



CSDS – Context Sensitive DRT System – The project aims to devise new technological solutions, based on advanced systems for digital connectivity and security, in order to develop a prototype on-demand transport system (DRT) that integrates local public transport and private transport, promoting intermodal, sustainable and safe mobility, with particular attention to low-demand areas and to improving the perceived quality of the public transport service.

Partners: MAR.TE. Sea-Land Logistics S.c.ar.l., Sync Lab S.r.l. (lead partner) and Technetic Italia S.r.l.

Project duration: 24 months

Budget € 1,268,776.80

The CSDS project is funded by the Italian Ministry of Enterprises and Made in Italy with resources from the Sustainable Growth Fund (Fondo Crescita Sostenibile) – PN RIC 2021/2027 “*Entrepreneurial Discovery*”. In line with the 2023 ITS Directive and with European objectives for smart and sustainable mobility, the project develops an on-demand transport (DRT) platform based on artificial intelligence, cloud computing, IoT and secure data communication systems. The solution integrates multimodal information and real-time data on traffic, road safety, local events and vehicle availability, enabling optimised planning of on-demand mobility services.

Accessible via a mobile app and a cloud platform, the system improves the accessibility, efficiency and safety of travel, providing citizens and transport operators with advanced monitoring, analysis and decision-support tools. The project also contributes to reducing emissions, energy consumption and urban congestion, while promoting interoperability, technological innovation and new models of sustainable and connected mobility.

Within the partnership, MAR.TE is responsible for the industrial research activity dedicated to the Dynamic Optimisation Module of the DRT service, through the development of the preliminary version of the software for *vehicle routing* and dynamic *dial-a-ride* algorithms, with the support of the Research Centre for Transport and Logistics of Sapienza University of Rome. Sync Lab is in charge of data acquisition, planning, the back end and the simulation environment, while Technetic develops the front end for transport operators and citizens.