"European project DTRIP4H kicks off in Tallinn (EE) to transform healthcare Research Infrastructures through cutting-edge technologies"

Tallinn, Estonia, 23rd January 2025 — A European consortium of various experts has been awarded a substantial EUR 11.9 million lump sum grant from Horizon Europe to start the new initiative called "Decentralized Health Digital Twin Ecosystem Consisting of Research Infrastructures - DTRIP4H". It aims to transform European healthcare Research Infrastructures by using cutting-edge generative AI and digital twin technologies integrated with virtual reality (VR). Digital twin technologies driven by generative AI will enable the creation of virtual models of physical systems, allowing researchers to test and enhance real-world processes.

The first project physical meeting, held on January 21–23, lasted three days and was successfully hosted by the project's coordinator – Tallinna Tehnikaülikool (Tallinn University of Technology) in Estonia. More than 60 people joined on-site and virtually to lay the groundwork for our next steps with insightful discussions and collaborative efforts.

The DTRIP4H consortium aims to advance the state-of-the-art in European research infrastructures, ultimately strengthening research capabilities by closing the gaps that prevent access to critical assets and capabilities across research infrastructures that address pressing health challenges. The project emphasises a people-centred approach. It will use state-of-the-art federated learning methods, and generative AI incorporating digital twin technology in accordance with EU data strategy (COM 2022066) to develop a privacy-preserving, trustworthy, open source and decentralised digital twin environment to advance digital twin solutions for health research.

These advanced digital tools will offer researchers with enhanced capabilities for data visualisation, analysis and access, ultimately advancing healthcare research, reducing healthcare costs and accelerating the development of novel therapies through cutting-edge technology. This innovation boosts future health research and care, enhancing accessibility, interoperability, and integration across the European health research landscape.

The consortium brings together 23 beneficiaries and 3 affiliated entities from 14 European countries, including universities, large enterprises, hospitals, SMEs, and leading research infrastructures, such as the European Infrastructure for Translational Medicine (EATRIS) and the Environmental Exposure Assessment Research Infrastructure (EIRENE). This group boasts multidiscipline expertise in technology, healthcare, research, and development, translating cutting-edge research into tangible societal benefits.

The consortium members are:

Estonia: Tallinn University of Technology, Protobios
Finland: Lapland University of Applied Sciences, University of Oulu, Metropolia University of Applied Sciences, University of Helsinki, Near Real Ltd, Oulu University of Applied Sciences
Lithuania: TeraGlobus
Germany: DigitalTwin Technology, NEC Laboratories Europe GmbH, Ludwig Maximilian University of Munich (Hospital of The University of Munich)
Italy: Chino.io, The University of Bologna, NEC Italia S.p.A

Spain: University of the Basque Country
Portugal: Instituto Pedro Nunes
Belgium: European Health Management Association (EHMA)
The Netherlands: Sync Biosystems (part of the Demcon group)
Czechia: Masaryk University
Romania: Artificial Intelligence Expert (AIE)
France: Inria – National Institute for Research in Digital Science and Technology
Greece: Centre for Research and Technology – HELLAS
Cyprus: LINAC-PET SCAN OPCO LTD (The German Oncology Center)

About DTRIP4H:

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