

East & North Hertfordshire NHS Trust



- *Fast development*
- *High performance*
- *Advanced integration technology*

East & North Hertfordshire NHS Trust takes complete control of interfacing with InterSystems Ensemble

Whenever colleagues at the East and North Hertfordshire (ENH) NHS Trust came to him with an idea for a new departmental application, IT Implementation and Development Lead Ollie Morley used to want to avoid them. He knew that the development of new interfaces was a long and tedious process. Although the existing CLINiCOM Patient Administration System (PAS) deployed at the Trust was reliable, it featured a number of bespoke point-to-point interfaces – which meant that the introduction of a new application could take many months to implement.

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Towards the end of 2007, the Trust was faced with an unavoidable situation. Under the National Programme for Information Technology (NPfIT) and in order to comply with Connecting for Health (CfH) requirements, a new centrally hosted PAS had to be deployed by the summer of the following

year. This would exchange HL7 (industry standard application) messages with the Trust – a format that the locally deployed departmental systems would not be able to understand, since the Openlink messages they received from the CLINiCOM PAS pre-dated the HL7 standard.

Weighing the options

The Trust was left with two options. It could pay each departmental application supplier – of which there were six – to build their own HL7 interfaces to the new PAS in order to accept the new messages. However, this would increase both the costs and risks to the trust, as the majority of work would have to be outsourced to the individual suppliers. The second option was to use an integration engine to convert the HL7 messaging into Openlink, thereby allowing messages from all departments to flow through one central integration hub. This option would keep costs down – and significantly reduce risk,



as the Trust would be in direct control of the interfacing project. After a thorough review of the available integration products they chose InterSystems Ensemble®, a seamless platform for the integration and development of connected applications.

At the end of 2007, Ensemble was announced as the chosen Trust Integration Engine (TIE) by the Computer Sciences Corporation (CSC) for the North, East and Midlands areas of the NHS in England.

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manage and maintain. The fact that it had been announced as the official NHS offering by CSC vindicated our decision. Furthermore, InterSystems invested time and effort into ensuring we would get the best from Ensemble’s capabilities.”

“Ensemble was the obvious choice, in terms of money, time and control,” commented Morley. “It is easy to install,

Planning for success

To facilitate the replacement of the existing PAS, a Project Board and a specialist integration team were established. They shared a key objective, to ensure that everyone kept sight of the overall goal: the sharing of patient information between managers and clinicians for the benefit of the patients. InterSystems provided initial Ensemble training to the Trust, and also highlighted some of the common potential project risks – factors such as allocating sufficient time for the design, build, testing and configuration of all interfaces at all stages. Once the training was completed, the Trust was in a position to integrate all the applications.

In Phase One of the integration project, the team first had to replicate all of the existing interfaces in order to move away from point-to-point and onto communication through an integration platform. Once the preparation for this was complete, switchover for Phase One occurred over a single weekend, with no problems at all. “The proof of the pudding was that users didn’t notice anything had happened,” commented Morley.

In Phase Two the team prepared all the existing clinical application systems for the switchover of interfaces from CLINiCOM to the new locally hosted PAS. The team conducted a number of rigorous worst-case scenarios using a “test harness” developed by one of the Trust’s Integration Specialists. “In the end, we didn’t need to worry about the switchover – we knew it was going to work from the pre-support we had received and the numerous pre-tests”, commented Morley. Once again, ‘Go Live’ for this phase went very successfully – with no recorded issues.

In total, it took the team seven months to complete both phases, building, testing and activating the interfaces, and seamlessly transition to the new PAS.

Feeding a new data warehouse

The team's new enthusiasm for integration and development did not stop with the PAS integration. The Trust had decided that it was time to retire their old INFoCOM data warehouse that ran on the Sybase database. After reviewing several data warehouse options, the Trust decided to use InterSystems Caché®, the high-performance object database with industry-standard SQL for reporting access. To speed their implementation they chose to use the expert services of Temenos, an InterSystems application partner, to help them with the initial installation and configuration. As the Ensemble integration engine and the Caché data warehouse share common technology, the experience and knowledge gained by the Trust on the integration project was further utilised within the data warehouse project.

The new centrally hosted PAS messaging interfaces now feed into the Caché data warehouse using an automated download every 24 hours. The Trust uses the data warehouse for vital business intelligence reports such as statutory returns and patient waiting list management. The data warehouse also gives clinicians at the Trust a historical view of the specific legacy PAS data that had not been migrated onto the new system.

Enthusied and empowered by integration

The Trust considers the project to be a complete success. With the ability to rapidly develop, test and trace messages, the Trust is now self-sufficient and in complete control of their application integration. The integration team also created an easy-to-use dashboard that provides at a glance the status of all the interfaces in real-time, ensuring that they can provide an informed, fast response service to everyone in the Trust who depends on the interfaces.

The success of the project has spurred the team on to become more proactive in general as regards IT integration. Their innovative approach to the problem reduced third-party supplier costs and, very importantly, enabled them to quickly recognise and engage with new integration-based business and clinical opportunities. "Where previously we shied away from colleagues coming to us with new ideas about linking together disparate applications, we are now actively reaching out to clinicians asking them how we can make their working day more productive. So, rather than hiding under my desk when I see a clinician entering the IT Department, I now welcome them with open arms and am keen to hear what they have to say, no matter what the complexity or scalability of the potential project," concludes Ollie Morley.

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