New opportunities for ports with automated terminals and ships: the transferability case from road transport to feeder shuttle service

MSES

Aegis

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Main Objective

The main objective is to evaluate, analyse and define potential alternatives for the transfer of goods from road to sea through autonomously operated and sustainable Short Sea Shipping routes to and from the **Port of Valencia**.

Specific topics addressed:

- 1. To promote alternatives that help to decarbonise the port from the point of view of emissions, noise and congestion.
- 2. offer intermodal alternatives for the traffic of goods.
- 3. To alleviate the possible traffic peaks which strain the current land transport alternatives by offering a stable shuttle service through Short Sea Shipping.
- 4. To take advantage of the connectivity of the port of Valencia to increase the traffic carried by other ports, increasing competitiveness, a larger market and a more environmentally sustainable service for shippers
- 5. Establish a holistic approach to analyse in detail the future autonomous shipping in coexistence with traditional shipping.
- 6. Avoid high investments in alternative infrastructures





74,58 millions Tons 5,38 millions TEU 389.942 Passengers in regular line 26.286 Cruise passengers 425.999 Vehicles

VALENCIA

6.02 million Tons 46.004 TEU 107,138 Vehicles 0,28 million Tons 2.825 Passengers in regular line



AUTOSHIP

Port of Valencia

Truck transport statistics: Number of trucks entering the port per hour, working days



Average of 4,866 trucks per day in 2023





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Transferability Use Case

Port of Valencia main hinterland routes:



Use Case:

Transferability to a **Shuttle Service** with the following characteristics:

- Containers and/or Ro-Ro
- 24/7
- Different schedules and routes
- Sustainable fuel for navigation and Shore Side Electricity supply while at berth
- Autonomous or semi-autonomous operation at port





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Results

Number of trucks that could be shifted to the Shuttle Service:

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	ALENCIA:	Pessimistic scenario (5%)	Baseline Scenario (15%)	Optimistic Scenario (25%)
	potential	16,150 trucks	48,450 trucks	80,750 trucks
	trucks	62 trucks per labour day	186 trucks per labour day	310 trucks per labour day
S	SAGUNTO:141,108potential trucks	Pessimistic scenario (5%)	Baseline Scenario (15%)	Optimistic Scenario (25%)
		7,055 trucks	21,166 trucks	35,277 trucks
		27 trucks per labour day	81 trucks per labour day	136 trucks per labour day
•	• 34,037 potential trucks	Pessimistic scenario (5%)	Baseline Scenario (15%)	Optimistic Scenario (25%)
		1,702 trucks	5,105 trucks	8,509 trucks
		7 trucks per labour day	20 trucks per labour day	33 trucks per labour day







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