LONGRUN

Development of efficient and environmentally friendly LONG distance poweRtrain for heavy dUty trucks aNd coaches.

Arjo Roersch van der Hoogte

Uniresearch

LONGRUN Project Manager

The research leading to these results has received funding from the European Union under Grant Agreement no. 874972

LONGRUN Consortium

Facts & Figures

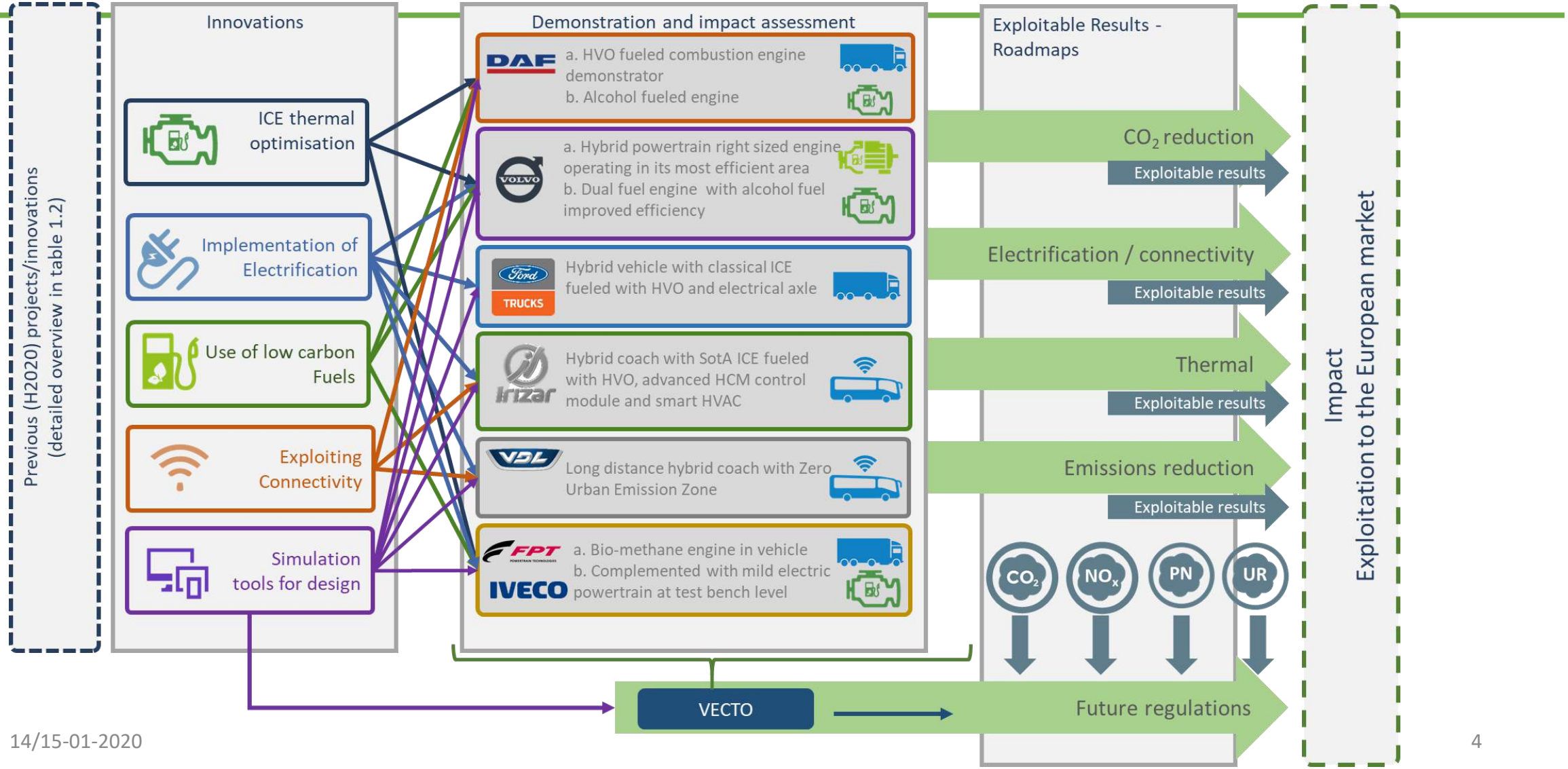
- Start date: 1 January 2020
- Duration: 42 Months
- Total budget: 33.0 M€
- EC funding: 24.9 M€
- EC contact number: 874972

www.H2020-longrun.eu

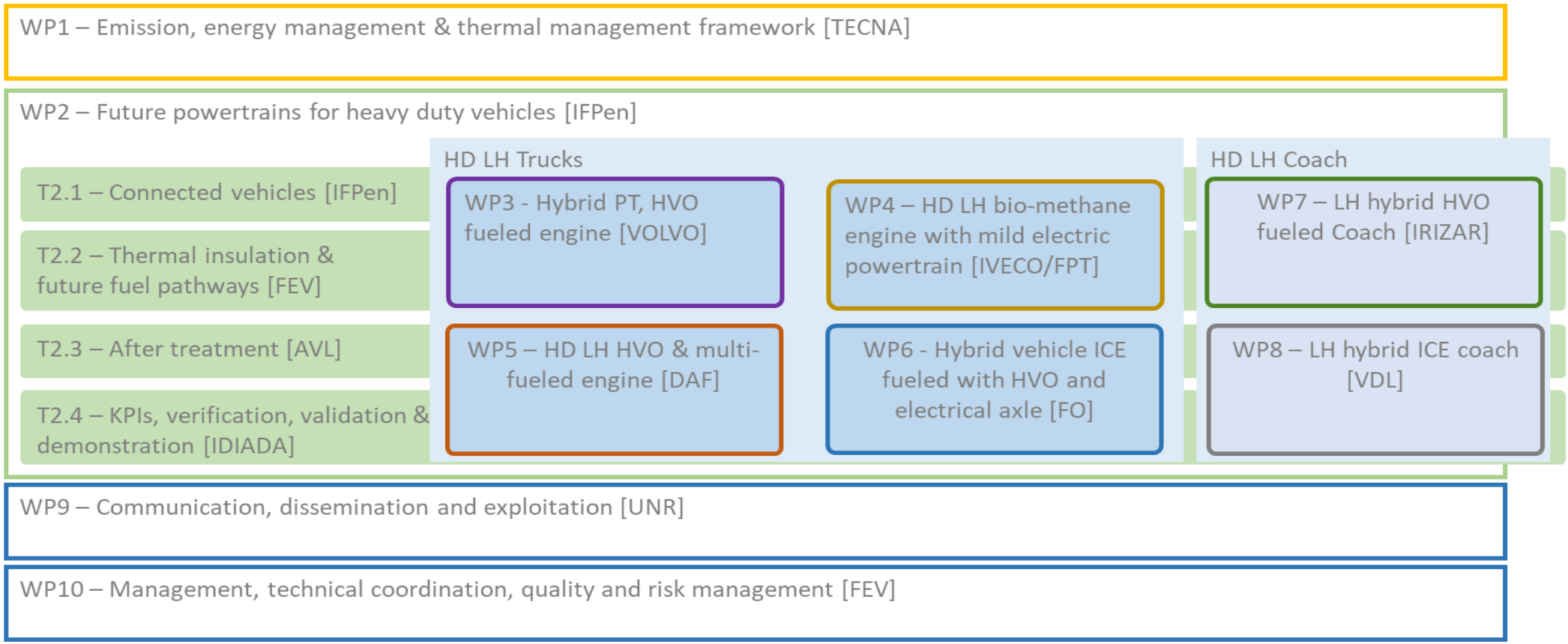
TARGETS / OBJECTIVES

- Innovative solutions to contribute to lower the impacts with:
  - 10% energy saving (TtW) and related CO2
  - 30% lower emission exhaust (NOx, CO and others)
  - 50% Peak Thermal Efficiency
- In addition, a multiscale simulation framework will support the design and development of efficient powertrains, including hybrids for both trucks and coaches.
- With these proposed initiatives a leading position in hybrid powertrain technology and Internal Combustion Engine operating on renewable fuels in Europe can be realized.

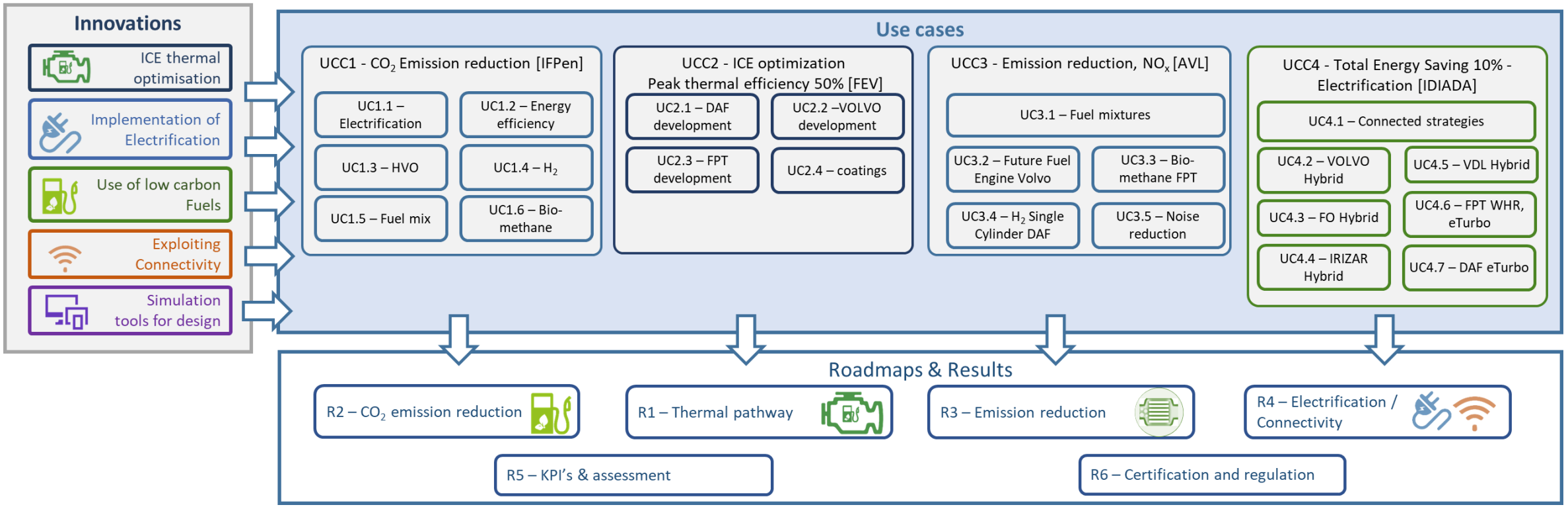
Project structure and roadmaps



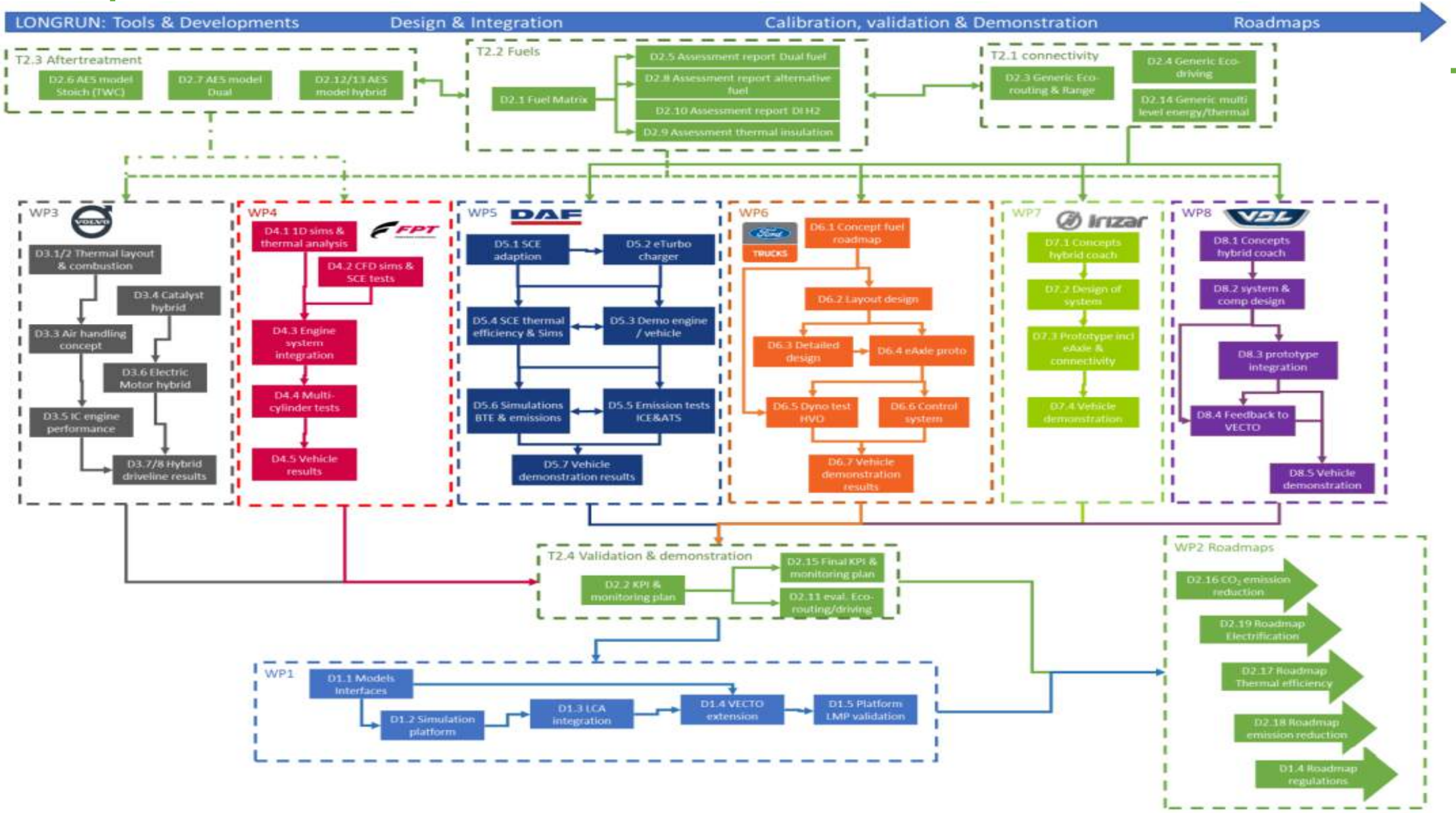
Work Package Structure



Use cases - Roadmaps



Flow of information



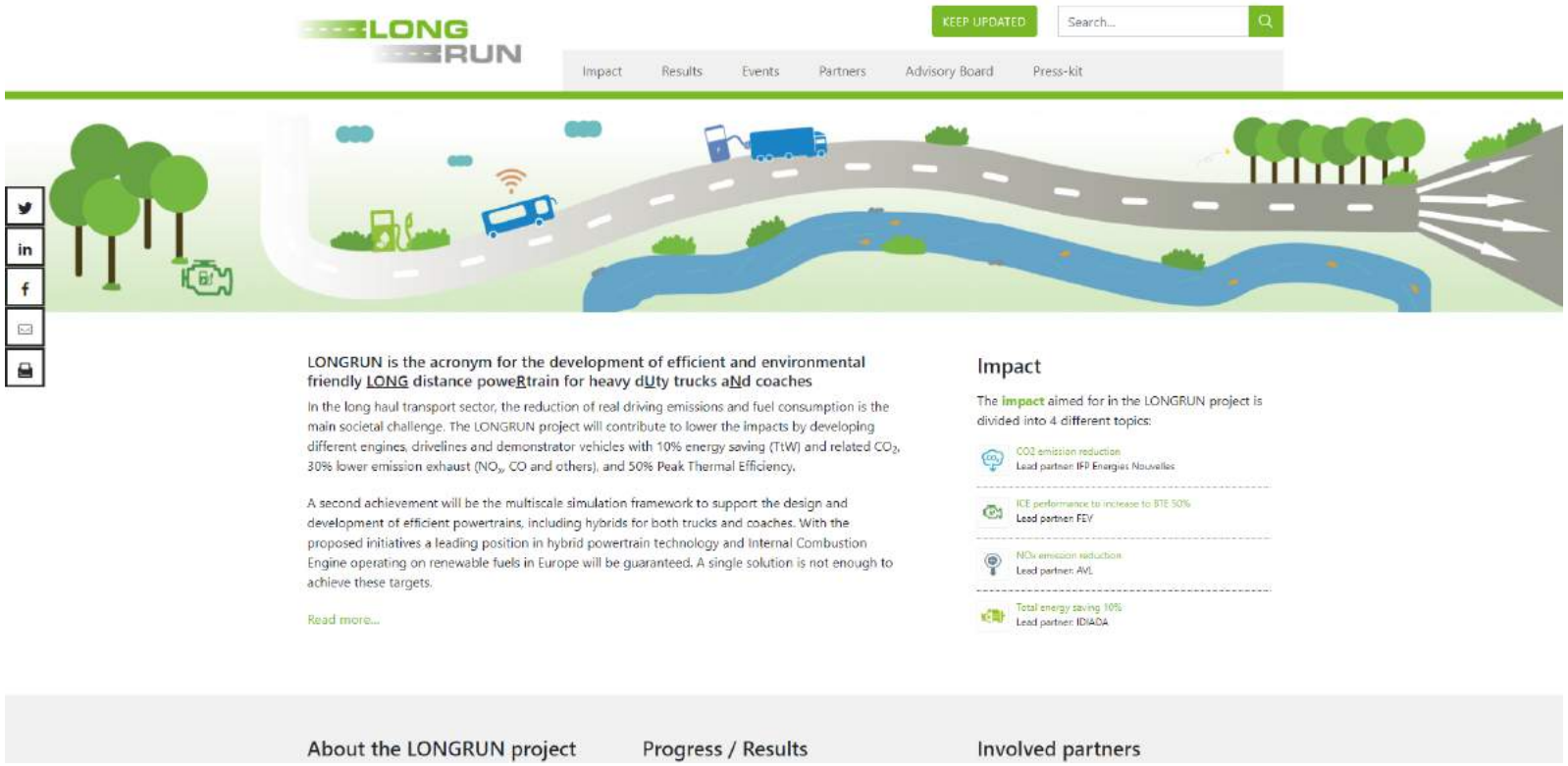
LONGRUN major achievements

- WP1 (TECNALIA) → creation of a communication matrix and Simulink templates to standardize the communication between Vecto and OEM specific software code.
- WP2 (IFPEN) → 1) Generic eco-routing strategy and range estimation algorithm & Generic eco-driving strategy; 2) Fuel matrix for future HD engines & Assessment of the Dual Fuel (liq/liq) combustion defined; 3) Test procedures, KPIs and monitoring plan for all vehicles and engines have been defined and first baseline vehicles have been tested.
- WP3 (VOLVO) → Thermodynamic layout and combustion concept created & high efficient combustion system designed and created.
- WP4 (FPT/IVECO) → Thermodynamic analysis and 1D simulations and BTE improvement meeting the targets of the investigation.
- WP5 (DAF) → SCE adaption to DAF advanced HD fuel injection application and development Turbocharger started.
- WP6 (Ford Otosan) → All layout design completed for the E-axle development and E-axle prototype.
- WP7 (IRIZAR) → Design of systems and components finalized. This included amongst others the advanced motor, energy management, electric architecture for hybrid powertrain, energy storage system, advance braking system, and more.
- WP8 (VDL) → Development and design of new series hybrid architecture.
- Despite the delays due to COVID19, the LONGRUN partners have already submitted 20+ deliverables and achieved two milestones.

Contact

- FEV project coordinator
  - Lukas Virnich – virnich@FEV.com
- UNR project management
  - Arjo Roersch van der Hoogte – a.rvdh@uniresearch.com
  - Roos Leupen – r.leupen@uniresearch.com

- https://h2020-longrun.eu/
- https://h2020-longrun.eu/newsletter/



Thank you

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