#### International Networking Event





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#### Who we are?

- Dokuz Eylül University (DEU) is a state university established in 1982 in Izmir, the third biggest city of Turkey.
- Our university provides education to 73.796 students in total with 3.657 academic staff and 4.824 administrative staff.
- We have labs and R&D Centers for materials characterization, testing from macro to nano scale.
- Assoc. Prof. Dr. Egemen TEOEMETE's research interest are:
- Cement and polymer based composites,
- Mortar and concrete,
- Waste utilization in concrete, alkali activated materials
- Electrical Heating Mortar and Concrete (EHM, EHC),
- Self-sensing multifunctional smart materails: strain, damage, temperature and moisture sensing
- Historical structures.

## **Project Ideas-1**

### 1. Carbon sequestration in cement composites

Objectives: To capture and sequester carbon in concrete and mortar; to eliminate pollution, global warming, develop multifunctional construction materials with superior properties.

## 2. Use of waste materials in concrete and Alkali Activated Materials (AAC)

Objectives: To use plastics, slugs, ashes and other industrial wastes in concrete, mortar and AAC, eliminate pollution, global warming, obtain high performance materials. Also use of AAC will eliminate cement production which needs too much energy and CO2 emissions.

# 3. Electrical Heating Mortar (EHM) and Concrete (EHC) For heating buildings and deicing roads, airports

Objectives: To eliminate fossil fuels for heating, the accidents, delays, closures, and use of chemical deicers that pollutes the soil and underground water.

### **Project Ideas-2**

#### 4. Thermal energy storage solutions for structures:

Objectives: To increase energy efficiency, eelimination of pollution, global warming, use of fossil fuels which develops pollution and global warming

5. New materials for cultural heritage:

HORIZON-CL5-2022-D4-02-03: Sustainable and resource -efficient solutions for an open, accessible, inclusive, resilient and low-emission cultural heritage: prevention, monitoring, management, maintenance, and renovation (Built4People)

Looking for all kinds of partners suitable for the calls in the next slide.

### **Calls to Apply:**

#### HORIZON-CL5-2022-D4-02 - EFFICIENT, SUSTAINABLE AND INCLUSIVE ENERGY USE

HORIZON-CL5-2022-D4-02-01: Designs, materials and solutions to improve resilience, preparedness & responsiveness of the built environment for climate adaptation (Built4People)

HORIZON-CL5-2022-D4-02-02: Solutions for the sustainable, resilient, inclusive and accessible regeneration of neighborhoods enabling low carbon footprint lifestyles and businesses (Built4People)

HORIZON-CL5-2022-D4-02-03: Sustainable and resource -efficient solutions for an open, accessible, inclusive, resilient and low-emission cultural heritage: prevention, monitoring, management, maintenance, and renovation (Built4People)

HORIZON-CL5-2022-D4-02-05: More sustainable buildings with reduced embodied energy / carbon, high life -cycle performance and reduced life -cycle costs (Built4People)

HORIZON-CL5-2022-D4-02-06: Support to the activities of technology areas of the SET Plan: Action dedicated to energy efficiency in industry

## HORIZON-CL5-2022-D3-03 - SUSTAINABLE, SECURE AND COMPETITIVE ENERGY SUPPLY

HORIZON-CL5-2022-D3-03-02: Best international practice for scaling up sustainable biofuels

HORIZON-CL5-2022-D3-03-06: Efficient and low-emission technologies for industrial use of combustion and gasification systems from low-value biogenic residues and wastes