

ECOO ARTICLE



The I-SCREEN Project: Harnessing AI for Early Detection of AMD in Community Eye Care

The [I-SCREEN project](#) represents a pioneering step in eye care, leveraging artificial intelligence (AI) to revolutionise the early detection of age-related macular degeneration (AMD) in community settings.

This innovative initiative unites academic institutions, clinical experts, and optical and optometric professionals across Europe. It seeks to demonstrate the potential of cutting-edge AI technology in enhancing the detection of ocular conditions in community-based practices, ultimately improving patient outcomes and advancing integrated eye care.

ECOO's Role in the project

A cornerstone of the I-SCREEN project is Work Package 4, led by ECOO. This work package centres on establishing and managing a network of optical and optometric practices to collect Optical Coherence Tomography (OCT) images from individuals aged 55 and older who still have good functional vision.

The objective is to screen 5,000 patients, with the OCT images uploaded via a specifically designed platform to the retinal experts at the Medical University of Vienna for review. The findings will assess the feasibility of using AI to detect retinal changes and identify early and intermediate AMD in cost-effective, community-based imaging.

ECOO brings its extensive expertise as the European umbrella association for optometry and optics to the project. This work package not only encompasses a strong multinational dimension but also fosters cross-disciplinary collaboration between optical/optometric practices and clinical partners.

Reflecting on the broader impact, Matjaž Mihelčič, ECOO Immediate Past President and leader of Work Package 4 emphasises:

“Developments in technology used in eye care, combined with a growing interest across European countries in providing integrated, patient-centred care, represent a key momentum for European optometry to be at the forefront of shaping the future of eye care. The I-SCREEN project is doing exactly that and will ultimately empower local eye care professionals to combine their professional skills and access to the patients with cutting-edge AI technology. It will pilot an efficient referral pathway for patients with ocular conditions which might occasionally be detected in asymptomatic patients, in community-based practices.”

Progress and Achievements to date

ECOO has already made significant strides since the project launched at the beginning of 2024. To date, 21 optical and optometric sites have been recruited across several countries in the vicinities of the respective clinical partners: Switzerland (Zürich and Binningen), Austria (Vienna), Spain (Barcelona), Slovenia (Ljubljana) and the UK (Belfast). In addition, the clinical site in France (Dijon) has its own set-up to source the OCT images within its clinical setting.

To support participating sites, ECOO has developed a comprehensive toolkit and is in the process of organising induction meetings with each country as soon as the necessary ethics approvals are secured by clinical partners. Once all elements of the overall project are aligned, these sites will begin their work as soon as possible in 2025.

The data that these primary eye care sites collect is fundamental to the study on AI-based detection of AMD in community-based cost-effective OCT imaging. ECOO's work strand is part of the overall project, each partner focusing on different important elements of the overall project. The various partners cooperate in a collaborative and committed manner under the overall lead of the Medical University of Vienna.

ABOUT THE PROJECT

The project is funded by EU's Horizon Europe programme under the EIC Pathfinder call, which is designed to support groundbreaking innovations in deep-tech fields, promoting high-risk, high-reward research that addresses global challenges. These calls encourage visionary ideas with the potential for transformative impact, fostering interdisciplinary collaboration and pioneering solutions. As part of this call, ECOO has received its funding from the Swiss State Secretariat for Education Research and Innovation (SERI).

For more information about the I-SCREEN project, visit i-screen.eu.

ABOUT ECOO

The European Council of Optometry and Optics (ECOO) represents the interests of optometrists and opticians across Europe. Our members are national professional associations from 25 countries who together represent more than 200,000 opticians and optometrists. ECOO aims to promote eye health to the public across borders and to harmonise clinical and educational standards of optometric and optical practice throughout Europe.