MECHANICAL ENGINEERING

MUR DM 117/Stellantis - High efficiency vehicles for last mile delivery

Funded By	CENTRO RICERCHE FIAT [P.iva/CF:07084560015] MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584] Dipartimento DIMEAS Politecnico di TORINO [P.iva/CF:00518460019]
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Context of the research activity	Innovative commercial vehicles Progetto finanziato nell'ambito del PNRR - DM 117/2023 - CUP E14D23002030004
Objectives	The overall efficiency is one of the main weaknesses of electrified Commercial Vehicles currently available on the market. In particular, energy efficiency, payload available and storage systems are the main areas in which there are the major shortcomings. Overall, the possible solutions for last mile delivery vehicles are likely to be a combination of different technologies and approaches, leading to archetypes and technologies able to improve efficiency, reduce costs, and minimize the environmental impact of last mile delivery. Amongst the main areas, several proposals for innovative functions for managing on board storage in a flexible and efficient manner are emerging in the vehicles design. Furthermore, it has also to be considered that autonomous driving will have an impact, for example allowing new cabin archetypes. In this square, the main goal of the research is the development of high efficiency vehicles for last mile delivery. To this aim, innovative vehicle archetypes and systems will be considered in conjunctions with new load management functions for flexible and efficient storage. Also, innovative passenger compartment thought for urban delivery and also autonomous driving will be investigated and function integration will be maximized considering the vehicles electrification and connectivity. The scope of the project is to define technology enablers in order to increase the efficiency of LCV vehicles for goods delivery. For this purpose, they will be conveyed into vehicle and storage architecture archetypes proposals.

Skills and competencies for the development of the activity	Automotive and mechanical engineering