



FUTURE UNIFIED DC RAILWAY ELECTRIFICATION SYSTEM

Regarding the energy challenge for the railway sector, the project FUNDRES presents a deep forward thinking scenario and proposes related work to define the future of railway. FUNDRES focuses on a Medium Voltage DC electrification system that can serve as energy hub for renewable sources in order to:

- increase the capacity while improving the energy consumption and limiting the environmental impacts;
- decrease the investment and exploitation costs, while maintaining safety and service quality.



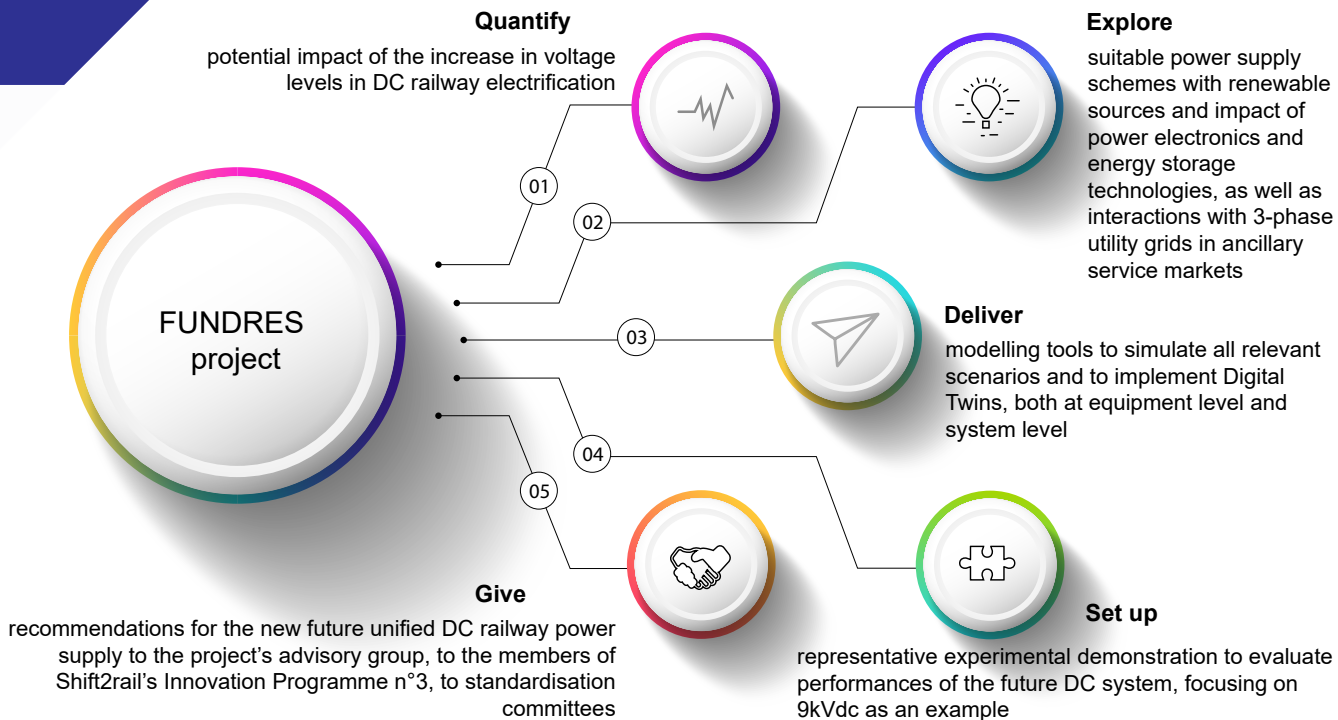
This project has received funding from the Shift2Rail Joint Undertaking (JU) under grant agreement No 881814. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Shift2Rail JU members other than the Union.

The content of this document reflects only the author's view - the Joint Undertaking is not responsible for any use that may be made of the information it contains. The user use the information at their sole risk and liability.



<https://fundres-project.eu/>

Main objectives



■ WP1 ■ WP2 ■ WP3 ■ WP4 ■ WP5

UIC

- End users communication, strategy and competitiveness
- Railway sector

LAPLACE

- Multilevel converters for high voltage and high power applications
- Implementation of SiC devices in power converters
- In-depth knowledge in power converters for railways



POLIMI

- Consolidated experience in Railway and Power System sectors in engineering academic courses
- Many research projects with Industries and Railway Operators

LAPLACE as coordinator

- Management of complex projects
- Experience/coordination of H2020 projects
- Collaborative research at European level

EPFL

- Medium voltage power electronics
- Direct current systems
- Solid state transformers
- Design optimisation, Magnetics
- Wide band-gap devices

Facts & figures

- Acronym: FUNDRES
- H2020-S2RJU-OC-2019
- Grant agreement n° 881772
- EU Contributions: €750 000
- Work programme S2R-OC-IP3-01-2019
- Project coordinator: LAPLACE
- Partners: 4 partners from France, Switzerland, Italy
- Shift2Rail Open Call "S2R-OC-IP3-01-2019: Future traction power supply for railways and public transport"
- Duration: 24 months
- Project start date: 01/12/2019
- Project end date: 30/11/2021

Contact

Project coordinator:
Mr. Philippe LADOUX – LAPLACE
ladoux@laplace.univ-tlse.fr

Dissemination:
Ms. Christine HASSOUN – UIC
hassoun@uic.org

Consortium

Laplace

EPFL



POLITECNICO
MILANO 1863

UIC