SUREBRIDGE - Sustainable Refurbishment of Existing Bridges

Funding: European
Duration: Nov 2015 - Dec 2020
Status: Ongoing

Objectives:

The main aim of this project is to realize an innovative and holistic refurbishment approach (method, technology and calculation tool) using fiber reinforced polymer (FRP) materials to perform bridge maintenance including repair, strengthening and refurbishment actions in the most effective and efficient way, in the shortest possible time, with the most efficient, sustainable use of resources and with minimum possible disturbance and disruption for the environment and road users. Within the overall aim of the project, there are a number of specific objectives that cover new design concepts for refurbishment of existing bridges, improved logistics and less waste production in the overall frame of the project.

The objectives of SUREBRIDGE are:

1. To study and analyze the existing rehabilitation and refurbishment methods based on flexible construction processes and identify the bottle necks of these methods
2. To enhance the technology for maintaining and refurbishing existing bridges especially in densely populated urban areas through use of advanced materials and construction processes
3. To provide suitable design and calculation tools to empower authorities and relevant stakeholders to take advantage of the knowledge and technologies produced in this project.

Expected outcomes:

1. Realization of an effective method for refurbishment of existing bridges based on flexible construction processes and concept of DFMA (Design for Manufacture and Assembly)
2. Enhancing the existing technology for maintaining and refurbishing existing bridges
3. Empowering the (local) authorities, stakeholders and experts through an awareness of the real breakthrough by deploying an innovative strategy, technology and a design tool for application of FRP composite materials in bridges

Methodology:

The work in the project is structured in four work packages including a work package for management and dissemination and three work packages with focus on Research and Technology Development (RTD).

Parent Programmes:
ERA-NET - European Research Area Net

Funding type: Public (EU)

Partners:
Chalmers University of Technology Sweden; FiberCore Europe Netherlands; AICE Consulting Srl Italy;

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**STRIA Roadmaps:** Vehicle design and manufacturing, Infrastructure

**Transport mode:** Road transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:**
Decarbonisation, Societal/Economic issues, Deployment planning/Financing/Market roll-out, Environmental/Emissions aspects

**Geo-spatial type:** Other