



Simpl application testing framework enhances quality assurance, reduces development time, helps create applications that are right first time and improves patient safety.

Informing Healthcare (now part of NHS Wales Informatics Services), set up in 2003, is one of the key enablers for 'Designed for Life', the national strategy to deliver world class health and social care for Wales. Informing Healthcare's aim is to improve health services in Wales by introducing new ways of accessing, using and storing information. More specifically its aims are:

- To make relevant information about patients health available to the doctors and nurses who
- treat them, wherever they receive care
- - Provide doctors, nurses and health professionals with the tools, knowledge and services they
- need to follow best practice
- - Give patients better information about their health and healthcare services
- - Ensure NHS Wales is supported by modern technology and systems

Challenge

Quality assurance work at Informing Healthcare is embedded in the development of all products and services for NHS Wales – whether developed in-house or externally by third-party suppliers.

In January 2009, Informing Healthcare took the decision to enhance its existing quality assurance work with the introduction of a software application test framework, to be used with all Informing Healthcare software application development projects across Wales. This meant a test framework would be in place to provide consistency in the approach to application testing across all national systems and would be adaptable in its approach so that it could be applied to in-house application development or buying an application – bespoke or off the shelf - or any combination of the three.

Ultimately, Informing Healthcare wanted to ensure that it was firstly, producing applications that meet the needs of patients and clinicians; second, to ensure the design, development and testing of all Informing Healthcare applications achieve the

maximum level of patient safety and three, to ensure applications have undergone a rigorous testing process.

Solution

In late 2009, working with its partner Simpl, Informing Healthcare went live with a software application development Test Framework.

Established in 2007 as a wholly-owned subsidiary of New Zealand-based Simpl Group, Simpl is trusted IT advisor and integrator for public and private healthcare organisations primarily in England, Wales and Scotland.

Simpl uses its deep healthcare IT knowledge to operate at a strategic level, working in partnership with customers to help them understand and clarify IT based problems, design solutions; create project delivery roadmaps, identify existing or required staff resources, deliver and test proofs of concept. Simpl can also own the tactical outcomes and delivery of a project to recognised-industry standards.

Simpl was responsible for all aspects of the Test Framework. At a strategic level, Simpl supported Informing Healthcare to identify, understand and define the need for a test framework.

At a tactical level, Simpl was responsible for the actual creation of the Test Framework. Simpl also provided staff resources to fill the role of test manager for certain application development projects and helped Informing Healthcare identify and recruit additional staff resources required to enforce the Test Framework on other specific projects. Lastly, Simpl supported Informing Healthcare with the roll-out of the Framework to all project and programme managers.

Aligned to the NHS Wales' Clinical Safety Strategy and approved by Informing Healthcare's Board of Directors, the Test Framework is a comprehensive set of documents which provides guidance and checklists on how to test an application, the appropriate test environment, and a range of testing techniques. It also explains Informing Healthcare's Test Strategy and provides sample Test Plans, Traceability Matrix and Test Summary Report.

CASE STUDY

Benefits

The Test Framework is now in use by a six-strong in-house team based at Informing Healthcare Research Laboratories at Swansea University and the NHS Wales Informatics Service's office in Cardiff. The research labs, a virtual healthcare organisation, represent a range of health care settings, such as the patient's home, a GP practice, the out of hours doctor service and a hospital outpatients' department. The research labs enable Informing Healthcare to try out and test applications in a risk-free environment before purchasing and or introducing them into the live NHS Wales environment.

Test managers at Informing Healthcare have already identified a number in-house application development projects against which the Test Framework will be applied. Several of these projects are already underway and using the Framework. Referring to the project with Informing Healthcare, Paul Malcolm, EMEA Regional Director, Simpl says: "Organisations should not get too carried away with the glamour of application development and the benefits that new applications can bring to healthcare organisations. It is important of course, but it is also essential that only top quality applications reach the doctors and nurses on the front line and that can only happen through testing in a consistent, proven way.

With the inclusion of the testing strategy to the Framework, it helps stakeholders to understand the testing process better than before. Firstly, in-house product managers and external suppliers of applications are required to comply with the testing procedures laid down in the Framework. Second, the Framework helps the external suppliers understand why Informing Healthcare is committed to such rigorous testing, which in short, is because clinical safety is Informing Healthcare's highest priority along with the 'Fit For Purpose' factor of applications."

Results

The Test Framework is refining and improving Informing Healthcare's previous application testing procedures and defines a consistent approach to in-house application testing across the organisation. It also provides clear testing guidance and sets expectations to external, third-party suppliers of applications.

The Framework enhances quality assurance procedures, reduces application development

testing time and helps create applications that are right first time for doctors and nurses across Wales. The Framework, aligned with Informing Healthcare's process for ensuring patient safety, also helps ensure that any IT system implemented improves rather than jeopardises patient safety.

Andrew Griffiths

Chief Operating Officer

Informing Healthcare (now part of NHS Wales Informatics Services)



CASE STUDY