Case study:

Collaborative partnership to deliver sample tracking software in the cloud

Company overview

The Wellcome Sanger Institute is a world leader in genome research that delivers insights into human and pathogen biology that change science and medicine. It is sited on the Wellcome Genome Campus in Cambridgeshire at the heart of a global hub of fundamental and applied genomic research.

Client name: Wellcome Sanger Institute (WSI)
Product type: Tree of Life Programme
Technology: Open source code (Python)
Industry: Research
Location: United Kingdom

The challenge

Under its Tree of Life programme, the Wellcome Sanger Institute is leading the initiative to decipher the genomes of 72,000 living organisms found in Britain and Ireland. This huge undertaking involves receiving many thousands of samples from a wide range of partners around the country: museums, botanical gardens, research organisations, universities and more.

Rather than depending on manual spreadsheets and processes to record and track samples – each of which may have around 50 pieces of related meta-data – the Institute needed a software system that would enable them to efficiently, quickly and effectively manage the journey of each and every sample through the process, giving team members across different departments access to up-to-date and real-time information whenever they need it.

The approach

We began by running a comprehensive discovery programme to work through the as-is situation with Institute team members and fully understand the desired end state.

In 10 weeks an MVP of the solution was ready for go-live. Since then we have continued to optimise and enhance specific features as needed in the spirit of continuous improvement, such as linking downstream sequence data back to each sample, as well as expanded the functionality of the system.

The solution

We have delivered a bespoke software solution to the Institute which enables team members to track every single sample received on an end-to-end basis.

Hosted in a private cloud, there is a single user interface. Written in Open Source code (Python), the open API used means that the system is easy to maintain, fully scalable and can be securely connected to the wider European and rest of the world databases as they are developed under the programme.

Outcome

The speed, efficiency and accuracy of the project has been significantly increased and samples, along with their meta data, can be logged and recorded in much less time than previously.

There is much less room for error or inaccuracy now that manual processes and data entry have been removed. The Institute has a system that can easily be configured to other projects too – thus representing a strong return on investment.

Client quote

"It has been a real pleasure working with NashTech. They took the time to collaborate with the team and understand what we needed, fully documenting processes and creating a detailed solutions architecture. There is no way we could have scaled to where we are, in the accelerated timescale it's been achieved, without NashTech."

Kenneth Haug
Enabling Platforms Team Lead - System Owner