



Virtual Human Twins in the EU: Update 1H 2023

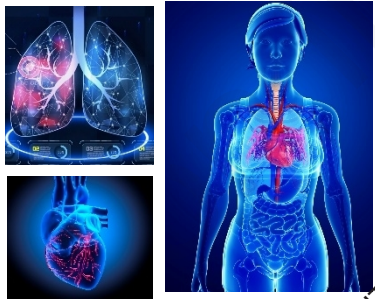
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Unit H3 - eHealth, Well-Being and Ageing
DG CNECT, European Commission

Connecting computational models from diverse scientific domains

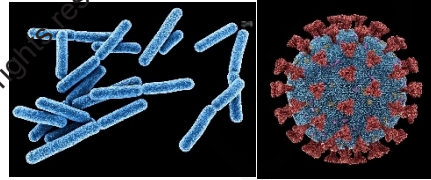
2022

2030+



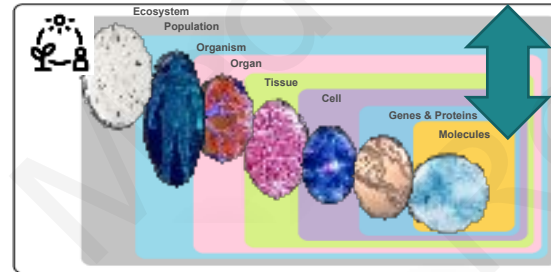
selected organs and organ systems

Personalisation of treatment



integration across disciplines e.g. comorbidities

Early risk prediction & disease prevention



integration across time & length scales & environment

Addressing unmet medical needs & enhancing current procedures



full Human Digital Twin

• 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
- **Progress with advanced technologies:** AI, HPC, edge & cloud computing

→ **Manifesto/Sol text: including, consolidating the contributions, priorities, requirements, vision, concerns and interests of the full ecosystem**

• 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

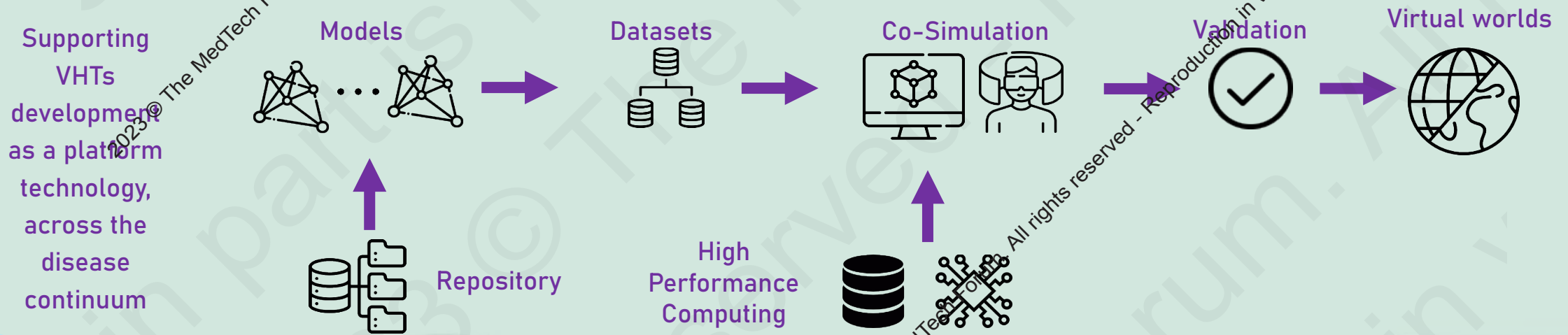
EDITH – The European Virtual Human Twin – CSA DEP 2022

www.edith-csa.eu

- **Roadmap:** the building blocks to address interoperability, computation, data & model integration, clinical application & uptake
- **Repository** of VHT resources: data, models, algorithms, good practices e.g. in VVUQ
- **Advisory Group of Stakeholders:** senior expert input on critical topics for success

Advanced Platform for VHT Model Integration & Validation: Preliminary Market Consultation – open for submissions

<https://digital-strategy.ec.europa.eu/en/funding/preliminary-market-consultation-virtual-human-twin-models-platform>



- **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

Thank you

- **The VHT Group at DG CNECT Unit H3**

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