Spoke 3 – Deep Tech: Entrepreneurship & Technology Transfer

In Lombardy and in the metropolitan area of Milan there are excellences in almost all industrial sectors, not only in the production of goods but also in the provision of services. These excellences are also based on a cutting-edge university and research system, of which the four universities submitting the MUSA project are fundamental elements. All sectors of industry will have to face the challenges of social, environmental and economic sustainability in the coming years.
Within Spoke 3, solutions are developed that make it possible to strengthen the process of growth of innovation, facilitating entrepreneurship and technology transfer. The focus is, in particular, on how technologies can contribute to the sustainable development of all industrial sectors (from the health industry to the eco-industry, manufacturing, luxury, fashion, design), how they can support inclusion processes and participate in urban regeneration and sustainable finance projects.

The fabric upon which the Spoke is inserted is already predisposed to the development of these innovations, since Lombardy hosts, according to data from the Ministry of Economic Development (Mise), over a quarter of all Italian start-ups (26.7%). The province of Milan alone, with 2,545 start-ups, represents 18.7% of the total. This means that there are already numerous programmes in place on these issues at the submitting universities.

The objective of Spoke 3 is therefore to support the competitiveness of the territory, understood as the "cradle of innovation", also in light of the excellence of the Universities and the industrial system. On the one hand, we want to strengthen entrepreneurship based on research and technological innovation, increasing the number of new businesses that develop products or services, starting from innovative ideas from a technological point of view. On the other hand, we want to develop new services for local businesses, especially SMEs, which make it possible to enhance their research and development activities and at the same time enhance technology transfer from universities to businesses. The achievement of the objectives requires the development of a series of activities, along the entire value chain "from idea to business".

These activities aim at combining the existing best practices with those that will be developed during the project, such as the creation of laboratories and development platforms located throughout the territory and the investment in equipment for the construction of centres and laboratories necessary for the prototyping of innovative products and services. Finally, the organisation of services along the supply chain that starts from the innovative idea and arrives at the creation of successful businesses and services to support local SMEs and medium-large national businesses. All the activities of the Spoke, moreover, pay particular attention to promoting female entrepreneurship, and to increasing the internationalisation of the ecosystem.

The research areas of the Spoke consist of: Photonic Technologies, Batteries and energy storage systems, Hydrogen, Smart Advanced Materials, Building materials and related supply chain (smart city - synergy with the Urban Regeneration Spoke), Technologies for environmental remediation (synergy with the Urban Regeneration Spoke), Aerospace (thrusters, materials, production processes, drones, communication systems), Smart manufacturing (with 3D printing and advanced electronic devices and circuits), Medical devices and smart sensors (synergy with the Big data-Open Data in Life Sciences Spoke), Digital Health (synergy with the Biomedicine Spoke), Life sciences and bioeconomy & enabling technologies (bioinformatics, systems biology, AI and machine learning), Technologies for Sustainable Finance (synergy with the Sustainable Finance Spoke) and Fintech, Technologies for Sustainability (synergy with the Urban Regeneration Spoke), Technologies for Made in Italy (synergy with the Fashion, Luxury and Design Spoke).

Participants:

PUBLIC ENTITIES

PRIVATE ENTITIES

POLYTECHNIC UNIVERSITY OF MILAN*, UNIVERSITY OF MILAN-BICOCCA, UNIVERSITY OF MILAN	BOCCONI, POLITECNICO DI MILANO FOUNDATION, A2A, DELOITTE OFFICINE INNOVAZIONE, CAMOZZI GROUP, HUAWEI TECHNOLOGIES ITALIA, INFINEON TECHNOLOGIES ITALIA, HUMANITAS UNIVERSITY

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