

Migrating Innovation from Lab to Production



Objective

A portable imaging device manufacturer needed to bring an innovative add-on accessory from proof-of-concept to production. The accessory was designed to add informational overlays to the images from their existing imaging device. The solution needed to run securely on a tablet and be able to support processing-intensive AI and machine learning technologies used to augment imaging from the main device.

Challenges

The accessory's operation had been perfected in a lab environment with unlimited processing and electrical power, but the design needed to be migrated to production on a battery-operated tablet running an embedded operating system. To complicate matters, the product's software had been developed using a scripting language that is not typically used in an embedded environment. The company lacked the in-house software development expertise necessary to work with both embedded real-time systems and the scripting language. In addition, the unusual combination presented unique security challenges that had to be identified and resolved.

Solution

After interviewing more than 30 software engineers, the manufacturer turned to Base2 for its experienced software engineers who thoroughly understood both the embedded environment and the scripting language. After a detailed assessment of the requirements for the accessory's operation in the field, the Base2 consultants established a secure framework and software architecture that tracked the device's state, such as battery life and external connections, and optimized the software's performance to swiftly display overlay information. They also followed best practices to ensure the project complied with IEC 62304 and other relevant regulations for medical device software development.

Outcome

With the help of Base2's experts, the manufacturer was able to achieve their goal of migrating their breakthrough add-on accessory to production within their desired market window. They are now able to offer this beneficial product to enhance the capabilities of their existing imaging device, providing improved provider and patient experiences and a new revenue stream opportunity.

"I would recommend Base2 to anyone who is in a similar situation as I was. I could see from the working culture of the Base2 consultants that Base2 is very customer success-oriented."

*~ Development team lead,
Imaging Device Manufacturer*

Base2 assists companies across heavily regulated industries, such as aerospace, defense, transportation and medical devices give form to Digital Innovation. Our expert software and systems engineers deliver the processes and practices to speed up product development and accelerate time to market for develop complex interconnected systems.

To learn more about Base2, please visit www.base2s.com.