**Proposal for a Thematic Network on Bridging the Gap Between Innovation and Adoption: Building the Foundations for Trusted AI and Virtual Human Twins in Health and Care**

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**Public Health Area:** (3) Bridging the Gap Between Innovation and Adoption: Building the Foundations for Trusted AI and Virtual Human Twins in Health and Care.

**Scope of the Joint Statement**

The European Virtual Human Twin (VHT) initiative aims to revolutionise healthcare through personalised, comprehensive, and dynamic digital representations of individuals. Realising this ambitious vision necessitates addressing a myriad of technical, infrastructural, ethical, legal, and social implications. This Thematic Network proposes to develop a **Joint Statement, that extends and complements the existing VHT roadmap** developed during the EDITH CSA.

The Joint Statement will provide concrete recommendations to enhance the **transition from VHT innovation to widespread adoption** by identifying critical insights and practical challenges for policymakers, healthcare organisations, regulators, and payers. In addition, we will delve deeper into the practical implications of **Artificial Intelligence (AI),** identifying actionable strategies for its trusted and effective **integration within the VHT ecosystem**. This includes leveraging AI for data quality, resource integration, and knowledge discovery, while addressing biases, human oversight, trustworthiness, and explainability in AI systems.

**Relevance of the Proposal and Synergy with Ongoing EU Actions**

The VHT initiative is highly relevant to current **global trends and European Union priorities**. Escalating healthcare costs and workforce shortages necessitate a shift towards more efficient systems, which the VHT can facilitate through prevention, early disease detection, and optimised treatment planning. There is also a growing imperative for personalised medicine, moving away from a 'one-size-fits-all' approach, which VHT can achieve by simulating treatment responses and providing a holistic view of patient health.

Focusing on the VHT, this thematic network aligns seamlessly with the **EU Digital Agenda** and investment in infrastructures like the European Health Data Space (EHDS). It also contributes to the realization of the **EU4Health** goals, especially related to the focus areas of protecting people and strengthening health systems. The proposed thematic network is designed to further elaborate on the opportunities provided by AI technologies, AI factories, the GenAI4EU framework and its open innovation ecosystem encompassed in the EU’s ambitious **AI strategy** in the realization of the vision of the VHT. There are multiple discussion topics with a share interest between VHT and AI initiatives, including ethical considerations such as data ownership, algorithmic bias, trustworthiness, human oversight, and explainability of AI systems. Our Joint Statement will contribute to practical implementation guidance for this evolving landscape.

**Objectives and How They Will Be Reached**

Building on the foundational work of the EDITH CSA and the work of all partners, our proposal ensures non-duplication by focusing on **enhancing stakeholder engagement to bridge innovation with adoption**. EDITH has already mapped the VHT ecosystem and identified stakeholder needs and expectations for a range of key stakeholders. This Thematic Network will extend this by *increasing the participation* of specific stakeholders crucial for adoption and expansion of the ecosystem, benefiting from the amplification effect that is provided by the official inclusion in the Health Policy Platform thematic network webinar series.

Our primary objective is to **bridge the gap between VHT innovation and widespread adoption** by directly addressing the specific needs, concerns, and opportunities identified by key stakeholders. We will achieve this through 3 steps: preparation, webinars and synthesis.

**Preparation phase: targeted stakeholder engagement and dialogue**

1. **Engagement and dialogue focused on facilitating path to adoption:** we will increase direct engagement with and facilitate dialogue among several key stakeholders for adoption. Critical stakeholders such as patients and practitioners have been extensively involved in the EDITH CSA and their views are already included in the roadmap. Building on this, the thematic network cycle would galvanize understanding, familiarity and engagement with the entire health ecosystem, focusing on the following stakeholder:
   * **Policymakers:** focus on legislative clarity, effective implementation of the AI Act and EHDS, and securing long-term funding for VHT development and adoption across Member States. We will identify how AI Factories and other EU initiatives can best support VHT adoption at national levels.
   * **Healthcare Organisations/Providers:** address challenges in integrating user-friendly VHT/AI solutions into clinical workflows, focusing on practical training, ensuring data quality, and maintaining human oversight. We will explore how AI can enhance clinical decision support systems and personal health forecasting tools.
   * **Payers (Health systems, Insurers) & HTA Agencies:** concentrate on robust evidence generation for VHT/AI value and fair reimbursement mechanisms, including strategies for assessing self-learning AI models and ensuring explainability. We will explore innovative payment and procurement models that account for the evolving nature of AI in VHT.
   * **Regulators:** continue to keep track of initiatives related to the development of clear guidelines and credible assessment frameworks (e.g., work of ISO-IEC TC62 ahG11) for safe, effective, and compliant VHTs throughout their lifecycle, aligning with the EU AI Act's risk-based approach. We will address challenges related to the "black box" nature of some AI systems in regulatory contexts, while leveraging knowledge-based VHT models as a complimentary modelling approach.

**Engagement and dialogue focused on increasing participation:** we will increase direct engagement with and facilitate dialogue among the stakeholders representing projects, communities and initiatives focusing on data collection and AI technologies. This includes systems biology initiatives such as the Human Cell Atlas, European communities such as the European Society for Cardiology, and European Initiatives such as the European Cancer Imaging Initiative.

**Webinars**

Leveraging the experience from the aforementioned preparations, building on the EDITH work, and drawing on lessons learned from previous EU Health Policy Platform webinars, we will organise 2 tailored virtual interactive webinars. The target audience the entire VHT ecosystem, with a particular call for attendance towards the organisations involved in the preparation phase.

* **Webinar 1: facilitating the path to adoption**. The webinar will start with short testimonies on the EDITH CSA work, the current status of the VHT initiative and the inputs received during the preparation phase. Identified challenges will be discussed and audience participation will be requested to complete the list of challenges and prepare a series of targeted actions to address them. These actions will focus on all stakeholders.
* **Webinar 2: AI as a facilitator for realizing the vision of the VHT**. Starting with testimonies of tangible examples of the use of AI in VHT innovation and adoption, the webinar will continue with a more fundamental discussion on the ongoing developments and the related challenges surrounding their uptake. An interactive discussion will help identifying additional examples, opportunities and challenges.

**Joint statement**

We will synthesise the input and feedback from the previous phases to **identify opportunities, gaps, and strategic recommendations**. Given the short timing, a joint statement will be prepared immediately following the final webinar in order to allow for a maximal amount of time to incorporate comments from the entire ecosystem. This will facilitate the formal endorsement by the health policy network and its partners.

**Possible Network and Partners Involved**

The Virtual Physiological Human Institute will lead this Thematic Network, leveraging its extensive network and expertise within the EDITH consortium. We will engage the established **EDITH Community of Practice**, including members of the EDITH Advisory Group of Stakeholders and the VHT Manifesto signatories, **clinical societies** (e.g., European Society of Cardiology), **patient organisations** (e.g., European Patients’ Forum), **academic institutions** (e.g., KU Leuven, University of Liège, University of Bologna, Karlsruhe Institute of Technology and other universities within VPH membership), **academic organisations** (e.g., Human Cell Atlas, LERU, **IRCCS Rizzoli Orthopaedic Institute**) and **professional associations** (e.g., Avicenna Alliance, BioMed Alliance). Our approach aligns with the collaborative spirit of the EU Health Policy Platform.

**Format and Dissemination of the Joint Statement**

The output will be a Joint Statement, detailing needs, challenges, opportunities, and **concrete recommendations** for trusted VHT and AI adoption. The Joint Statement will be formally presentation at the EU Health Policy Platform Annual Meeting in spring 2026.

The Joint Statement will then be published as a **public document** and it will be complemented by expert-designed **infographics[[1]](#footnote-1)**. A dissemination campaign will be developed, leveraging the contributor’s existing **digital and social media channels**, including the EDITH legacywebsite([www.virtualhumantwins.eu](http://www.virtualhumantwins.eu)), and leveraging the EU Health Policy Platform channels (bi-weekly newsletter, Agora Network). This multi-faceted approach ensures that insights inform EU health policy and empower stakeholders for responsible VHT/AI innovation and adoption.

1. Infographics produced by VPHi for the survey on the use of computational modeling and simulation in clinics: <https://www.vph-institute.org/upload/clinical-survey-finallowres-dm_644a78543a76e.pdf> [↑](#footnote-ref-1)