

CASE STUDY

CREATING THE NEW GENERATION OF HEARING AID DEVICES WITH BLUETOOTH CONNECTIVITY

Comarch for WS Audiology



About WS Audiology

WS Audiology (WSA) was created in 2019 as the result of a merger between Widex A/S and Sivantos. The company offers a diverse portfolio of technologically advanced hearing aid devices and solutions that come under brands such as Signia, Widex, Rexton, Audio Service, Vibe, and more. WSA employs more than 10,000 people and is active on more than 125 markets. Each year, WSA sells about 5.5 million units of hearing aids, and those numbers are still growing.

Project overview

What was the project goal?

In 2021, WSA started the project to create a new generation of hearing aid devices that will support Bluetooth protocol connectivity. Comarch's task is to support WSA in creating high quality firmware with use of C++ and Python, and to provide a test framework for Bluetooth modules. The entire project is managed in SAFe (Scaled Agile Framework) methodology, with every team working in Scrum. The high-level goal of the cooperation is to help WSA to become the world leader on the hearing aid market.

What needs and challenges were addressed by Comarch?

- The need to support the WSA software team with highly-qualified engineers
- Insufficient resources with deep Bluetooth connectivity expertise
- Request for HW verification and consulting

What were the key qualities Comarch brings to the project?

- Vast experience in embedded software development
- Deep understanding of Bluetooth technology
- Comarch engagement in healthcare solutions
- Efficiently managed on-boarding process for the team
- Flexibility in responding to the client's changing needs and requirements
- Readiness for adjusting to the client's internal processes
- Ability to develop together with the client's teams

Comarch services

Project Scope

For Comarch, the project started with building a testing platform as the basis for the further development and verification process for the client. Simultaneously, we have been running hardware tests in search of possible improvements. After presenting the results to WSA, we assisted with fixing issues. The next step was to develop the device low level drivers in C++ and implement Bluetooth module support for the audio stream services. We have also provided the test framework to ensure the usability and to support the further implementation of planned features.

Experienced Team

Comarch started the project with half of the required engineers. The team was extended during the first months of the project. All in all, Comarch has provided WSA with a team of 11 specialists – nine software developers, a Product Owner and a Scrum Master. Our team works internally on its tasks. However, it is not separated, as the cooperation with WSA is very close and continuous, including in the field of current consulting and software integration. Our team was introduced into the processes of the WSA organization, so we can truly say we are partners at work.



Benefits of using Bluetooth in hearing aids

- Easy connectivity across all Bluetooth devices – capability to connect with a device such as smartphone, notebook, etc. and using hearing aids as wireless earbuds
- Remote control of hearing aids internal settings such as volume using dedicated secure mobile app
- Monitoring the state of the battery inside hearing aids

Feedback from the Client



We selected Comarch as our partner in developing the new generation of hearing aid solutions because of their experience and great qualifications in Bluetooth connectivity, as well as hardware and embedded systems expertise. This decision proved to be the right one.

The framework development was always on track, and the deliveries reached their expected functionality. What's more, our partners at Comarch has always been very proactive in contributing their efforts to drive hearing aids technology forward.

I recommend Comarch as a services provider and a trusted business partner."

Peter Vestergaard
Senior Director, Embedded Software at WS Audiology