



# PhD in INGEGNERIA GESTIONALE / MANAGEMENT ENGINEERING - 39th cycle

**THEMATIC Research Field: MULTI-STAKEHOLDER PARTNERSHIPS TO FACE SOCIETAL  
CHALLENGES: THE ROLE OF DIGITAL TECHNOLOGIES**

<b>Monthly net income of PhDscholarship (max 36 months)</b>
<b>€ 1450.0</b>
In case of a change of the welfare rates during the three-year period, the amount could be modified.

<b>Context of the research activity</b>	
<b>Motivation and objectives of the research in this field</b>	<p>Today's complex societal challenges cannot be solved by isolated actors or even those within a single sector, such as government, private, or civil society. These challenges are often seen as wicked problems , i.e. social problems that are difficult to solve because of their incomplete or contradictory knowledge, the number of people and opinions involved, their large economic burden and interconnected nature with other problems.</p> <p>In response, the corporate world has recognized its responsibility in addressing social and environmental issues and has begun engaging in system-building, sustainability-oriented innovation (Sol), i.e. sustainable innovations that are not achieved in isolation and are aimed at driving institutional change. Entering multi-stakeholder partnerships has become a common approach for developing Sol and addressing these unprecedented challenges. In this view, private companies as well as non for profit of hybrid organization, governmental institutions and the civil society engage and collaborate to contribute to a more sustainable development.</p> <p>The ubiquity of digitalization and data accessibility offer unique opportunities to advance societal well-being and tackle grand challenges. Concurrently, extensive research on multi-partner collaboration and information systems provides evidence of the key role of digital technologies and data sharing for successful collaborations., as well as the many challenges, barriers and ethical and governance</p>



	<p>issues related to the use of digital technologies and data sharing in multi-partners collaborations. The aim of this research is to study the complex relationship between multi-stakeholder partnerships for Sol and digital technologies, with the goal to understand what governance and socio-technical design models of multi-stakeholder collaborations are suitable to exploit the potential of digital technology to contribute to the grand societal challenges.</p> <p>Possible streams of research within this broad objective are:</p> <ul style="list-style-type: none"> <li>- The role of digital technologies in enabling multi-stakeholder partnerships for Sol</li> <li>- The role of digital technologies in enabling stakeholder, citizens, or crowd engagement in Sol</li> <li>- The role of digital technology/AI to support complex decision making in multi-stakeholder partnerships for Sol</li> <li>- How to develop data-driven or digital technology-based solutions to grand societal challenges through multi-stakeholder collaborations</li> </ul> <p>The research falls within the "HumanTech - Humans and Technology" project. The HumanTech project has been selected and funded by the Ministry of University and Research (MUR) for the period 2023-2027 within "Dipartimenti di Eccellenza" (Law 232/2016), the ministerial initiative aimed at rewarding the departments that stand out for the quality of their research and at financing specific development projects.</p>
<p><b>Methods and techniques that will be developed and used to carry out the research</b></p>	<p>The research will require a comprehensive systematic literature review encompassing all pertinent literature streams to effectively frame the study. As more refined research questions emerge, the investigation will be conducted using a mix of qualitative and quantitative empirical methods, drawing on multiple case studies or collaborative research approaches and the analysis of large datasets. When feasible, specific research questions addressing individual barriers to digital technology adoption, trust-related concerns, or complex decision-making processes will be examined using experimental</p>



	<p>research methodologies, leveraging the resources of the Department of Management, Economic and Industrial Engineering's (DIG) Behavioral Research in Immersive Environments Lab, funded through the HumanTech research platform.</p> <p>Additionally, the research can benefit from the partnerships and data accessible through some of DIG's Digital Innovation Observatories.</p>
<p><b>Educational objectives</b></p>	<p>The main educational objectives are:</p> <ul style="list-style-type: none"> <li>- Developing research skills in the domain of sustainability-oriented innovation, multi-stakeholder partnerships and digital transformation. As a result, the PhD candidate will be equipped to contribute to the development of sustainable solutions that meet the needs of various stakeholders and effectively address pressing environmental and social challenges.</li> <li>- Developing research methodology skills in the area of empirical qualitative methods, behavioral research and data analytics. By acquiring these skills, students will be able to conduct rigorous and insightful studies that can inform evidence-based decision-making and contribute to the advancement of knowledge in their respective fields.</li> </ul> <p>1. Developing capabilities to drive the adoption of digital technologies to support sustainability-oriented innovation in multi-stakeholder partnerships. By developing these capabilities, the PhD candidate will be well-prepared to harness the potential of digital tools and platforms to facilitate collaboration, foster innovation, and advise sustainable outcomes in various contexts and sectors.</p>
<p><b>Job opportunities</b></p>	<p>Job opportunities for a PhD graduate in this research area are:</p> <ul style="list-style-type: none"> <li>-Researcher/lecturer at higher education institutions</li> <li>-Sustainability expert or manager in private, hybrid, non for-profit companies or public administrations</li> <li>-Sustainability expert or manager in Consultancy Companies</li> <li>-Digital technology and data governance expert in hybrid</li> </ul>



	or non for-profit companies or public administrations
<b>Composition of the research group</b>	1 Full Professors 1 Associated Professors 3 Assistant Professors 0 PhD Students
<b>Name of the research directors</b>	Raffaella Cagliano

<b>Contacts</b>	
raffaella.cagliano@polimi.it	

<b>Additional support - Financial aid per PhD student per year (gross amount)</b>	
<b>Housing - Foreign Students</b>	--
<b>Housing - Out-of-town residents (more than 80Km out of Milano)</b>	--

<b>Scholarship Increase for a period abroad</b>	
<b>Amount monthly</b>	725.0 €
<b>By number of months</b>	0

<b>Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information</b>
<p>The candidate will have access to a working space at the Department of Management, Economics and Industrial Engineering and will attend all the educational activities and the PhD Courses offered by the PhD Program in Management Engineering. Opportunities to become teaching assistant and to be trained within the Teaching Development Program of the Department and Polimi are also available.</p> <p>Finally, all the relevant research data, software and infrastructure will be available.</p>