

PROJECT

RECET4Rail

Reliable Energy and Cost Efficient Traction system for Railway

The main objective of RECET4Rail is to introduce new emerging and disruptive technologies in the railway sector to improve the rail system performance from all points of view, while reducing the overall life-cycle exploitation cost. RECET4Rail will provide essential knowledge that will lead to future improvement of the high TRL level S2R traction demonstrations on trains done by the S2R Members, preparing also future S2R key work on domains like digitalisation applied to Traction, environmental or reinforcement of standardisation to lower complexity and costs.



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PARTNERS

8

COUNTRIES

€2,3 M

TOTAL BUDGET

3

YEARS



IN ONE CLICK

Coordinator	Programme	Period
UNIFE	HORIZON EUROPE	2020-2023
Sector Transport	Web https://recet4rail.eu/	

01

Objectives

The overall concept of the RECET4Rail project is to support the future improvement of the high TRL level S2R JU traction demonstrations on trains done by the S2R JU Members, preparing also future S2R JU key work on domains like digitalisation applied to Traction, environmental sustainability (especially devising carbon free traction systems) or reinforcement of standardisation to lower complexity and costs.

02

Solutions

This project will develop a design of approaches, end-to-end conception time evaluation and feasibility/performance study of 3D printing technologies for new traction system components use cases; RECET4Rail will investigate on the possible application of Dynamic Wireless Power Transfer (DWPT) for the definition of an opportunistic battery charging system; it will improve the understanding of the robustness and reliability of high voltage SiC modules with respect to railways traction applications and their particular requirements. The project will also develop smart maintenance approaches enabled by predictive analytics.

03

Impacts

RECET4Rail will contribute significantly in improving the Traction Drive sub-system of trains. The results from each workstream will allow to achieve the expected impacts, in accord with Shift2Rail Work Programme. These works will contribute to the reduction of the Traction Capital Cost KPIs. Transfer distances of up to 250mm will be possible and the results will provide the system designers with validated lifetime models for SiC devices, among other impacts.