Re-Architecting a Next-Gen Security Solution

Challenge

A global technology company specializing in retail security and IoT merchandising was confronted with a critical problem that was limiting growth. They needed a partner with deep expertise to create a next-gen security product that could scale with their customers' needs, safeguard sensitive credentials, and enable seamless integration via mobile devices.

The client's pain points included:

- An **expertise gap** in the specific technology framework that was required to create a next-gen product in the timeline needed.

- As customers diversified and inventory categories expanded, **inconsistencies in existing IoT mechanisms** led to operational inefficiencies and increased vulnerability to shrinkage.

- They wanted to make their products even **more secure** by utilizing the latest methods.

- They needed a solution that could be **scaled significantly** to adapt to a fast-growing customer base and support dynamic customer expectations.

Solution

INSPYR Solutions engaged the client through a series of consultative discovery sessions to better understand the needs of the business. We then assembled a cross functional product team with expertise in Go backend engineering, Android and iOS mobile development, React Native specialization, QA testing, and product management. The team essentially rebuilt the client's backend system and implemented the following solutions:

- Re-architected the web service backend in Go to handle requests at scale, minimizing sensitive data stored on devices and ensuring end-to-end security.

The newly delivered next-gen security solution provided:

- Scalability gains
- Enhanced security posture
- New revenue streams
- Improved efficiency

- Developed a mobile application and SDK, leveraging Bluetooth and NFC integration for proximity-based management of security mechanisms such as locks. The SDK permits customers to white-label and extend the app's functionality to suit their branding and workflow requirements.

- Improved the system's capabilities so it could reliably authenticate and authorize mobile requests under heavy load as needs scaled to meet demand.

Throughout development, INSPYR Solutions maintained rigorous security standards to deliver a highly tailored platform that met the strict operational requirements of large national retailers and other customers the client services. The implementation was executed with minimal disruption to operations and featured compatibility with pre-existing infrastructure, a critical factor for enterprise-scale rollouts.

Outcome

The newly delivered next-gen security solution provided a significant business impact:

- **Scalability Gains:** The platform now supports a very large number of devices and concurrent users, allowing the client to take on more customers and work with existing ones to expand operations.

- **Enhanced Security Posture:** By minimizing on device sensitive data and centralizing authentication, the client now maintains industry leading protection against unauthorized access that seamlessly integrates with the revamped mobile app.

- **New Revenue Streams:** Armed with a robust, secure, and flexible IoT security solution, the client can now approach new potential customers with their security products and participate in sales opportunities that would not have been available before.

- **Improved Efficiency:** The mobile integration enables customer staff members to work much more efficiently. For example, employees can unlock secure areas and merchandise via the app instead of having to physically unlock them each time. This significantly cuts down inefficiencies in staff resources and reduces wait time for shoppers, in turn leading to higher customer satisfaction.

These outcomes collectively empowered the client to compete effectively on large-scale retail security and IoT opportunities, expanded new revenue streams, drove significant cost savings, and positioned them for ongoing innovation and growth.

Client Profile

This retail security company provides innovative loss prevention and asset protection technologies to some of the world's most recognized brands. Specializing in IoT-enabled solutions, their products combine intelligent design with advanced security features such as Bluetooth and NFC integration to safeguard high-value merchandise across thousands of retail locations. With a focus on seamless user experience, operational efficiency, and scalable technology, the company helps retailers protect what matters most while streamlining store operations.

Technologies Supported

Go, Android, iOS, React Native

About INSPYR Solutions

Technology is our focus and quality is our commitment. As a national expert in delivering flexible technology and talent solutions, we strategically align industry and technical expertise with our clients' business objectives and cultural needs. Our solutions are tailored to each client and include a wide variety of professional services, project, and talent solutions. By always striving for excellence and focusing on the human aspect of our business, we work seamlessly with our talent and clients to match the right solutions to the right opportunities. Learn more about us at inspyrsolutions.com.