



# HORIZON EUROPE 2023 Single-Stage Cluster 1 Health Calls Evaluation

## Topic Specific Briefing for Experts

**HORIZON-HLTH-2023-TOOL-05-03: Integrated, multi-scale computational models of patient patho-physiology ('virtual twins') for personalised disease management**

# The Evaluation Process

- Individual Evaluation
  - Consensus meeting (Fast track)
  - Quality-check by EC staff
- Todos**
- 
- Cross-reading – Evaluators (preparation for the Panel)
  - Panel Meeting- the final meeting involving Evaluators & Recorders
- Top proposals**

# The Individual Evaluation Report (IER)

- Excellence → (0-5)
- Impact → (0-5)
- Implementation → (0-5)
- Other
  - Clinical Study, ethics...

# The Individual Evaluation Report (IER)

¿Por qué se penaliza?

# Excellence

- Scope?
- Beyond the state of the art?
- No quantified information
- Scientific Methodology

Cómo se va a hacer, **clave!**

La mayoría flojean en este apartado.

HORIZON-HLTH-2023-TOOL-05-03:

# Integrated, multi-scale computational models of patient patho-physiology ('virtual twins') for personalised disease management

## Scope

**Develop** multi-scale and **multi-organ**, dynamic, interoperable, modular computational models, capable of accurately simulating the individual patient patho-physiology, spanning different anatomical scales

**Advance the state of the art** in multi-scale modelling by employing diverse modelling methodologies, including but not limited to: mechanistic modelling, artificial intelligence, agent-based, network physiology for modelling the **healthy state, disease onset, progression, treatment and recovery. Availability of the necessary diverse data types must be demonstrated.**

**Integrate** standardized, spatiotemporal multi-scale models as a basis for developing personalised 'virtual twin' models taking account of patient individual characteristics, user needs and requirements.

**Validate** patient-specific models and **generate evidence** of clinically meaningful, real-world observations for diseases under study. PoC, feasibility studies in user environments and/or real-world settings are to collect evidence of utility vis-à-vis current clinical practice. Dynamic VHT models will need be shown to improve prognosis, diagnosis, treatments, outcomes, incl. co-morbidities and long-term care.

Develop an exploitation strategy and business plan, with regulatory and industrial input for accelerating clinical and/or market uptake.

# Excellence

- Others:
  - Robustness of AI algorithms
  - Clinical Study
  - Social Science and Humanities
  - Open Science
  - Gender Issues
  - ...

# Impact

- Expected outcomes and wider impacts? → Mirar bien el “call”
- The scale and significance of the proposal → Cuanta gente se beneficia y cuánto
- The potential barriers (to the expected outcomes and impacts)
- The strategy for dissemination and communication and the exploitation plan.



HORIZON-HLTH-2023-TOOL-05-03:

## **Integrated, multi-scale computational models of patient patho-physiology ('virtual twins') for personalised disease management**

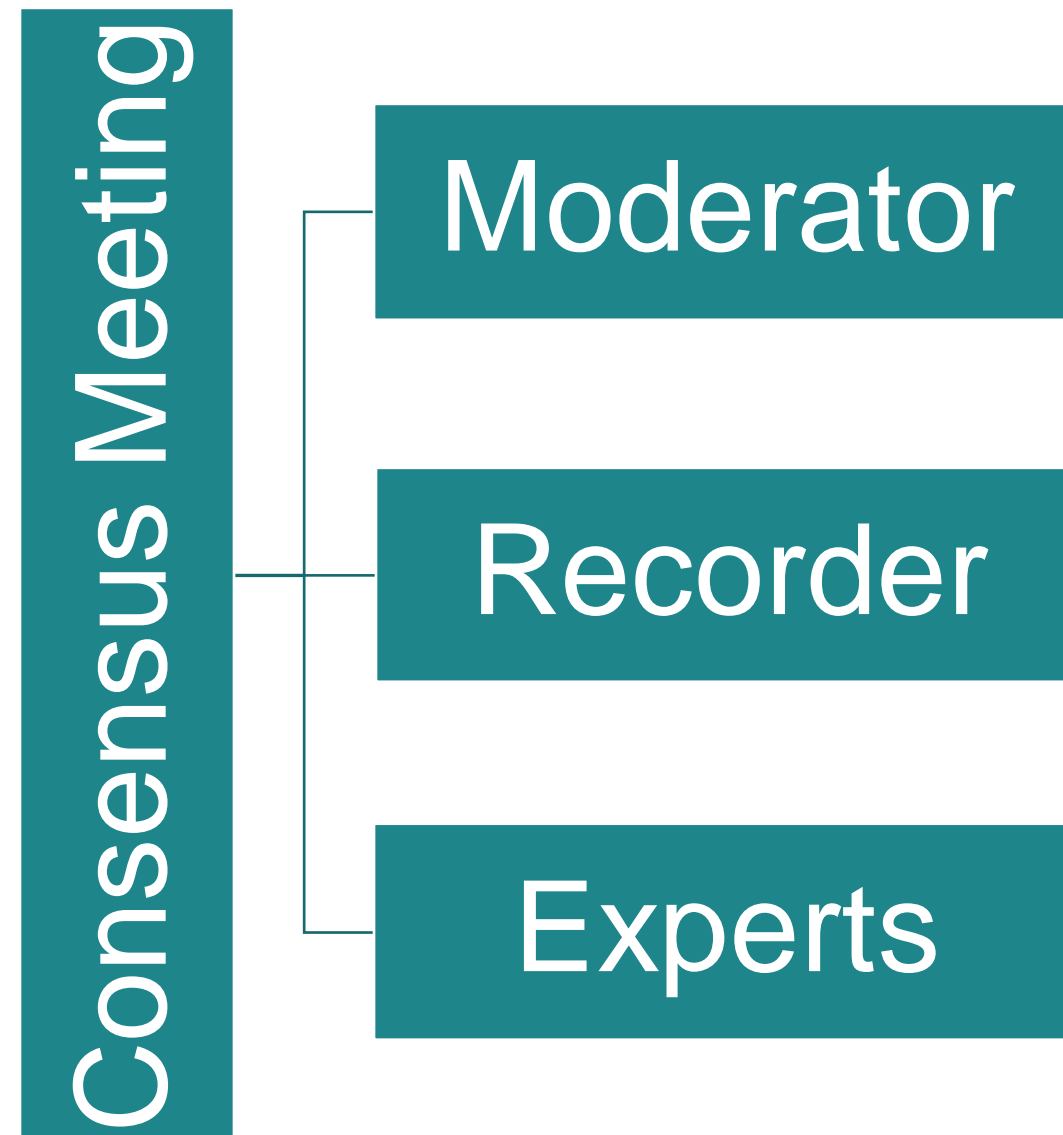
- **Expected outcomes**

- Clinicians, other healthcare professionals have access to and/or use validated multi-scale computational models of individual patients, for delivering optimized, cost-effective patient management strategies superior to the current standard of care.
- Healthcare professionals benefit from enhanced knowledge of complex disease aetiology and progression by recourse to validated, multi-scale and multi-organ models.
- Clinicians and patients benefit from new, improved personalised diagnostics, medicinal products, devices, and therapeutic strategies tailored to the individual patient patho-physiology.
- Citizens and patients access validated 'virtual twin' models enabling integration of citizen-generated data with medical and other longitudinal health data, and benefit from early disease detection, prediction of disease progression, treatment options, effective disease management.

# Quality of Implementation

- Workplan (timeline, balanced, justified, Gant)
- Risks (Identified?, mitigation measures?)
- Consortium composition (clinical-technical, previous experience in EU projects...)

# Consensus Meeting



# Top proposals

- Cross-reading
- Panel meeting
- Ranking