

PHRASE Project marks one year of advancing stroke care through AI-powered personalised diagnosis and treatment

“Personalised Health cognitive assistance for RehAbilitation SystEm” – The PHRASE project, funded by the European Innovation Council (EIC) Transition program, responds to the rapid growth in the number of stroke patients needing care and rehabilitation by delivering AI-based personalised diagnosis, prognosis, and interventions.

According to the World Health Organization, Stroke is the leading cause of disability and the second highest cause of death¹. The burden of stroke-caused cognitive and neuromotor impairment is rising, with more than 80 million people living with the consequences of stroke. This rapid growth in the number of stroke patients needing care and rehabilitation requires an urgent, scientifically grounded, and scalable response.

The PHRASE project will respond to this challenge by delivering an AI-based personalised intervention built on patient-specific multi-scale computational models informing diagnostics, prognostics, and intervention planning. The three-year project is heading towards its first year of execution in April 2023, when it will deliver the first version of the Brain Health Pipeline, going from data collection and processing to simulation and modelling, prediction, and intervention. Since the project started, in April 2022, the consortium members have worked together to define the intervention and diagnosis scientific approach, the patient data management guidelines, the technological integration of the pipeline components, and the clinical protocol for the validation with patients. The testing with stroke patients will begin in September 2023, at the project’s 18-month mark.

The PHRASE integrated stroke rehabilitation pipeline will be validated with 1000 patients in several European hospitals to shorten hospital stays, reduce personnel and transportation costs, and create a virtuous cycle of recovery for patients.

Public Events

PHRASE will participate with Eodyne and EBRAINS at the HBP Summit: Achievements and future of digital brain research. Marseille 28th- 31st March 2023 <https://summit2023.humanbrainproject.eu/program/>.

¹ <https://www.world-stroke.org/publications-and-resources/resources/global-stroke-fact-sheet>

About the Consortium

The **PHRASE** consortium brings together an amazing group of highly qualified experts: [Charité University Medicine Berlin](#), [EBRAINS AISBL](#), [Saddle Point Science](#) and [Radboud University](#), with extensive experience in brain research, data science, and cognitive science rehabilitation therapy, as well as entrepreneurial profiles to bring this project to success.

About Eodyne Systems

[Eodyne](#) has a track record of delivering science-base neurorehabilitation solutions to the markets. Eodyne's expertise is grounded in developing and integrating advanced interactive systems involving technologies such as virtual and augmented reality, ambient and wearable sensors, machine learning and perception, focusing on maximising clinical impact and user experience.

Background information

The EIC Transition program funds innovation activities beyond the experimental proof of principle in the laboratory and supports both:

- Maturation and validation of a novel technology from the lab to the relevant real-world application environment;
- Development of a business case and (business) model towards the innovation's future commercialisation.

Each project will receive a grant of up to €2.5million (more in exceptional cases) and access to EIC Business Acceleration Services, including coaching, mentoring, and partnering events. Projects are also eligible for the Fast Track scheme to access the EIC Accelerator for supporting the commercialisation and scale-up phases.