Case Study
Noble's Hospital
Isle of Man

PROVEN LARGE-SCALE DEPLOYMENT

CLASS LEADING VR

FLEXIBLE & WORKFLOW DRIVEN

> " The system had to demonstrate the flexibility that we ourselves must demonstrate in such a vital island operation and above all, we had to be able to rely on and invest trust into this solution. Soliton IT's performance has assured us of this – Noble's Hospital has confidence in Radiology+ to manage our vital clinical workflow and keep Radiology running smoothly. We can trust this system. "
>
> **Karen Hawkins, PACS Manager**
> **Noble's Hospital, Isle of Man**

S+ Radiology

Noble's Hospital in Isle of Man invests in Soliton IT's entrusted RIS to manage island's vital radiology operation.

Noble's Hospital is the Isle of Man's primary hospital run by the Department of Health & Social Care within the Isle of Man Government. The 20-ward, 314-bed site provides acute care to the Island's residents and visitors with some specialist and paediatric services referred to NHS Trusts, generally in the north-west region of England.

The hospital is the third to take its name from the generous benefactor Henry Bloom Noble, with two earlier hospitals also named in his honour in 1888 and 1912 respectively. The new hospital in Braddan, which opened in 2003, was designed to meet the future needs of the Island's growing population, with access to state-of-the-art equipment and facilities.

One area of the hospital which has seen a significant growth in demand and scope of operation is the radiology department, which provides patients with x-rays, CT, MRI & ultrasound scans, nuclear medicine imaging, mammography and other interventional procedures to diagnose and treat a wide variety of medical conditions.

Consisting of 30 radiographers and 5 radiologists, plus clerical staff, aides and an assistant practitioner, the radiology department offers a full service including 24/7 general x-ray and CT provision and has generated over a million digital radiological studies.
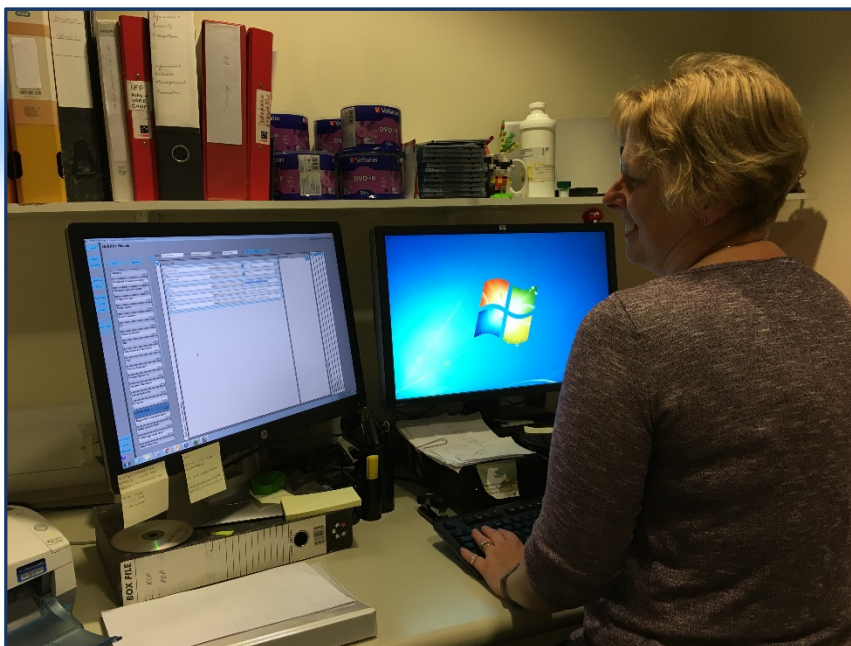
LIMITATIONS WITH LEGACY RIS

This organisational set-up and diagnostic practices relied on an IT system to route, archive and manage the department and associated tasks. Karen Hawkins, PACS Manager for the hospital, had previously used a combination of a Radiology Information System (RIS) and a PACS (Picture Archiving Communication System) to document and support a patient's radiological journey through the hospital system. For 10 years, Karen had used McKesson TC-RAD with Philips/Sectra PACS but, due to the RIS's withdrawal from the market, then following a successful tender process, appointed Philips to provide the sole-vendor RIS/PACS system – XIRIS RIS and iSite IntelliSpace 4.1 PACS. Whilst XIRIS, a web-based infrastructure with a useful flagging feature, was more intuitive than the previous application, it was Philips iSite IntelliSpace PACS which truly rewarded Karen's team with a significantly improved system which allowed rapid image access, user-friendly presentation of images and overall more efficient patient care. Although IntelliSpace presented clinical imaging success, there were some drawbacks to the RIS which affected the department. Michelle Stevens, Superintendent Sonographer for the hospital and regular user of the system, comments:

"We found our legacy RIS to have limitations which were not in line with the development of our department and the statistics functionality could not fulfil our requirements".

Noble's also had support challenges and the tiered structure of day-to-day radiology tasks led to clinical practices taking longer than needed. Karen comments:

"Unfortunately, we spent twice as long on each task as we had to cross-reference to our more reliable PACS, Intellispace".

When Philips announced the cease in development of XIRIS in 2012, Noble's sought to replace the RIS with immediate effect.

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EXCELLENT PACS FEEDBACK RAISED RIS EXPECTATIONS

Delighted with the functionality of Intellispace, Karen identified that the site required both applied RIS functionality and an application which supported the extended features of the PACS. In addition, the NHS England *Five Year Forward* initiative of a 2020 Paperless NHS was made even more pressing locally when the Isle of Man Government opted to bring the deadline closer to 2018 as part of its Digital Strategy. This created a new urgency to make Noble's Hospital further digitalised and reduce the quantity of paper records within a small timeframe.

In 2016, to start the re-procurement process, Karen formed a project team who would take responsibility for selecting the RIS. This group was formed of radiology staff, in particular modality leads to offer imaging insights and respective future training to their own areas. Key IT contacts were also involved in the selection; the hospital's IT infrastructure ran on the government network, outside of the standard N3 hospital networks which are customary in England, and the new RIS would have to be enabled for this. This unique detail called for an additional degree of technical expertise and required a RIS provider who had experience in meeting strict security criteria and the technical capacity to provide implementation, quick support and remote access to an area which is difficult to manage - both technologically and geographically. Lisa Airey, Radiology Manager, comments:

"Noble's Hospital is unique – we are a healthcare provider based on an island in the middle of the Irish Sea and when our services are compromised, there is a corresponding impact on the smooth functioning of the hospital. We have a different level of responsibility to most hospital sites."

Capitalising on the experience with XIRIS, Karen identified the functional criteria for the new RIS solution. She took the specification from the previous tender and emphasised the areas for improvement, added new functional requirements which had arisen and sought IT and clinical insights from the project team. Along with a user-friendly interface and worklist structure that was easy to navigate, a statistics feature was needed to provide Karen with real-time departmental data to manage the team and operations effectively and an applied booking system, for both exams and patients, was required for a seamless clerical procedure. In addition, Karen needed the system to be easy to use, flexible for users with configurable permissions to ensure that radiology staff could make edits to records and reports where required.

RADIOLOGY+ FROM SOLITON IT MEETS REQUIREMENTS

Noble's Hospital saw two RIS vendors who were advocated by the prime contractor Philips as integrating with their new release of PACS –IntelliSpace 4.4. One vendor, Soliton IT, came to the forefront of the RIS offering with their pioneering Radiology+, which met Karen's functional criteria and could be deployed by a team of specialists with specific migration and integration proficiency.

Soliton IT, a UK-based RIS developer, had previously demonstrated their development and implementation competence with other Radiology+ successes across the UK. Soliton IT could also assure Noble's of their integration with IntelliSpace 4.4 by arranging a site visit to a London hospital, St George's NHS Trust, to show the system working within a hospital environment and present the integration qualities with Philips' new PACS release. Similarly, a recent successful migration from Philips XIRIS to Soliton IT's Radiology+ at NHS Wolverhampton provided a solid foundation for investment.

Impressed with the intuitive integration with IntelliSpace, Noble's Hospital appointed Soliton IT to deploy Radiology+ in early 2017. After an excellent standard of implementation, including migration of 1.5million studies, the hospital saw immediate benefits of an innovative RIS.

Karen comments:

"It was immediately evident that Radiology+ was straight forward and very user friendly. The entire application flowed well and was logical and relatable to users from clerical and clinical areas of Radiology."

Radiology+ provided Noble's Hospital with concise display of radiology tasks with its worklist structure and automation of processes with its workflow dynamic. Daily tasks such as scheduling patient appointments, booking in temporary patients (visitors without a Manx address), data-entry and departmental reporting tasks were displayed in intuitive worklists which were simple to navigate and manage. This simplified interface was particularly advantageous in Vetting tasks with Radiologists finding the process smooth and less disjointed than the tiered set-up of the legacy RIS. Similarly, Karen found the "on-hold" feature especially useful; the department receives exam requests from 6months, and in the case of bone densitometry, up to five years in advance and placing a patient *on-hold* allows this future planning and easy retrieval of the record at any time.

Karen's requirement for an applied statistics function was also met with Radiology+ offering an innovative statistics-generation element to the RIS which provided graphical statistical analysis on departmental work throughput and performances. The hospital found the module so user-friendly, that even users outside of IT roles could create queries and filter information. Equally, further analysis could be drawn when ascertaining waiting time units; by applying a value to an exam, Radiology+ can calculate waiting time units and allow Karen and Lisa to manage workloads by applying time frames and quantitative expectations to exam tasks.

Integration with PACS was also a notable success. The new Philips IntelliSpace PACS 4.4 simplified PACS operations with built-in flexibility, scalability, and interoperability – elements which were supported and complimented by Radiology+. If a patient and their image is opened within PACS, Radiology+ will automatically route to the respective reporting tab – providing intuitive workflow automation and ultimately providing quicker and improved patient care. Karen comments:

"We've seen excellent standards of Desktop Integration (DTI) which has allowed a seamless link between RIS and PACS – the two applications make each other look good"

Radiology+ now has 85 users across clerical, IT and radiology functions within Noble's Hospital with plans to enhance the application with additional nuclear medicine workflow functionality.

RADIOLOGY+ - KEY BENEFITS

- Proven integration with Philips PACS

- Flexible, modular and adaptable to individual user and site requirements

- Developed in collaboration with NHS users

- Intuitive and easy to learn

- One content-rich interface provides an at-a-glance view of Radiology tasks

- Specialist clinical modules available

- Mobile application for mobile users

- Fully integral voice recognition with clinical contexts incorporated

- Supports multi-site configurations

FEATURED PACS PARTNER

PHILIPS

Isle of Man
Government

Reiltys Ellan Vannin

Radiology