

I am Salvatore Quaranta, PhD student in “Mechanical, Manufacturing, Management and Aerospace Innovation” at the University of Palermo. This project idea stems from the fact that in recent decades and in particular with the spread of the Covid-19 pandemic there has been a net increase in E-commerce which has led to an increase in congestion in urban centers and therefore to an increase in 'pollution. So my research project focuses on the optimization of urban logistics through the exploitation of innovative electric vehicles. In particular, we intend to develop specific algorithms for the optimization of urban distribution systems based on the use of e-cargo bikes, to study new methodologies for the optimized design of support infrastructures for the implementation of urban logistics systems and to optimize the design. of the vehicle for urban delivery operations. Then a flexible and modular e-CB will be proposed capable of operating in different scenarios, which allows manufacturing companies to better satisfy the preferences of a diversified target market, while achieving good efficiency in their supply chain, and a decrease pollution in urban centers.