic application updates would ensure clients always have access to the latest features and improvements without manual effort, leading to a smoother, more satisfying user experience.
3. **Foster Internal Self-Sufficiency:** By equipping their staff with the necessary skills and tools to manage and develop the application independently, ASM could reduce reliance on external support, save costs, and accelerate problem-solving and innovation within the company.

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Solutions Provided by Galvia Digital

The Galvia Digital team leveraged their extensive expertise to deliver a comprehensive solution tailored to ASM's unique needs:

Browser-Based Component Library:
The project required the web-based application to be built from the ground up to provide the best development for ASM. Galvia Digital developed a browser-based component library that integrated the UI/UX of the original Winform library.

This new library, built with Vue.js, can be utilised across various parts of the business for application development. This approach allows the application to scale effectively in a cloud environment.

Application deployed to Kubernetes:
By automating deployments with Kubernetes after each new revision, Galvia Digital ensured that updates were quick, reliable, and free from human error. This approach enhances scalability demand and facilitates efficient application management, ultimately improving productivity and customer satisfaction.

Automatic Application Updates:
Galvia Digital implemented a system where every update was automatically applied in the browser, eliminating the need for manual updates, providing the customer with the latest features and improvements without any manual effort and promoting a seamless experience.

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New Component Framework:
We developed a new component framework for the company, ensuring consistency for staff and clients. This streamlined service promotes uniformity, simplifies development, and speeds up the creation of complex applications. ASM can use this framework in other business applications to encourage efficiency.

Comprehensive Documentation:
Our expert development team provided ASM with documentation, including all technical decisions, ensuring transparency and clarity, making it easier for the client to understand and grasp the technical aspects.

CI/CD process:
We implemented automated unit, component, and end-to-end application testing, ensuring components worked together as expected and verified the entire application through real user scenarios. This process caught errors early, improved code quality, and improved development by automating repetitive testing tasks.

NPM Package for Component Library:
Our development team created an NPM package for the component library, making it easy for developers to install, manage, and update components for other applications and start new projects. The simplified integration allows developers and employees to easily include pre-built components in their projects.

UI Development and Documentation:
The component library was documented using Storybook JS, a UI development and documentation tool.

We utilised this to provide a visual interface to see and interact with each component, simplify building and testing components in isolation, enhance collaboration among team members, and make the library accessible to browse and reference. This expedited development and ensured consistent use of components.

Staff Upskilling:
Galvia Digital upskilled ASM staff through targeted training and comprehensive documentation. This approach fostered self-sufficiency among ASM staff, enabling them to handle issues and updates independently, thereby expediting problem-solving and development processes. Ultimately, this strategy saves the company time and money by negating the need to hire new staff.

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Results

Phase 2 Commissioned:

Our team expertly delivered the project on time and to specification. The successful completion of Phase 1 led to the immediate commissioning of Phase 2.

This seamless transition ensured consistent project momentum, reduced downtime, and increased efficiency, saving costs and enhancing overall effectiveness.

Sample Test Roll-Out:

We empowered the team to begin internally testing the solution within the ASM staff user base to start the migration from the desktop to the browser-based application.

This allowed internal company users to test and refine the migration from the desktop to the browser-based application in a controlled manner. This approach helped identify and resolve issues early, gather valuable user feedback, and ensure a smoother transition.

It minimised risks and disruptions while allowing the company to make necessary adjustments before a full-scale launch, ultimately leading to a more prosperous and user-friendly deployment.

Confidence Development:

Galvia Digital's support helped ASM staff gain confidence in their ability to progress the application development independently. This newfound confidence fostered a positive work environment, encouraged innovative solutions, and ensured the project stayed on track, leading to timely completion and a high-quality application.

Enhanced Notification Functionality:

Our skilled software team introduced new update notification features that enhanced the platform by improving user engagement, experience, and overall functionality.

Galvia Digital ensured this notification feature was used to target ASM's update problem to help them better deal with system updates for clients and avoid manual intervention or having to travel to the customers' premises to solve server installations.

Notifications provided timely updates and alerts, informing users about important events or system changes and improved communication and customer interaction. This feature added value to the platform, retaining existing users, and attracting new ones by offering enhanced convenience and usability.

Phase 3 Commissioned:

ASM commissioned a phase 3 to complete the remainder of the application, allowing for seamless continuation of development, keeping the project on schedule and maintaining momentum.

Completing the application enhanced its functionality, usability, and market competitiveness, leading to increased user satisfaction and business scaling.

Addressing all remaining requirements in one phase streamlined project management also minimised costs and maximised efficiency.

Documentation Hand-over:

We handed over all documentation to the team, which streamlined collaboration for ongoing development and made it easier for everyone to work together efficiently with the required tools.

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Conclusion

Galvia Digital's expertise and innovative approach empowered ASM to effectively prepare and plan the deployment of their new browser-based application to select customers for a trial phase. This allowed ASM to gather valuable feedback before proceeding with a full-scale launch to their entire customer base.

The comprehensive solutions improved scalability, efficiency, and user satisfaction while fostering internal self-sufficiency. This case study highlights Galvia Digital's capability to deliver complex, impactful digital transformation projects, making us an ideal partner for those seeking innovative and reliable software solutions.

By choosing Galvia Digital, you can be confident in receiving high-quality service, cutting-edge technology solutions, and a partnership that drives success and growth.

> *"We have found the Galvia Digita team to be thoroughly professional, strategic and engaged. We can highly recommend working with Galvia Digital. Their expertise enabled us to kick start our frontend web development."*
> *Ian Fraser, ASM (UK) Limited*

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