

AURA · Ambient Ubiquitous Resilient AI Distributed healthcare intelligence

Move intelligence, not data

Research, build and validate collaborative healthcare AI across personal devices, telecom edge and clinical systems, keeping raw sensitive data local.

Protected health embeddings

Local encoders transform ambient and wearable signals into health representations. Validate useful prediction against privacy risks.

Federated Digital Twins

Personal, edge and clinical twins exchange protected knowledge to support personalised care and collaborative modelling.

Privacy-preserving distributed AI

Combine federated learning, differential privacy and trusted execution environments for collaborative processing and learning.

AI-native networks and 6G

Investigate in-network AI, ISAC, precise positioning and healthcare slicing, with deployment on current 5G/edge infrastructure.

Where intelligence operates

Personal environment	Trusted telecom edge	Cloud and clinical systems
Local sensing and encoding Personal Digital Twin Raw signals remain local	Distributed inference Confidential processing Protected representations	Collaborative modelling Clinical Digital Twins Protected knowledge exchange

What we will demonstrate

Privacy with utility
Test predictive performance and resistance to reconstruction and re-identification attacks.

Distributed operation
Evaluate latency, resource use and continuity across distributed nodes.

5G deployment and 6G readiness
Validate the current platform and selected capabilities on pre-6G testbeds.

Value in everyday care
Pilots with older adults in at least two countries, assessing safety, usability and acceptance.

Partners sought

AI and privacy researchers; Digital Twin developers; telecom operators and edge providers; 6G testbeds; sensing companies; care and clinical organisations.

36 months: architecture & encoders / integration / pilots & pre-6G validation



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