Modern radiology departments face rising demand for their services: throughout Europe, the number of scans performed increases each year. Patients expect to be seen more quickly, and to have more say in their own treatment. At the same time, there is pressure – particularly among publicly funded services – to provide a more efficient service, doing more for less. Hospitals are finding that they can meet increased expectations through more intelligent use of technology.

AZ Sint-Lucas Hospital, based in the Belgian city of Ghent, is a good example. With 805 beds and 70,000 patients admitted a year, it is also typical of the modern hospital. Its busy radiology department, employing 15 radiologists, carries out 140,236 examinations annually, with the number rising each year.

In 2008, the radiology department decided to move from film-based processes to a digital system. It installed a Picture and Archiving Communication System from Merge, and a RADIOLOGY INFORMATION SYSTEM (RIS) from medavis. The aim was to provide a more patient-centric service and to minimise waste and inefficiency.

Dr. Adelard De Backer, head of radiology, says that the medavis RIS appealed for a number of reasons. A key factor was its ability to integrate with other healthcare systems, such as the Hospital Information System and the Electronic Patient Record System.

"RIS is a very important tool in the radiology department because it crosses the whole of the workflow," he says. "It was essential that it could integrate with other systems, especially the Picture Archiving and Communications System (PACS). The medavis RIS was the best at fulfilling all the requirements we needed at the time to develop a digital workflow." The medavis RIS uses the HL7 and DICOM protocols to connect to other systems, and it is now “integrated deeply
into the digital workflow of the hospital”, says Dr. De Backer. Not only that, but the RIS feeds information and medical reports into a local distribution platform serving general practitioners, improving the efficiency and reliability of communication between the hospital and primary care.

The RIS’s powerful BILLING functionality was also a very strong point in its favour. “In Belgium, the billing process is characterised by a lot of rules which we have to follow very closely,” explains Dr. De Backer.

Although the number of yearly examinations has increased each year since the initial implementation, the radiology department hasn’t needed to recruit extra staff because the medavis RIS has improved efficiency, and the initial outlay has already been paid back. When they make an appointment for a patient, staff know how long the examination will take, and this enables them to create a worklist that minimises the time in the waiting room, resulting in greater patient satisfaction. “We now have a standardised workflow. Everybody knows how to perform a standard examination, how to make an appointment and how to bill it in the worklist,” he says. The RIS has been extended into additional departments such as cardiology and nuclear medicine. Its flexibility has enabled the workflow to be adjusted to the specific requirements of the individual departments. Although the quality and functionality were the key selling points of the RIS, Dr. De Backer says he has also been impressed by a strong client/customer partnership. He attributes the smooth implementation of the system to the large amount of preparation medavis did beforehand, consulting with healthcare, finance and IT staff to develop a good understanding of what was needed.

Within a few weeks, radiology staff were using the RIS without difficulty. The RIS has been very stable but, if there are technical issues, Dr. De Backer reports that they have always been resolved quickly – a single point of contact in the medavis technical support team responds to questions in a timely fashion. [...] While it may be difficult to predict some future trends in healthcare, the ongoing demand for radiology services is unlikely to change. A 2012 Department of Health report cited data which showed the number of CT and MRI scans carried out for the NHS has increased threefold in the last 10 years. Others have reported that the number of some common imaging tests shows an average increase of up to 15 per cent every year. It is clear, then, that hospitals must have strong systems to help meet this demand. As the experiences of staff at AZ Sint-Lucas Hospital [...] show, smarter use of technology may be one important solution.