

The mobile app & EEG headphones that lull you to sleep.

BUSINESS NEED

Tim Antos, CEO of Kokoon, **suffered from sleeplessness for many years**. He also found audio to be very effective in helping him relax and fall asleep – but found that the **headphones he used were not designed to be slept in** and proved very uncomfortable.

Necessity is the mother of invention however, and Tim soon had his lightbulb moment. He decided to **design a special set of headphones**, which would be comfortable to sleep in and which would use special EEG technology to **sense sleeping patterns**.

Tim and his colleagues from Imperial College, London created the sleep sensing headphones using the latest, most sophisticated technology. Hence, they knew **they would need an experienced software development team to produce the mobile application and backend solution**, which would be at the centre of the system. Ensuring **excellent user experience** and ease of use was also of utmost importance to Tim and his team – which is why their product also **required the expertise of a Business Analyst, Quality Assurance professionals, and UX designers**.

SOLUTION

The Kokoon headphone is the first of its kind in the world and **the software behind this technology is extremely sophisticated**. The project therefore required a team that can **'think outside of the box'** and the **PGS Software team provided Kokoon with new concepts** that were then integrated into the overall solution.

Audio is one of the most effective ways to help us relax and switch off naturally. The technology in the headphones **accurately tracks how deeply you are sleeping** using both movement and its built in EEG sensors to measure tiny voltages from the brain to understand individual sleep patterns. This **information is fed to your smartphone app** to give a nightly sleep score. The data is then used to identify how the technology can improve your sleep. The system will adjust your audio and pause it as you fall asleep. Protective white noise is then introduced to ensure you remain undisturbed. Kokoon's **intelligent alarm technology identifies the perfect time to wake you up** so you can start the day feeling alert and fresh. Using a Kokoon headphone is easy – simply put it on and let the sensors do the work.

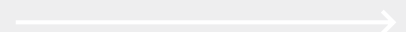
The PGS Software team **were instrumental in integrating the mobile application for both iOS and Android devices** with the Application Processing Interface (API) that processed the EEG data. They used **DevOps methodology to accelerate the development of the system** and it was a great success as they were able to **develop the mobile app and the backend service in parallel**. They produced **continuous sprints of high quality software**, generating working models during the project.

Testing is always an important part of any software application and the **PGS Software team carried out the testing** working in conjunction with Kokoon's own in-house team to ensure that **all work complied with the company's exacting standards**.

Producing the software to get the technology to work was not the only key area that PGS Software was involved in. **PGS Software's expertise covered a wider remit** as the project evolved and the company provided Kokoon with additional support including a **Business Analyst, Quality Assurance, and UX staff**. Additionally, PGS Software was also **involved in developing the look** of the mobile app.

BUSINESS BENEFITS

PGS Software created an application that **delivers user benefits like no other product** on the market – leading to over **15,000 pre-orders of the Kokoon headphone** even before its official launch.



The Kokoon headphone:

- ISTQB Foundation Level
- Adapts to the user and their environment
- Tracks how deeply the user is sleeping
- The mobile app provides a "sleep score"
- The data stored in the app is used to identify how the user's sleep can be improved
- The system adjusts the audio as the user falls asleep
- The intelligent alarm technology identifies the perfect time to wake the user up

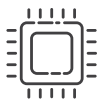
The headphones have been **a tremendous success**. Made from natural, breathable fabrics, they are designed to mold to the shape of your head to help you remain cool and comfortable wherever you are. Folding down to the size of a book, the Kokoon headphones are the ideal travelling companion.

PROJECT DETAILS



SOLUTIONS

Continuous Integration, Scrum, Manual Testing, UX, External Bluetooth device integration



TECHNOLOGIES

iOS, Android, Ruby



TOOLS

Jenkins, Xcode



TEAM

9 Developers

ABOUT THE CLIENT

Kokoon is a start-up based in London, UK. The company's flagship product is the world's first sleep sensing headphone, which was launched on Kickstarter, raising \$2M in donations.

ABOUT PGS SOFTWARE

PGS Software S. A. is a public listed IT development centre providing extended teams who develop custom software solutions and deliver end-to-end business services to clients worldwide. As a certified Amazon Partner Network (APN) Consulting Partner, we specialise in Cloud Transformation (Application Migration & Modernisation). We have 3 development centres in Poland (Wroclaw, Gdansk & Rzeszow) as well as branches in London, Munich, Vienna & Barcelona. We provide Agile-to-DevOps delivery capabilities such as B2B/B2C web & mobile development, Continuous Delivery, Business Analysis, UX & UI design.

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“Good communication is key in any successful project and this is an area that the PGS Software team excelled in. Weekly meetings were held with members of my team to ensure that the project was on schedule. Thanks to the dedication and hard work of the PGS Software team, Kokoon now has a robust backend system for handling the myriad of information from the end user that it receives.”

TIM ANTOS

CEO, Kokoon

FOR MORE INFORMATION ABOUT OUR SERVICES:

PLEASE CALL US AT **+48 71 7982699** OR VISIT OUR WEBSITE **WWW.PGS-SOFT.COM**.