

NEMADE to make mammography with improved imaging at lower X-ray dose, more comfortable and at lower cost

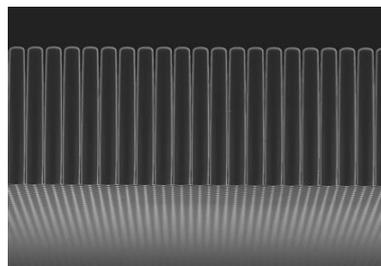
A project within the EUREKA CATRENE programme

Paris, 22 March 2018 – The CATRENE funding programme, managed by AENEAS, today highlights the NEMADE project. The NEMADE project's goal is to develop a new generation of X-ray mammography detector system for breast screening and tomosynthesis (3D imaging). This new generation of detector systems will reduce the pain felt by many patients during examinations, while also providing higher imaging performance at lower X-ray doses and lower cost than current technologies.

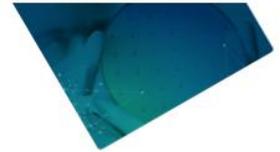
In mammography, X-ray equipment is used to diagnose and screen for breast cancer. A growing number of countries – including emerging economies – are introducing screening programmes for women aged between 50-74, the age group where screening has the biggest impact on saving lives and reducing the costs of treatment. By delivering improved detection techniques at lower cost, NEMADE will help enable these programmes and bring multiple benefits. More accurate and earlier detection, with fewer false positives, will lead to higher efficiency and added affordability. By incorporating pressure-based breast compression techniques that decrease discomfort, more women are likely to participate. In addition, the lower X-ray doses and shorter imaging cycles will make examinations safer.

The NEMADE consortium aims to strengthen and expand Europe's position in this domain through its expertise in personalised mammography, CMOS-imager based medical X-ray detectors and scintillators (devices to convert X-rays into visible light). Technologies being developed in the project will enable improved scintillator performance and lead to new detectors, based on next-generation CMOS imagers, with real-time X-ray dose sensing and improved imaging processing capabilities.

Worldwide, the total mammography and tomosynthesis system market is worth around €1.7B, with annual growth rates estimated at approximately 14% worldwide. By enabling a new generation of affordable, high-end mammography detectors, NEMADE will allow Europe to compete in a market currently dominated by the USA and Canada. It will also consolidate Europe as the leading supplier of CMOS-based X-ray detectors for medical and extra-oral dental applications and reinforce its position as a supplier of high-end scintillators for a wide range of medical applications.



From left to right: NEMADE detector, SEM image of structured scintillator and pressure sensing paddle



About CATRENE:

CATRENE is a EUREKA cluster programme managed by AENEAS. It was created in 2008 and focussed on micro and nanoelectronics research and innovation, which aims at achieving Technological Leadership for a competitive European ICT industry. It is based on the ambition of European countries, in partnership with European companies, to jointly deliver nano- and microelectronics-based solutions that respond to the needs of society at large, improve the economic prosperity of Europe and reinforce the ability of its industry to be at the forefront of global competition.

After 7 years of operation, more than 8 calls and 51 complete and still running programmes, CATRENE projects involving SMEs, large corporations, research institutions and universities have, and are, demonstrating great impact on societal challenges while promoting European economic development in this vital area.

About CATRENE: <http://www.catrene.org>

About AENEAS: <https://aeneas-office.org>

About NEMADE project

NEMADE is an RD&I project consortium involving three European partners from the Netherlands and Sweden who are leaders in their specific technology areas (CMOS-based medical X-ray detectors, personalised mammography and structured scintillators), Teledyne DALSA, SigmaScreening and Scint-X.