

Creating a high precision image & data visualisation app

When a leading specialist in industrial grade measuring systems wanted to improve their high-end industrial equipment, a mobile and tablet based application was created to meet the fast pace and needs of the metal production industry.

BUSINESS NEED

The company already provides its clients with precise, industrial grade machinery, responsible for scanning and monitoring the quality of steel sheets and other produced goods. This hardware used advanced image recognition technology to identify, measure, and record faults and irregularities on the metal sheets that passed underneath.

They also wanted to improve their service even further by providing mobile device support with software that could present all the information acquired by their scanners, cameras, and

sensors. Because workers are often on the manufacturing floor, a portable solution that could interpret and present this data was ideal.

This was vital for the metalworking industry, for which the company supplies products. Production often runs 24 hours a day and can't be stopped. Their clients need a way to correctly identify faults and defects; the sooner they become aware of them, the sooner the sheets can be graded and sent out where necessary.

PROJECT DETAILS

From the start, a Xamarin framework was used to develop the app. Doing so enabled the app to be developed for multiple systems without delaying delivery times. Later stages then focused on optimising the product for each platform, ensuring users got the best possible experience for their specific device.

During this phase, test automation was applied directly to Xamarin to test non-functional components, such as the UI, ensuring a high quality product right from the start.

Data gathering was designed to specifically work with the company's Application Programming Interface (API), providing direct access to all the relevant data collected from the scanning

equipment. This was an important step, as the hardware's cameras scan entire sheets of metal in numerous, smaller 'tiles'. The app can recall tiles directly from the API, allowing users to zoom down to specific areas to view and assess irregularities.

Due to the specific nature of the industry, it was also decided to keep the service on-site; many clients have remote factories where internet access is not an option.

Finally, this is supported with a graphic overview, including a scale, to help users assess a defect's dimensions, depth, and more. It also worked alongside existing tracking methods, ensuring staff can identify which sheets have defects.

BUSINESS BENEFITS

The final product is a reliable mobile application that enables workers to keep up with the fast pace of the industry, without compromising on quality.

- The software compliments the company's existing scanning equipment, greatly improving its versatility
- Clients can now assess defects and sheet quality in real time, enabling on the spot decision making
- Sheets can also be assigned to custom categories, further streamlining production and shipping cycles
- The application informs users of all sheets passing through the scanners, eliminating the risk of human error
- Graphic presentations enable staff to accurately understand key findings & take informed decisions

TECHNICAL DETAILS

SOLUTIONS

Image Presentation, Data Visualisation

TECHNOLOGIES

Xamarin, ASP.NET

TOOLS

Xamarin, Visual Studio, Jenkins

TEAM

2 Software Developers, 1 Mobile Developer, 1 Backend Developer, 1 QA Engineer

ABOUT THE CLIENT

The company specialises in industrial grade measuring systems, helping manufacturers and raw material processors to correctly measure, assess and grade their goods with high precision. Based in Germany, the organisation provides both 2D and 3D optic inspection equipment to clients around the world.

ABOUT PGS SOFTWARE

PGS Software is one of the largest public listed custom software & services providers in Poland. As an AWS Advanced Consulting Partner, we specialise in Cloud projects – consulting, cloud-native development, application modernisation, & migration. Working according to agile methodologies (Scrum, DevOps, & Continuous Delivery), we create mobile & web applications as well as provide Business Analysis, Visual Design, UX, UI, & QA services to Clients worldwide. We have development & business entities in Poland, UK, Germany, & Spain.



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