



Theme 3: The digital revolution, sustainable development and smart cities

Industry 4.0 not only has the potential to contribute to the productivity and competitiveness of industry but can also contribute to a more efficient energy use and to more sustainable patterns of consumption and production.

In industrial production increases in the price of raw materials leads to a priority on recycling and reusing waste in the production process. More generally, the technological advances associated with Industry 4.0 allow for the programming at competitive prices of smaller production series adapted to the specific demands of consumers thus economizing on stocks. In these ways, Industry 4.0 can contribute to putting in place the circular economy (fewer stocks, less transport-related energy costs and lower procurement costs) thus significantly improving energy use. At the level of cities and urban conurbations, new technologies are contributing to the ability of both public and private organisations to put in place innovative solutions designed to economize on energy use associated with the strategy of 'smart cities'. These include the management in real time of energy consumption in public and private buildings and infrastructure and new forms of local renewable energy such as combined heat and power production from enhanced geothermal systems, heat recovery from waste water and ventilation. These questions are central in the strategy of OIN Eco-Vallée, supported by Nice Côte d'Azur and UCA.

The numerical revolution should contribute to multiplying the possibilities for responding to new emerging demands of consumers including the personalization of consumption, distance work, and more personally tailored transport solutions. These possibilities raise the issue of designing appropriate public policies including public private partnerships (PPP) designed to promote and diffuse eco-innovations. The question of new digital solutions contributing to green innovations including those in the area of renewable energy (solar, wind and geothermal) are central in the preoccupations of public authorities.

Some of the key questions raised in this third theme of the workshop are:

1. How can Industry 4.0 contribute to balancing competitiveness with environmental suitability?

2. How can Industry 4.0 promote more sustainable patterns of production and consumption?
3. How can Industry 4.0 contribute to the development of sustainable and resilient urban spaces?
4. Can the circular economy contribute to a process of reindustrialisation at the regional and national levels?

Proposed speakers

- 1) Jackie Krafft et Nathalie Lazaric (CNRS, Université Côte d'Azur), "Integrated and Replicable Solutions for Co-Creation in Sustainable Cities".
- 2) Filip Gluzsak (GridPocket SAS, Valbonne), "Connected Things and Energy Services".
- 3) Maurille Larivière, Director, The Sustainable Design School, Nice (Member UCA): 'The Impact of New and Emerging Technologies on Sustainable Design'
- 4) Francesco Quatraro (Università de Turin, Italie), "Green Technologies and Environmental Productivity: A Cross-Sectoral Analysis of Direct and Indirect Effects in Italian Regions".
- 5) Adel Ben Youssef (Université Côte d'Azur), "Industry 4.0: Combating Climate Change".