

## **Project Area: Factory of the Future**

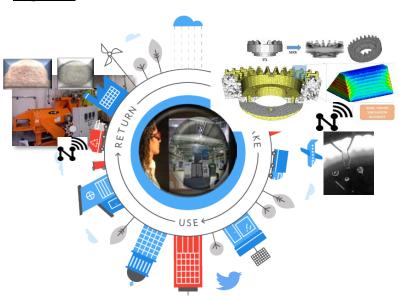


Objective: To expand and promote research activities in the Manufacturing sector, which is a fundamental pillar for the technological progress and the economic and social prosperity of modern countries. Italy plays a primary role in Europe and can rely upon unique resources to preserve and enhance its competitiveness in manufacturing, such as its industrial vocation, the ability to create products that combine design, technology, and customization thanks to the great tradition in the machinery and automation sectors. industry and to represent a research hub for the industrial world.

Approach: The Factory is defined as a coherent set of enabling technologies, processes and products that dynamically evolve over time to follow market needs and new production logic. The role of IoT (Internet of Things) tools, Cyber-Physical Systems (CPS), digital manufacturing, big data analytics, advanced sensors and intelligent sensor networks is crucial to improve the efficiency and sustainability of products, processes and production systems, towards a circular economy vision. Industry 4.0 is the next developmental stage in the organisation of the manufacturing value chain. The main research areas are:

- 1. Systems for personalized production
- 2.Strategies, methods and tools for industrial sustainability
- 3. Human centered factories
- 4. High efficiency adaptive and evolutionary production systems

## Figures:



## **Scientific Impact/Results:**

- A new systemic perspective on manufacturing which considers the coevolution of products processes and systems.
- New cutting-edge technologies and processes to achieve high performance manufacturing (high quality and productivity) and environmental sustainability
- New advanced manufacturing systems supply chains and business models adaptive and highly integrated
- New manufacturing technologies and systems to realize new products for the societal challenges.
- New technologies and solutions to valorise the central role of people and their unique competences.