

# MED'INNOVANT 2023

## 5 challenges to overcome



## 5 Challenges

**MED'INNOVANT**

**Challenge #1: Wastewater: turning waste into a resource! Combat heat islands in the city by reusing treated water (grey and black water) for green spaces**

Topic: Water in the urban environment

Sponsor: Saint-Gobain Bâtiment Distribution France

**Challenge #2: Using cross-referencing of data (Big Data + AI), determine whether a building has individual or collective heating and whether it is powered by gas or electricity**

Topic: Energy & Data Processing / Big Data

Sponsor: ENGIE

**Challenge #3: "Je rêve de toits" (I dream of roofs): Accommodating multiple uses comfortably and sustainably on Mediterranean roof terraces so that these under-valued spaces become places for living, well-being and relaxation, health, production, sharing, living together, and so on.**

Topic: Use of roofs & shared space

Sponsor: EIFFAGE

**Challenge #4: Encourage the integration of biodiversity at several levels: homes, buildings, neighbourhoods, and town**

Topic: Urban nature

Sponsor: REDMAN

**Challenge #5: Develop low-carbon mobility solutions for the activities of artisans and merchants**

Topic: Sustainable mobility

Sponsor: ICI MARSEILLE & Euroméditerranée



# Challenge #1 - SAINT-GOBAIN DISTRIBUTION BATIMENT FRANCE

**MED'INNOVANT**

**TOPIC:** Water in the urban environment

- **Challenge:** **Wastewater: turning waste into a resource!**  
Combat heat islands in the city by reusing treated water (grey and black water) for green spaces
  
- **Context:** Faced with the major challenges of climate change and population growth, the sharing of water resources between all uses (domestic, agricultural, industrial, etc.) requires the emergence of new solutions, adapted to the local context.  
The reuse of treated wastewater can be one of the answers to the scarcity of freshwater resources, as it avoids further saturation of wastewater treatment plants.
  
- **Examples:**
  - Grey water reuse
  - Black water recycling
  - Rainwater management
  - Water purification
  - Water infiltration
  - Regulation of drinking water consumption
  - Flood control





## Challenge #2 - ENGIE

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**TOPIC:** Energy & Data Processing / Big Data

- **Challenge:** Using cross-referencing of data (Big Data + AI), determine whether a building has individual or collective heating and whether it is powered by gas or electricity
- **Context:** This challenge must be seen in the context of the forthcoming (2025) ban on the installation of new gas-fired boilers in multi-family buildings. The aim is to be able to determine the current energy connection and operating situation of an existing building, whatever its use: commercial, residential, etc. Using AI and data processing, this will enable us to identify which buildings will soon need to undergo renovation work to replace their heating systems in order to comply with the new RE2020 standards.
- **Examples:**
  - Data processing to assess building connection: gas or electricity
  - Collection and analysis of energy data, targeting a building's power supply and connection type
  - Monitoring and estimating energy consumption
  - Acquisition, operation and management of energy data





# Challenge #3 - EIFFAGE

MED'INNOVANT

**TOPIC:** Use of roofs & shared space

- **Challenge:** "*Je rêve de toits*" (I dream of roofs): Accommodating multiple uses comfortably and sustainably on Mediterranean roof terraces so that these under-valued spaces become places for living, well-being and relaxation, health, production, sharing, living together, and so on.
  
- **Context:** Even more so in a Mediterranean context, available outdoor spaces and their use need to be optimized and enhanced:
  - What uses should be rediscovered or invented?
  - What conditions should be created to ensure comfort and good management?
  - How can we make the most of their spatial, environmental, social, economic, and energy value?
  
- **Examples:**
  - Confer new vocations on roofs
  - Sustain good management of shared spaces & synergies between users
  - Complementary role of green spaces: fight against heat islands, social vocation, recreational space, positive role for health-related issues
  - Short-circuit production using available rooftop resources

 **EIFFAGE**  
IMMOBILIER



# Challenge #4 - REDMAN

MED'INNOVANT

**TOPIC:** Urban nature

- **Challenge:** Encourage the integration of biodiversity at several levels: homes, buildings, neighbourhoods, and town
- **Context:** In order to encourage the redeployment of nature in the city and improve the quality of life of the various users of the urban environment (residents, workers, shopkeepers, schoolchildren, etc.), it is necessary to deploy solutions, initiatives, dynamics, symbioses, innovations, etc., in order to create a sustainable Mediterranean city. To promote the creation of a sustainable Mediterranean city, we need to work towards the return of nature to the city and develop actions to create synergies that respect biodiversity.
- **Examples:**
  - Improving air quality
  - Combat urban heat islands
  - Encouraging the return of biodiversity
  - Sustainable rainwater management
  - Resilient city: giving nature more space
  - Ecosystem services provided by nature





# Challenge #5 - ICI MARSEILLE & Euroméditerranée

MED'INNOVANT

**TOPIC:** Sustainable mobility

**Challenge:** Develop low-carbon mobility solutions for the activities of artisans and merchants

**Context:** The transport sector is the main contributor to greenhouse gas emissions. This is why ZFEs (low-emission zones) have been created in French cities. The trend to reduce the use of cars in the city has prompted those involved in urban logistics to imagine and test new ways of doing things.  
The aim of this challenge is to identify proposals that take these trends into account and offer alternatives for craftsmen and retailers, both in terms of their business activities and the movement of workers.

- **Examples:**
- Streamline the supply and demand for space and enable the pooling of space (particularly storage space) to reduce mobility requirements.
  - Organize last-mile logistics and facilitate the modal shift of certain activities (towards public transport, walking, cycling, 2-wheeling, car-sharing, etc.).
  - Easily share and pool vehicles between peers or employers, on a block or neighborhood scale.
  - Travelling together, to optimize the use of vehicles or travel by other means

