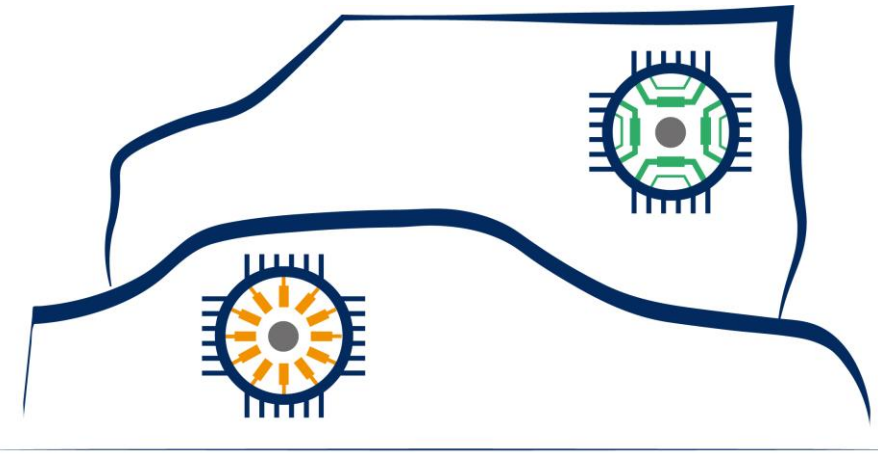
Rare Earth Free e-Drives Featuring Low Cost Manufacturing



ReFreeDrive

Collaborative Project
Grant Agreement Number 770143

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Participants(s:	All project partners
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Abbreviations

IM	Induction motor
SynRel	Synchronuous reluctance
WP	Work Package

Executive Summary

This document reports the project progress during the period from the project kick off meeting (October 2017, M1) to M9 (June 2018). It reviews each of the work packages (WPs), the work carried out and the coming activities for the next period. The next progress report will be carried out in M18 (March 2018). The main objective of this deliverable is to provide a summary of the work done so far and reflect the project current status from a global perspective:

- WP1 Management has overseen the work flow, organizing meetings and web conferences when needed and working with the Work Package Leaders to ensure activities are carried out according to schedule. A quality management procedure has been set in place and followed for the deliverables sent during this period. Project milestones have been reviewed, achieving the first of them (related to the boundary conditions definition).
- WP2 has established the boundary conditions at different levels, defining the driving cycles, and setting the basis for the design work packages (WP3, WP4) and the integration work package (WP5) to work with.
- WP3 and WP4 have researched preliminary designs of their respective technologies, induction machines (IM, WP3) and synchronous reluctance machines (SynRel, WP4). After the first mechanical and thermal analysis of different design options, the obtained results will be optimized in the next period. . Four non-oriented electrical steels, silicon-iron type, and one grain oriented steel have been selected in the project. The preliminary magnetic characterization on the selected materials has been carried out by RINA-CSM.
- WP5 has been kicked off in advance to follow the progress of the motor designs. The first technologies and integration analysis is reported in this deliverable
- WP9 has led the dissemination and communication planning and already undertaken several actions to raise the awareness of different target audiences towards the project objectives and its research.

This D1.1 deliverable has fully met its objectives. No deviations have been found in the deliverable or in the project progress in content, time or impacts, as set out in the Grant Agreement.