InterSystems Ensemble Case Study

NHS Ayrshire & Arran

NHS Ayrshire & Arran integrates with Ensemble to improve patient service delivery

A need for connected applications

In the Scottish healthcare system, a revolution is taking place. For the last three years the country’s 14 NHS Boards have been changing the way they work in line with the eHealth Strategy 2008–2011 – taking steps in a journey that places electronic patient records and communication at the centre of their management information.

Andy Hardy, the Head of eHealth Systems and Development for NHS Ayrshire & Arran, is responsible for implementing the strategy in his region. He knows that his task is not just about changing technology – it is about inspiring his team.

“When we first looked at the flow of information across our organisation we could see we had a basic business problem,” Hardy explains. “The systems were disconnected, making it difficult to complete seemingly simple tasks such as developing an electronic discharge letter. In turn, this was frustrating for both clinical staff and our team. We also had an issue with people working in silos, becoming experts in niche systems – this causes further frustration due to the constraints of having limited cross-pollination of skill sets and not having the necessary ability to create new applications quickly.”

One of the problematic systems in question used legacy integration engines, whose primary functions were to provide demographic information feeds from the patient administration systems (PAS) to functions such as Accident & Emergency and laboratory results reporting.

“I saw that we had an opportunity to build a new, fully connected platform. This would help us to integrate and develop new applications quickly – and also help us to rationalise and reduce our costs,” says Hardy.
A seamless platform

The business need to improve the integration pathways to the JAC pharmacy system led NHS Ayrshire & Arran to install InterSystems Ensemble®, a seamless platform for integration and the development of new connectable applications.

As part of the national contract InterSystems installed Ensemble on NHS Ayrshire & Arran’s virtual server environment, integrating it with the JAC pharmacy system and the legacy McKesson HISS platform, and replacing the legacy integration engines.

“The switchover went very smoothly, and we quickly discovered that Ensemble is a very intuitive integration platform because it is a single, architecturally consistent stack,” says Hardy. “For example, we can get quick visibility of all HL7 segments and their contents, and there are easy-to-follow on-screen diagrams for workflows that didn’t exist in the systems we replaced.

“After just a week of training my team were totally confident with the new system. Soon afterwards, they were coming up with even more ideas for how we could use Ensemble to improve the service we provide to patients.”

“Ensemble is improving the patient experience – giving us the ability to provide a more intelligent, connected service.”

Andrew Hardy, Head of eHealth Systems and Development, NHS Ayrshire and Arran

The benefits of a connected, easy-to-use integration platform

Service delivery enhanced

Ensemble solved a number of immediate problems for NHS Ayrshire & Arran by helping to create new, more efficient electronic interfaces.

The team were soon proposing new ways of using Ensemble to improve service. “When we were looking at a project involving migrating data from the PAS, my team realised that using Ensemble would be the best way to make this work effectively,” says Hardy. “Ensemble has now been used to merge new and legacy patient indexes into a single holding SQL database; filter any anachronisms or duplications in the data; and then transform those records into a format readable by the Scottish Care Information repository (SCI Store), which clinicians use to access patient information at the point of care.

“We can also present the filtered records to our local Community Health index, which has helped us get to the stage where we are now able to match 95 per cent of patients with all their existing records. It’s a good example of how Ensemble is improving the patient experience – giving us the ability to provide a more intelligent, connected service.”
Increased productivity

Since installing Ensemble, Hardy says that his team members are more efficient and no longer work in silos or on separate systems – which also gives him better business continuity: “Previously we had a situation where people would tend to specialise in individual systems that required a high level of knowledge of things like HL7, TCP and transmission errors specific to a particular legacy interface. This was a problem – when those people left the organisation, their knowledge and skills left with them.”

And because the NHS Ayrshire & Arran team is now trained to work on one connected platform, there have been benefits in terms of productivity and efficiency. “Owing to the inflexibility and disconnected nature of the old systems, we were spending too much valuable time trying to develop connected applications and were unable to achieve our business objectives. With Ensemble, the vast majority of that time has been reclaimed, and can be put to productive use on other projects,” says Hardy.

Costs reduced, time saved

By rationalising the number of platforms that it uses, NHS Ayrshire & Arran has been able to reduce time placed on support calls, while also realising an immediate efficiency saving.

“By eliminating the need for two of the old platforms we’ve become more efficient, saving time due to Ensemble needing very little support. Our increased efficiency gives us more scope for improving patient services. For our next project we’re looking at developing a joint clinical portal with Lanarkshire. We’re confident that Ensemble will enable us to achieve our goals, within budget.”

National licence for Ensemble to help healthcare integration in Scotland

In April 2010 InterSystems Ensemble was added to the framework contract for the national Patient Management System, helping Boards to facilitate the delivery of healthcare improvement as described in the Scottish Better Health Better Care action plan.

NHS Scotland also intends that the use of a common integration platform will enhance the secure flow of clinical and non-clinical information, improving patient safety and clinical outcomes.

Robin Wright, Chair of the eHealth Leads Group, has said: “This incremental programme will help Scottish hospitals move towards their vision of a paperless working environment, streamline patient services, bring about faster diagnosis and treatment and aid the development of a virtual electronic health record.”
Executive summary

NHS Ayrshire & Arran’s IT department found that it was struggling to develop new applications and achieve its business objectives because of the inflexibility of its information management systems. Since installing InterSystems Ensemble, the team has benefitted from one seamless platform for integration and development of connectable applications, and has been able to retire a number of legacy systems. The result has been a boost in the IT team’s productivity. Most importantly, Ensemble is being used to develop new applications that significantly improve patient service delivery.

Fast facts

Organisation: NHS Ayrshire & Arran
Web site: www.nhsayrshireandarran.com
Number of employees: 11,000
Country: Scotland
Industry: Healthcare

Customer profile

NHS Ayrshire & Arran is one of 14 regional NHS Boards in Scotland. It is responsible for coordinating primary and acute healthcare in the Ayrshire and Arran area, and contracting doctors, dentists and other independent contractors to provide care in local communities.