MECHANICAL ENGINEERING

MUR DM 117/Stellantis - Optimized structures and body for last mile delivery vehicles

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]
Supervisor	SCATTINA ALESSANDRO - alessandro.scattina@polito.it
Contact	
Context of the research activity	Design of 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 goal of the research is the development of optimized structures and body for last mile delivery vehicles. To this aim, high efficiency structures and body for delivery vehicles will be developed. The considered structures will be optimized and integrated for battery electric vehicles, ensuring functional integration and safety in terms of occupant protection and cargo security. The maximization of the weight and volume capacity and their impact on overall efficiency will be the main targets of the project.
Skills and competencies	

for the development of the activity	Automotive engineering