



Virtual Human Twins in the EU: Update 1H 2023

Kyriacos HATZARAS CEng
Programme Officer - EU Policies

Unit H3 - eHealth, Well-Being and Ageing
DG CNECT, European Commission

Current landscape

- Opportunities

- Regulatory developments: Data Governance Act, European Health Data Space, AI Act
- Highly diverse ecosystem in modelling and simulation
- Advanced VHT models seen in specific healthcare applications
- Technology progress: AI, advanced computing: HPC, edge, cloud

- Challenges

- VHT at an early stage; lack of common strategic approach to foster development
- Research needed to advance multi-scale, longitudinal, personalised modelling
- Regulatory pathways require further development
- Communication, education, outreach required for VHT adoption and diffusion

Key Elements

European Virtual Human Twin – EDITH Deliverables

- Roadmap: the building blocks to address interoperability, computation, data and model integration, clinical application & uptake
- Repository: federated and cloud-based, with VHT resources: data, models, algorithms, good practices e.g. in model verification & validation
- Platform: outline of the advanced, distributed, to-be-engineered and delivered, pre-competitive co-simulation platform for VHT design, development, integration, validation
- Statement of Intent: a process to capture and frame the interests of the entire ecosystem
- Advisory Group of Stakeholders: senior expert input on critical topics for success

Advantages

- Business & Industry: wider access to clinical partners, advanced software and capacity building services to de-risk, advance product development, inland & cross-border
- Researchers: wider availability of data, model resources, and collaborators as a basis from where to validate and extend research scope, applicability, added value
- Academic Hospitals: pioneering a new platform technology for new approaches in prevention and treatment, with a strong constellation of partners, building on their innovation record
- Patient Organisations: co-developing a platform technology enabling personalised care, already producing benefits, departing from 'one-size-fits-all' or 'blanket' approaches
- European Medical Associations: shaping a platform technology to the requirements, views and experiences of their members, healthcare professionals

Statement of Intent Process

- Sol: text including, consolidating the contributions, priorities, requirements, vision, concerns and interests of the full ecosystem
- facilitated by EDITH: www.edith-csa.eu and led by the EC
- taking into account:
 - IPR management and access rules
 - Clinical use cases to focus
 - Advanced IT architectures: 'from HPC to bedside'
 - Evidence generation
 - Regulatory clarity & evolution
 - ELSI: ethical, legal, social implications
 - Scale up awareness, trial, use of VHT technologies

Thank you

- The VHT Group at DG CNECT Unit H3

Kyriacos HATZARAS: kyriacos.hatzaras@ec.europa.eu

Margherita FANOS: margherita.fanos@ec.europa.eu

Renata PALEN: renata.palen@ec.europa.eu

Head of Sector Michiel SWEERTS: michiel.sweerts@ec.europa.eu



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