The IMREDD in 2020

Reference Centre: Smart territory, risks prevention and management education, innovation and territory.

The IMREDD stands as one of the major strategic projects of development of Nice Sophia Antipolis University in the horizon 2020. It fits into the IDEX project funded from the French National Programme « Investing for the future » UCA-JEDI « Joint Excellent and Dynamic Initiative ». It embodies a reference centre upon Smart territory, risks prevention and management, aiming to completely renew the links between research, education, innovation and territory.

- A new building based on a technological platform: 4 500 sq m, 480 students, 40 kwh/m2/year, experimental building, etc.
- A place for experimentation and validation at the scale of Nice Méridia science park.
- Scientific support from on-site research laboratories (124 permanent researchers) combined with a project house (62 researchers working on specific projects).
- Heavy shared investment in technology: Smart Fabrics Open Innovation and specific equipment for strategic business units (12 million EUR in 2021).
- Educational programs supported by research in the field of sustainable development, some of them developed in partnership with the Grandes Écoles (about 480 on-site students).
- Industrial partnerships.

So designed, the IMREDD will contribute to create high added value jobs and in turn jobs in services becoming a real benchmark in the field of sustainable development. In the long run, it will be able to disseminate knowledge and know-how to future Smart City projects in France and around the world.

One aim:

« Inventing the Mediterranean city of tomorrow respectful to the environment »
Fields of Strategic Study

At the heart of the development of its territory and contributing to its international influence, the IMREDD realizes one of the priority projects of Nice Sophia Antipolis University. It links together searchers, teachers, students, entrepreneurs, economic partners and local authorities to foster innovative collaboration on a future challenge: the harmonious development of societies in the respect of natural resources.

The IMREDD has the vocation of impulsing research, creating educational programs for training and further training in the field of environment and sustainable development and fostering expertise and innovation in the field. It pursues a three-fold mission:

- to conduct and promote research and training activities specific to sustainable development in the fields of science, technology, economics, social, human and juridical sciences;
- to impulse science & technology platforms-based approaches needed for the development of shared research & development activities;
- to enhance the activities above-described in contributing to the identification and support of new innovative entrepreneurs and in running the collaborative networks between the different stakeholders: laboratories, enterprises, local authorities and associations.

Conceived and designed around an open science and technology platform, the IMREDD must be a place conducive to innovation thanks to the mix of actors and approaches. It aims to be transverse with a strong link to Research & Development activities of enterprises and partners but also a place to validate new ideas, concepts or products for small businesses and start-ups as well.

This science and technology platform will be provided with the means to experiment at the industrial scale the different key concepts and technologies for the identified fields of strategic study; it will be a genuine platform, the IMREDD must be a place conducive to innovation thanks to the mix of actors and approaches. It aims to be transverse with a strong link to Research & Development activities of enterprises and partners but also a place to validate new ideas, concepts or products for small businesses and startups as well.

Missions

Focus on the Smart City Innovation Centre (SCIC)

First Collaborative Platform between research, higher education and the smart city business leaders cofunded by the European Union through the European Regional Development Fund (ERDF)

Built on a strong partnership between the University and the Metropolis, the Smart City Innovation Centre was officially launched in March 2015. It prefigures the IMREDD’s future technology platform. It is a place for cross-fertilisation between students, enterprises, startups and searchers dedicated to training and sensitizing, creation and research. Divided into several zones, the Smart City Innovation Centre offers a meeting room, a VIP room, a classroom for innovative pedagogy and a showroom made up of multi screen walls and a 360° cabin immersive screen.

The Smart City Innovation Centre enables to view in real time all the data collected by the Metropolis and illustrates the global city monitoring resulting from. Through four problematic areas linked to the IMREDD’s fields of strategic study - environment, risks, energy and mobility -, the showroom presents a special focus on all or part of a business or thematic activity.

The core system is brought by IBM who provides access to its calculators and especially to data analysis tools coupled to business software as well as searchers’ modelling and simulations.

The whole system offers a full and highly original platform allowing to obtain R&D results and innovations, and the capacity to create new concepts and businesses for the smart city of Tomorrow.

The IMREDD in 2016

The IMREDD falls within the context of the National Interest Operation (OIN) for the Plaine du Var called “Côte d’Azur Eco-Valley” and “Promising Campus”, a national label for universities that the University of Nice Sophia Antipolis (UNS) obtained in 2008. It defines a new form of cooperation between local authorities, companies and higher education and research in the field of green technologies and the Smart city. It is based in the Nice Premium building in the heart of the Nice Meridia business district.

Figures
- 1 770 sq m (Nice Premium Building - 4th floor)
- 10 degree programmes enrolling about 250 students
- about 100 trainers, half from the university and the other half from companies
- 2 research laboratories involving about 30 searchers
- 1 chair research programme on water resources management funded by Suez Environment
- 1 partnership framework agreement with EDF in the field of energy
- 1 IBM Shared University Research Award in the area of Big data and Data analysis
- 1 partnership framework agreement with IBM for a connected smart city
- 1 « collaborative technology platform » (Smart City Innovation Centre) in partnership with Nice Côte d’Azur Metropolis.

Educational programs
- Management of Environment and Sustainable Development - Professional Master programme in Apprenticeship
- High Energy Performance Buildings - Professional Bachelor programme in Apprenticeship
- Materials, Quality, Management - Professional Master programme in Apprenticeship
- Euro-Hydroinformatics and water management - Erasmus Mundus Master programme
- Hydroinformatics and water management – Master programme
- Water engineering - Engineering degree
- Legal Management of Risks and Sustainable Development – Master programme
- Spatial Prospective, Planning and Sustainable Territories – Master programme
- Climate, Risks, Environment, Health – Master programme
- Eco citizen Communication, Heritage and Sustainable Development – Master programme
- NEW (from September 2016): Engineers for smart cities - Master programme in partnership with Centrale Marseille and Nice Côte d’Azur Metropolis.

Research
- Environment and Innovative City, Water team associated to GeoAzur UMR 7329
- Technological innovation for urban development
- Analysis of spatial structures, adaptation processes and space changes - ESPACE - UMR 7300
- Spatial analysis for research in geography, environment and land planning

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