

RESEARCH THEME

XLII Cycle – a.y. 2026/2027

Title of the doctoral research	Design-oriented scenarios and proposals for distributed local-based resilient and sustainable healthcare systems
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Abstract	Recent global disruptions have exposed the vulnerability of centralised healthcare systems with consequences in the continuity, accessibility, and sustainability (Armocida et al,2020). This research explores how Distributed Economies (DE), enabled by Sustainable Product-Service Systems Design (S.PSSD), can support more resilient and sustainable local-based healthcare systems. S.PSS can improve continuity of service, reduce environmental impacts, and lower access barriers for local-based care providers. The proposal shifts the focus from products ownership to access, aligning economic incentives with Life Cycle Design and facilitating access over time of costly equipment through service-based arrangements (Vezzoli et al,2021). The aim is to develop design knowledge that supports the envisioning of local-based, resilient, and sustainable healthcare systems (Badanta et al,2025). The proposal addresses an underexplored yet strategic design space, aligned with national and European priorities on value-based healthcare and circular economy (Hu et al,2022). Q1 How can DE-inspired S.PSS enable local-based healthcare ecosystems resilience and sustainability? Q2 What are the key system vulnerabilities of local-based healthcare? Q3 Which S.PSS and DE scenario is the most promising to maximize resilience and sustainability? Q4 Which knowledgebase and knowhow can support S.PSS-DE & LCD medical devices design?
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Keywords	Distributed economies, Sustainable PSSD, Resilient healthcare systems
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