CreSense
Creative Human Sensing

co-innovation proposal

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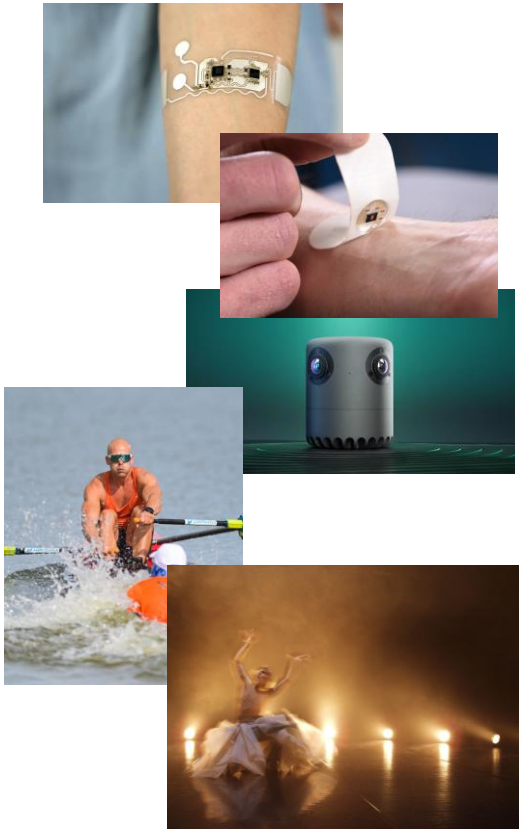
Nokia Veturi LEAD networking event 30.10.2025

Aim

CreSense project investigates how motion tracking, real-time multimodal feedback, and spatial audio can be combined to enhance movement-based interaction and learning. Applications range from neurorehabilitation and sports training to immersive environments for performing arts, gaming and learning

Aims

- Apply most recent human body sensing technologies in creative fields such as dance, sports, and XR interactions
- Customise and integrate existing sensing technologies
- Develop generative AI framework capable of integrating motion, audio, haptic and visual modalities
- Enable new ways to perform, experience and deliver art using sensing technologies, communication systems and digital design



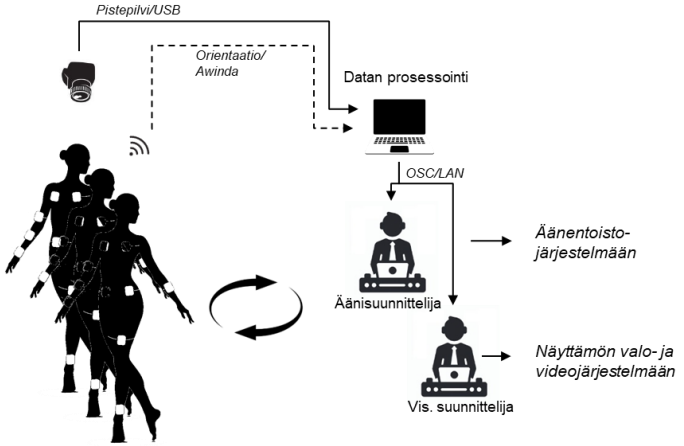
Background: SonicMove

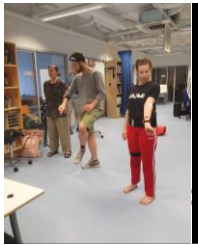
Project details:

- BF Co-research
- 2/2023-12/2025
- VTT, UEF, Aalto, Genelec Oy, BGMT oy
- 0.5M€

Key outcomes

- Pilots:
  - Biodatasonaatti
  - Sonic Organism
  - Circus acrobatics
  - Neurological rehabilitation
- Sonification toolkit
  - Camera and wearables input
  - Open Sound Control interface
  - Data fusion



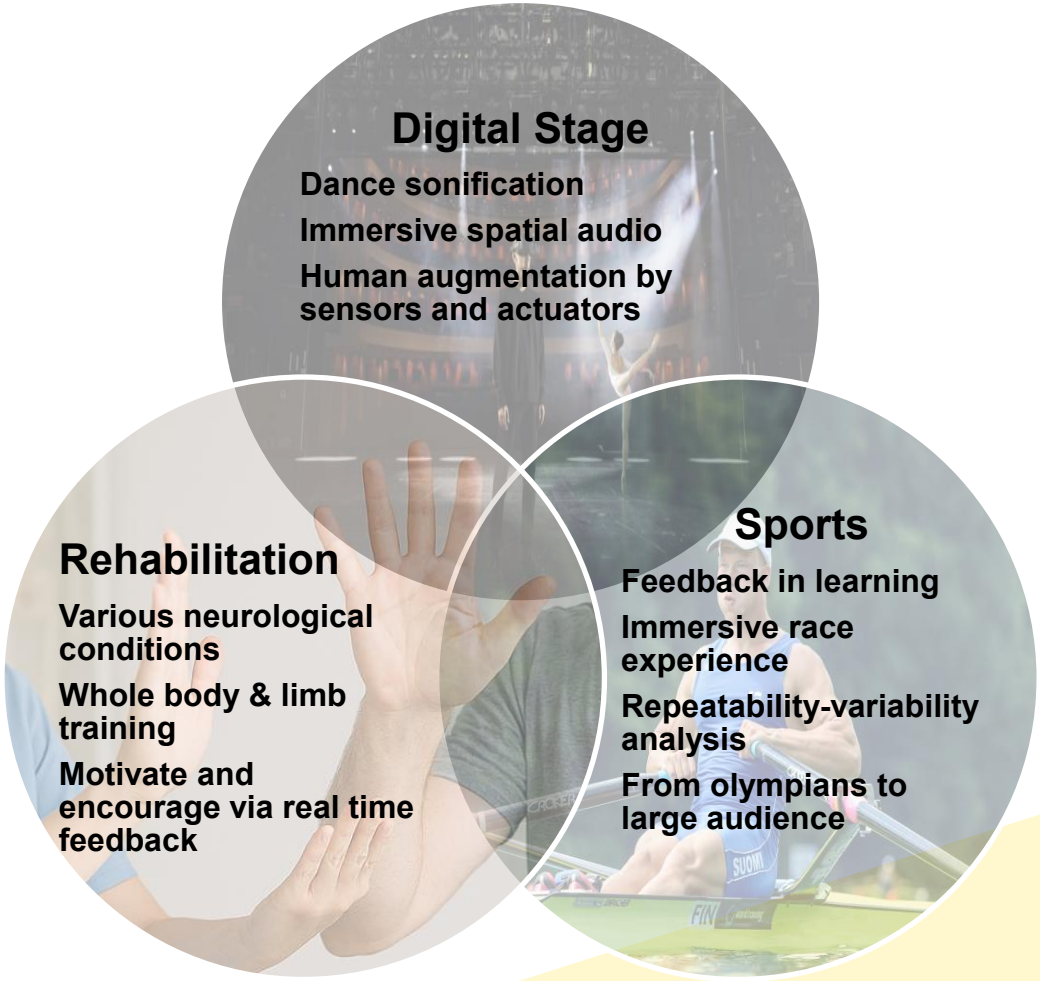






CreSense

Use Cases



Technical enablers

- 3D audio
- Tactile actuators
- Motion capture & analysis
- Wearable sensors
- Multimodal generative AI
- Audiotactile synthesis

Work packages

WP1: Project Management

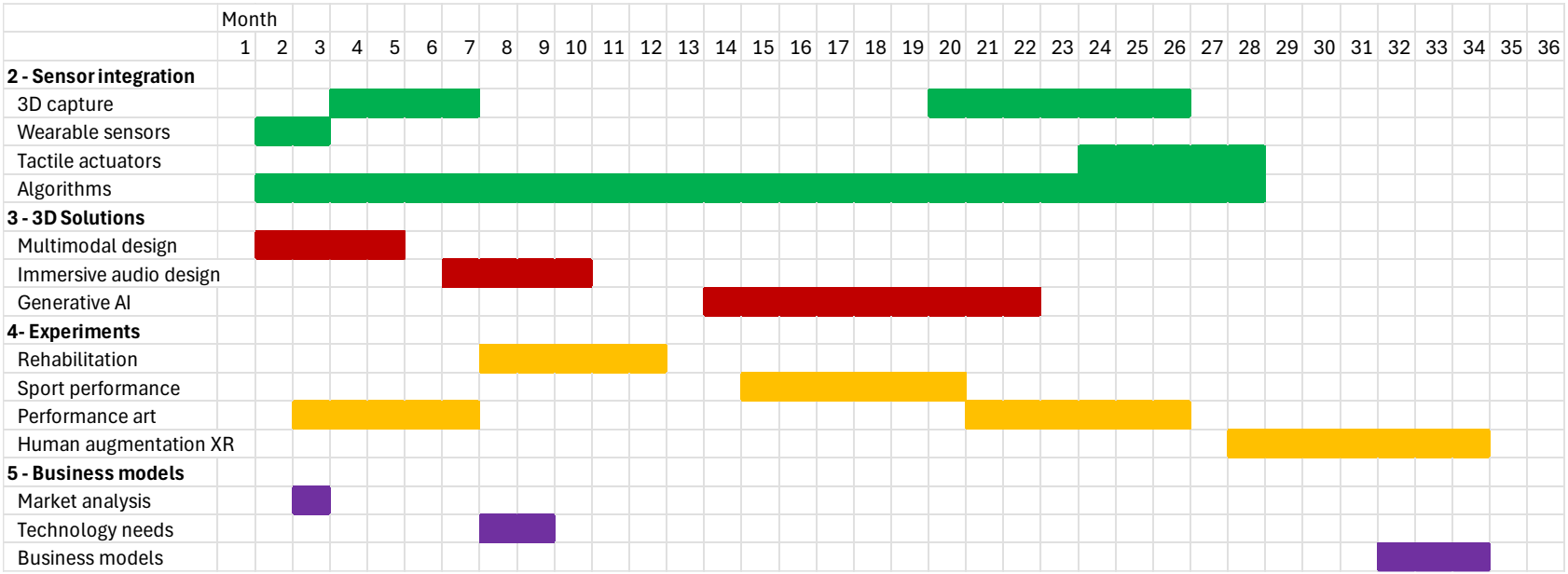
WP2: Sensor Integration
- 3D capture technologies
  - Motion tracking
  - Head scanning
- Wearable sensor customisation
- Tactile actuator integration
- Multimodal algorithms and ML

WP3: 3D Solutions
- **Multimodal** interaction; audio, tactile, visual content design for Human Augmentation
- Immersive audio design
- Generative AI models

WP4: Experiments
- Rehabilitation
- Sport performance
- Performance Art (Dance and Opera)
- Human augmentation in XR

WP5: Business Models
- Market analysis
- Technology needs
- Business models

Draft timeline



Consortium (draft)

Research organisations

VTT

Aalto University

UNIVERSITY OF EASTERN FINLAND

HUMAK

Companies

NOKIA

GENELEC

haltian

SoundlyFit

More companies needed!!

Partners

Tero Saarinen Company

OOPPERA BALETTI

JOEL THE ROWING FINN

beyond

the obvious

Thank you!

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