

## SELF\_Bridges – Long Span Modular Bridges: smarter, extensible, lighter and fast assembly

### Summary

“SELF\_BRIDGES – Long Span Modular Bridges: smarter, extensible, lighter and fast assembly” project was promoted by BERD company (co-promotor leader) and Itecons institute (ENESII), and it aimed at the research and development of a modular bridge, with pre-assembled, configurable and fast installation components, by incorporating new assembly technologies, e.g., extensible or foldable solutions, to reduce the number and volume of pre-assembled components and facilitate their installation on the site.

Thus, the project resulted in an innovative modular bridge solution, different from the currently existing solutions in the market, to reduce transport costs and facilitate the assembly process of modular bridges on the site. Also, the project aimed to develop a solution that incorporates in the structure an advanced monitoring technology via TIC for the deformations and fatigue behaviour,

allowing to monitor and control the structural behaviour. Finally, it aimed to develop an integrated reinforcement system that allows to overcome the limitation, of the maximum span between the supports, of 120 metres to a distance between spans up to 150 metres.



Figure 1. Real bridge.

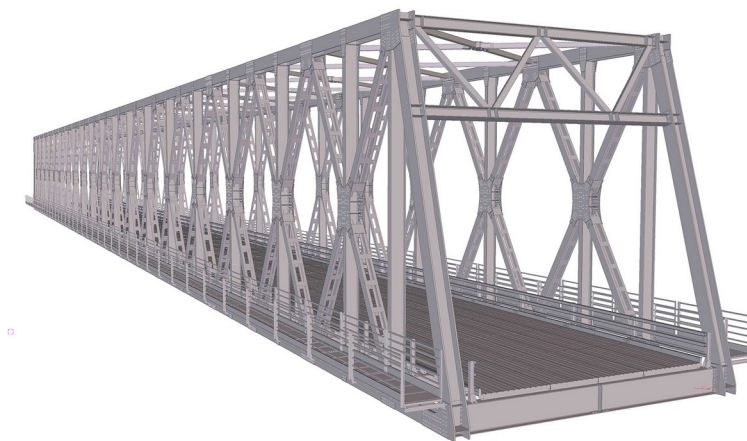


Figure 2. Bridge model.

## SELF BRIDGES

BY BERD & ITECONS

### Project Reference

POCI-01-0247-FEDER-039742

### Leading Institution

BERD – Projeto, Investigação e Engenharia de Pontes S.A. (Portugal)

### Partners

Itecons – Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia, Ambiente e Sustentabilidade (Portugal)

### CERIS Principal Investigator

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### CERIS Research Team

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### Funding

COMPETE 2020, Portugal 2020

### Period

2019-2023

### Total

857 717.90€

### CERIS

Coimbra Hub: 300 674.08€

### Project Website

<https://selfbridges.berd.eu/en/>