ITEA 4

Project Profile

DAIsy

Developing AI ecosystems improving diagnosis and care of mental diseases

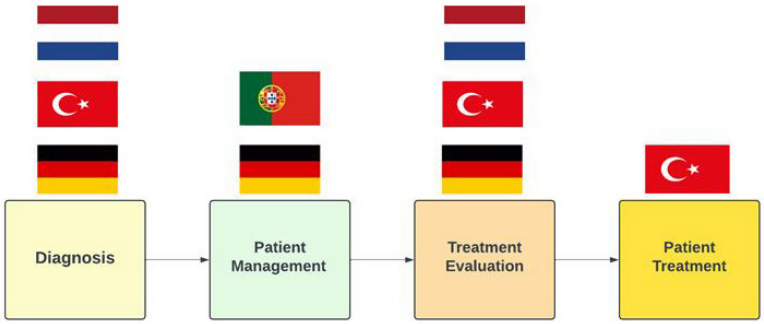
Major depressive disorder (MDD) is a common psychiatric disorder, ranking as the second leading contributor of years lived with disability. Finding the right approach for individual patients remains challenging. The ITEA project DAIsy (Developing AI ecosystems improving diagnosis and care of mental diseases) will therefore develop an ecosystem and platform for artificial intelligence (AI) solutions that improve the accuracy and efficiency of every step of a patient's journey, from diagnosis to follow-up.

Addressing the challenge

Although many forms of therapy and medication exist, just 50% of mental health patients find an effective treatment within a year of diagnosis. This is partly because mental illnesses are multifactorial, influenced by many conditions and lack both objective and subjective tools to evaluate symptoms. Additionally, the decentralisation of care and corresponding data fragmentation is increasing the challenge of collecting, interpreting and utilising relevant information. Diagnosis, treatment selection and treatment success are therefore all currently suboptimal, with many valuable healthcare resources being wasted.

Proposed solutions

DAIsy recognises the potential of AI to meet this challenge and will follow an integrated approach that covers the entire market and technical value chain, including hospitals, large industry, SMEs and research organisations. The first objective is to realise an AI ecosystem for mental healthcare by combining expertise on technology for patient monitoring, data collection and data aggregation, including from care professionals and AI experts. Secondly, the consortium will develop an integrated platform that provides AI-based solutions to improve diagnosis, treatment selection, diet and activity monitoring, behaviour adjustment support and treatment response assessment. A common platform enables easier sharing of (anonymous or synthetic) data, algorithms and common tools, promoting reuse between use-cases and enabling a multifactorial approach that enhances the accuracy and prognostic value of all steps in a patients' workup.



DAIsy - the process of the AI ecosystem platform with national use-case contributions

Projected results and impact

Most importantly, DAIsy foresees a 30% improvement in diagnostic accuracy and treatment selection, a significant decrease in treatment initiation and a reduction in screening and monitoring time. This can have an enormous impact on the lives of patients and society as a whole: MDD, for instance, affects 280 million people worldwide, causing 700,000 suicides and costing EUR 1 trillion annually. In addition to improving the quality of life of such patients, DAIsy will decrease the pressure on care staff and offer economic growth by making patients available for work. This will be particularly beneficial in lower-income countries that are more affected by personnel scarcity, helping to create more equal societies. All in all, this provides ample opportunity for DAIsy's partners to play an important role in the emerging market of AI for healthcare, expected to reach a value of nearly USD 108 million by 2027 at a compound annual growth rate of 49.8%.

Project partners

DAIsy
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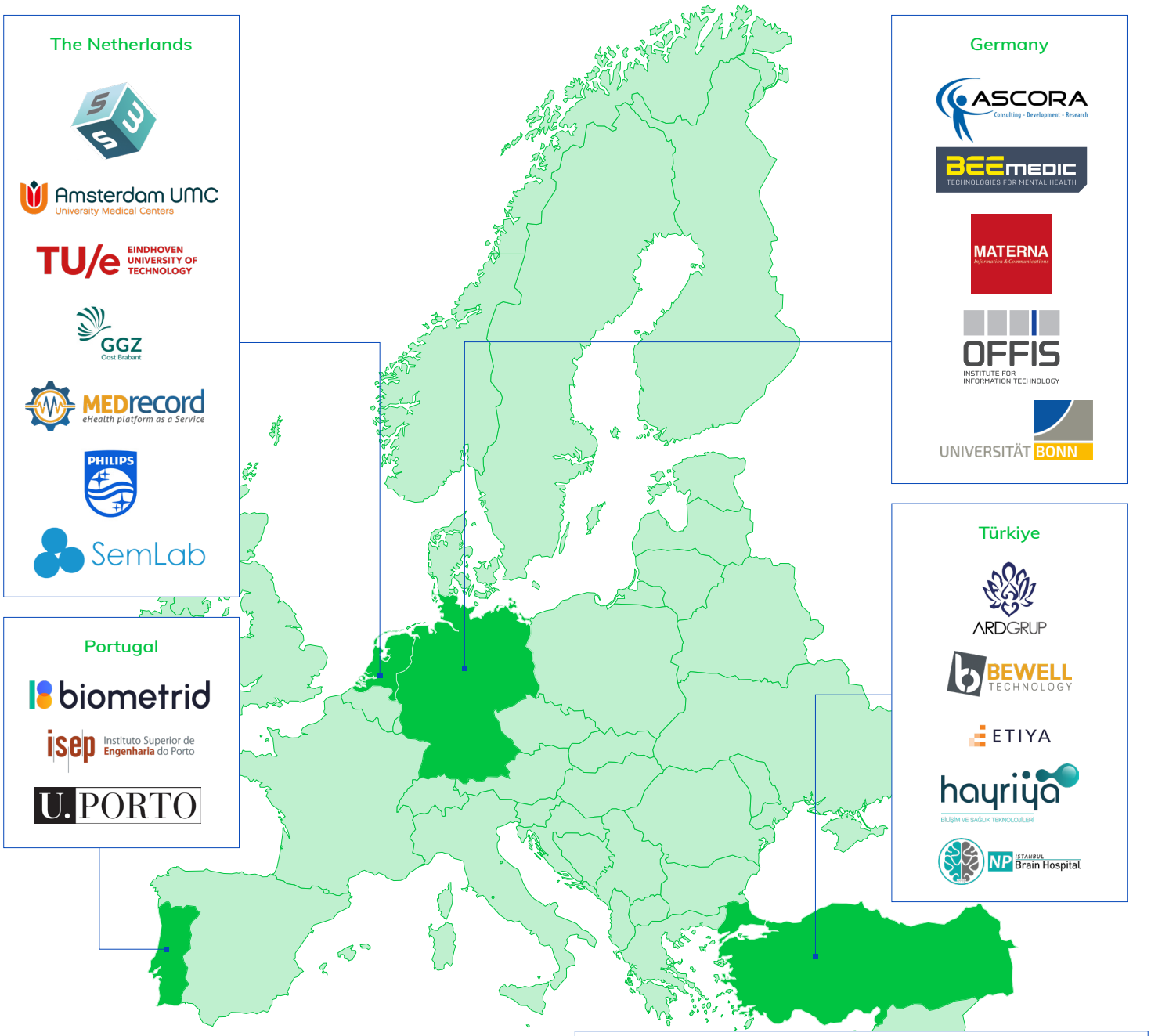

Project start
November 2022

Project end
March 2026

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ITEA is the Eureka RD&I Cluster on software innovation, enabling a large international community of large industry, SMEs, start-ups, academia and customer organisations, to collaborate in funded projects that turn innovative ideas into new businesses, jobs, economic growth and benefits for society. ITEA is part of the Eureka Clusters Programme (ECP).

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