RIVM, the Netherlands
National Institute for Public Health and the Environment

“With Barco’s digital display system, you can rapidly load images, manipulate them and play with the contrast. Microcalcifications, which radiologists are always afraid to miss, are clearly visible on the Coronis 5MP Mammo screens.”

Dr. Petra Bun, radiologist, BOBWest Screening Centre, Leiden, the Netherlands

Barco displays set the standard of care in ambitious breast screening project

In 2006, the National Institute for Public Health and the Environment in the Netherlands (RIVM) set off on an ambitious journey to fully digitize its national breast cancer screening service. A consortium including Barco proved to be the best partner to meet the complex, large-scale requirements of the project.

As part of the project, 63 mobile screening units are equipped with Barco’s Coronis 2MP display systems, while radiologists at 20 dedicated screening centers use Coronis 5MP Mammo displays. Everyone involved in the program praises the displays’ incomparable level of sharpness and contrast and also the speed and ease of loading and manipulating the images. In this way, Barco has helped RIVM to achieve its key objective of further enhancing its diagnostic performance to detect as many cases of breast cancer as possible at an early stage.
Since 1997, the Netherlands’ National Institute for Public Health and the Environment (RIVM) has been inviting all women between 50 and 75 for a bi-annual breast cancer screening test. Approximately 80% of these women accept the invitation, which equates to around 1 million women being screened per annum. In 2006, RIVM started to digitize the entire process. Barco’s Coronis display systems play a key role in the ambitious ’DigiBOB’ project.

RIVM’s reasons for going digital were manifold, but the institute’s prime concern was to enhance the diagnostic accuracy of state-of-the-art digital screening and to help detect more cases of breast cancer at an earlier stage. “A world première,” said Emile Knops, DigiBOB project leader, “as the Netherlands will be the first country in the world to have a national digital population-wide archive of breast cancer screening data.”

Vast experience

In 2007, RIVM advertised a tender to supply a complex solutions package for this ambitious project: digital mammographs for 63 specially adapted mobile units, displays for these units and for the radiology stations, a paperless workflow management system, and a large-scale, national storage system. A consortium, which included Barco (visualization), Philips (main contractor) and Hologic (mammography), best met the RIVM’s needs for the large-scale delivery of reliable, high-quality equipment. “As for visualization, we were confident that the DigiBOB project would benefit from Barco’s vast experience in mammography imaging and the technological know-how that is reflected in their medical product line,” Knops explained.

Enhanced diagnostic precision

Every mobile screening unit has Barco’s Coronis 2MP display system onboard to review the digitally acquired images. Every night, the mammograms are sent over to the radiology centers to pairs of radiologists who independently diagnose each mammogram on a dedicated, high-resolution Coronis 5MP Mammo display system. To ensure faultless quality and reliability over time, the displays are bundled with Barco’s innovative softcopy Quality Assurance solution. In combination with the intelligent I-Guard sensor, the MediCal QAWeb system provides an easy-to-use, web-based tool for automated and centralized calibration and QA, which saves the program both time and money.

The standard of care

“You don’t compromise on quality in breast screening, so we really needed the best screens, pledging an incomparable level of resolution and contrast,” underlined Prof. Dr. G J den Heeten, Director of the National Expert and Training Center for Breast Cancer Screening. Today, all radiologists involved in DigiBOB praise the diagnostic precision and productivity of the Coronis displays. “Digital clinical reading is a totally new experience, but everyone is enthusiastic,” confirmed Dr. Petra Bun. “With Barco, you are really sitting in a ‘cockpit’ and the images come to you. You can rapidly load the images, manipulate them and play with the contrast. Microcalcifications, for example, which radiologists are always afraid to miss, are clearly visible on the Coronis 5MP Mammo screen.”

Detect more breast cancers

“Looking into the future, the scope of the breast screening project is set to expand, as the government is working on lowering the entry age for screening and pinpointing high risk groups. With DigiBOB, we really hope to detect more breast cancers at an earlier stage – which is, after all, what the breast cancer screening project is all about,” concluded Prof den Heeten.