

DESIGN AND TECHNOLOGY. PEOPLE, SYSTEMS, ENVIRONMENT

MUR DM 118 - Co-design processes by digital tools for industrial design

Funded By	MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584] Politecnico di TORINO [P.iva/CF:00518460019]
Supervisor	GERMAK CLAUDIO - claudio.germak@polito.it
Contact	DI SALVO ANDREA - andrea.disalvo@polito.it
Context of the research activity	<p>In the age of digital transition, design-oriented companies increasingly require a co-design approach in which the designer, as director, works as a process facilitator between the end user and the manufacturer, through HCD evaluation methodologies and UX, with the specific use of tools in an immersive environment of virtual and augmented reality. (Progetto finanziato nell'ambito del PNRR - DM 118/2023)</p> <p>Progetto finanziato nell'ambito del PNRR – DM 118/2023 - CUP E14D23001580006</p>
Objectives	<p>From the point of view of Design Thinking, the scholarship addresses the methodologies (HCD and UX) and virtual tools (immersive VR and AR) that allow the direct involvement of the user/buyer in the design process related to oriented products/services to design. Companies, of any size and sector, ask for innovative processes that allow usable services and products to be designed through user involvement (co-design), in order to explore current and future needs and behaviors for competitive positioning and a longer on the market. In this direction, the science of Design in the last 20 years has experimented with numerous approaches to the theme, often mixing and integrating methodologies and tools derived from other disciplines, techniques, and humanities. However, a systematic and systemic approach becomes urgent, which allows the Designer to structure a process increasingly oriented towards co-planning and environmental sustainability, through a vision that places the person and the environmental, social, cultural, technological, and economy in which he lives his experiences. The scholarship intends to fill the gap that still exists today between preventive research, aimed at identifying user needs, and the subsequent evaluation, for example, of usability. The involvement of user groups during planning</p>

represents a process yet to be structured and validated through case studies that can be built together with local companies. The PhD student will work in close contact with the UXD Polito research group and in alternating periods for at least 6 months at the CIM 4.0 research center in Turin, a center of excellence for accompanying companies in the digital and sustainable transition. (Progetto finanziato nell'ambito del PNRR - DM 118/2023)

Skills and competencies for the development of the activity

- hints of physical and sensory ergonomics for the design project
- requirement planning for design (use, consumption, management, production, environment)
- design and evaluation techniques in HDC and UXD through analog and virtual tools
- theory of formal languages for the industrial product.