



This project is co-financed by the
European Union and the Republic of Turkey
Bu proje Avrupa Birliđi ve Türkiye Cumhuriyeti tarafından
finanse edilmektedir

Assoc. Prof. Dr. Egemen TEOMETE
Dokuz Eylul University
eteomete@gmail.com

Description of the Organization

- 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.
- Our university offers education and training in different campuses covering in total 5.731.800 square meters
- We have labs and R&D Centers for materials characterization, testing from macro to nano scale.
- We have thermal and structural test facilities.

Description of your research interest

- Assoc. Prof. Dr. Egemen TEOEMETE's main fields of study are:
- Cement and polymer based composites,
- Mortar and concrete,
- Electrical heating mortar (EHM),
- Smart materials, self-sensing multifunctional materials.
- Utilization of wastes in construction materials, mortar and concrete.

Project Idea-1

Carbon sequestration in cement composites

Objectives:

- To capture and sequester carbon in concrete and mortar
- To eliminate pollution, global warming
- Expected results:
 - Elimination of pollution, global warming, use of carbon for multifunctional construction materials with superior properties.

Destination 1– Climate sciences and responses for the transformation towards climate neutrality

HORIZON-CL5-2022-D1-01-01-two-stage: Carbon Dioxide Removal (CDR) approaches

Destination 3- Sustainable, secure and competitive energy supply- Carbon capture, utilisation and storage (CCUS)

HORIZON-CL5-2021-D3-02-13 Cost reduction of CO₂ capture (new or improved technologies)

HORIZON-CL5-2022-D3-01-15 Decarbonising industry with CCUS

Project Idea-2

Use of waste materials in concrete

Objectives:

- To use plastics, slugs, ashes and other industrial wastes in concrete and mortar, to eliminate pollution, global warming
- Expected results:
 - Elimination of pollution, global warming, use of wastes for multifunctional construction materials with superior properties.

HORIZON-CL5-2022-D1-01-01-two-stage: Carbon Dioxide Removal (CDR) approaches

HORIZON-CL5-2021-D3-02-13 Cost reduction of CO2 capture (new or improved technologies)

HORIZON-CL5-2022-D3-01-02 Demonstration of innovative materials, supply cycles, recycling technologies to increase the overall circularity of wind energy technology and to reduce the primary use of critical raw materials

HORIZON-CL5-2022-D3-01-15 Decarbonising industry with CCUS

Project Idea-3

Binders other than cement (Geopolymers etc.)

Cement productions emits millions of tones of CO2 to atmosphere. Binders other than cement can be a solution for this pollution. Geopolymers.

Objectives:

- To eliminate pollution, global warming and find alternative materials to cement
- Expected results:
 - Elimination of pollution, global warming, use of wastes and other low cost materials for construction materials with superior properties.

HORIZON-CL5-2022-D3-01-02 Demonstration of innovative materials, supply cycles, recycling technologies to increase the overall circularity of wind energy technology and to reduce the primary use of critical raw materials

Project Idea-4

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

Objectives:

- To eliminate the accidents, delays, closures, and use of chemical deicers that pollutes the soil and underground water.
- Expected results:
- Use of electrical heating mortar to heat buildings will eliminate use of fossil fuels which develops pollution and global warming

HORIZON-CL5-2021-D4-02-01 Demonstrating integrated technology solutions for buildings with performance guarantees (Built4People)

HORIZON-CL5-2021-D4-02-03 Strengthening European coordination and exchange for innovation uptake towards sustainability, quality, circularity and social inclusion in the built environment as a contribution to the new European Bauhaus (Built4People)

Project Idea-5

Thermal energy storage solutions for structures:

Objectives:

- To increase energy efficiency
- Expected results:
- Elimination of pollution, global warming
- **Destination 3- Energy systems, grids and storage:**

HORIZON-CL5-2022-D3-01-14 Thermal energy storage solutions

HORIZON-CL5-2021-D4-02-01 Demonstrating integrated technology solutions for buildings with performance guarantees (Built4People)

HORIZON-CL5-2021-D4-02-03 Strengthening European coordination and exchange for innovation uptake towards sustainability, quality, circularity and social inclusion in the built environment as a contribution to the new European Bauhaus (Built4People)

Consortium - profile of known partners *(if any): Seeking partners...*

No	Partner Name	Type	Country	Role in the Project
01				
02				
03				
04				
05				
06				

Consortium - required partners

No	Expertise	Type	Country	Role in the project
01		RTD		
02		SME		
03		INFRA		
04				
05				
06				



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Assoc. Prof. Dr. Egemen TEOMETE
Dokuz Eylul University
Civil Engineering Department
Turkey

Tel: +90 533 654 1493

eteomete@gmail.com

Web:

<https://debis.deu.edu.tr/akademik/index.php?cat=3&akod=20110327>