



# MULTIdisciplinary APPROach and solutions to development of intermodal transport in region

SHORTSEA SHIPPING DAYS 2019  
Piraeus , 13/06/2019





Non-EU part of  
cooperation area

EU part of  
cooperation area

## PROJECT PARTNERS



1. **INTERMODAL TRANSPORT CLUSTER** (HR)
2. **NATIONAL TECHNICAL UNIVERSITY IN ATHENS** (GR)
3. **PIRAEUS PORT AUTHORITY SA** (GR)
4. **PORT OF PLOČE AUTHORITY** (HR)
5. **INTERMODAL LOGISTICS TRAINING CONSORTIUM** (IT)
6. **MINISTRY OF INFRASTRUCTURE** (SI)
7. **PORT OF BAR HOLDING COMPANY** (ME)
8. **INSTITUTE OF TRANSPORT** (AL)
9. **CODOGNOTTO HOLDING** (IT)

This document has been  
produced with the financial  
assistance of the European Union.

The content of the document is  
the sole responsibility of  
Intermodal Transport Cluster and  
can under no circumstances be  
regarded as reflecting the position  
of the European Union and/or  
ADRION programme authorities.

[www.adrioninterreg.eu](http://www.adrioninterreg.eu)



# PROJECT



## DURATION:

24 Months

From: **01/02/2018**

To: **31/01/2020**



## FINANCING FUNDING PROGRAMME:

Interreg V-B Adriatic-Ionian Cooperation Programme



## TOTAL PROJECT BUDGET:

1.177.060,00 €



## ERDF AND IPA II FUNDING AMOUNT:

1.000.501,00 €

# OUR ACTIVITIES



**SYSTEMATIC COLLECTION OF INFRASTRUCTURAL, OPERATIONAL & REGULATORY BOTTLENECKS** and provision of solutions ensuring smooth flow operations in selected supply chains.

**DEVELOPMENT OF INTERMODAL TRANSPORT** promotion centers on a national level and the creation of a strong interdependent network promoting the concept of intermodal transport with specific direct and indirect measures.

**SUPPORTING THE OPTIMIZATION OF MULTIMODAL TRANSPORT SYSTEMS** and related processes through the development of a modeling transport performance strategy, which enables the calculation of ideal technical, technological, organizational, administrative or legal elements, affecting harmonized Intermodality.

# ABOUT THE PROJECT

PROJECT DURATION: 24 MONTHS (01.02.2018 – 31.01.2020)

## FINANCING:

Funding programme: INTERREG ADRION TRANSNATIONAL PROGRAMME

Total project budget: 1.177.060,00 EUR

EU co-funding amount: 1.033.635,00 EUR

## PARTNERSHIP

### **9 Project partners**

Partners from:

1. CROATIA (2)
2. ITALY (2)
3. SLOVENIA (1)
4. GREECE (2)
5. ALBANIA (1)
6. MONTENEGRO (1)





# ABOUT THE PROJECT

## LEAD PARTNER:

INTERMODAL TRANSPORT CLUSTER (HR)

## PARTNERS:

- NATIONAL TECHNICAL UNIVERSITY IN ATHENS (GR)
- PIRAEUS PORT AUTHORITY SA (GR)
- PORT OF PLOČE AUTHORITY (HR)
- INTERMODAL LOGISTICS TRAINING CONSORTIUM (IT)
- MINISTRY OF INFRASTRUCTURE (SI)
- PORT OF BAR HOLDING COMPANY (ME)
- INSTITUTE OF TRANSPORT (AL)
- CODOGNOTTO HOLDING (IT)



Klaster  
intermodalnog  
prijevoza



CFLI

CONSORZIO FORMAZIONE  
LOGISTICA INTERMODALE



LUČKA UPRAVA PLOČE  
PLOČE PORT AUTHORITY



PORT OF BAR



CODOGNOTTO



REPUBLIC OF SLOVENIA  
MINISTRY OF INFRASTRUCTURE

**Interreg**   
**ADRION** ADRIATIC-IONIAN  
European Regional Development Fund - Instrument for Pre-Accession II Fund

MultiAPPRO



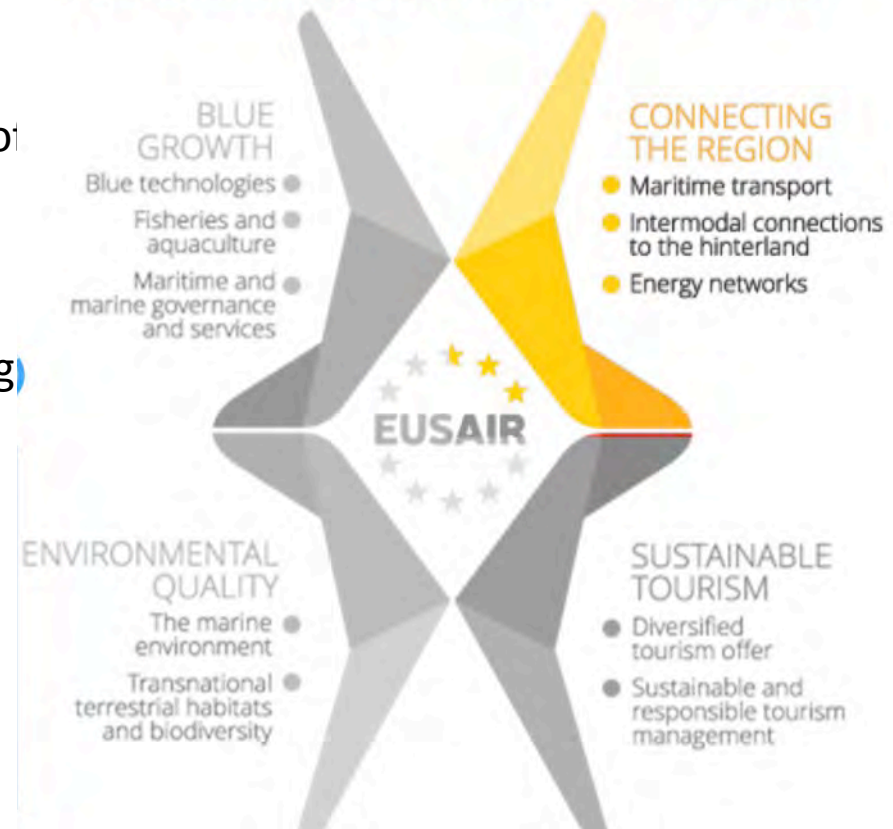
# EUSAIR labelling process

## Projects of macroregional impact (EUSAIR labelling process):

- **Strategic Infrastructural Projects**, e.g. part of TEN-T Network and the Macroregional Network
- **“Soft” Measures**, e.g. studies, analysis and feasibility studies supporting also the strategic projects (ADRION Programme can support/finance this project category)

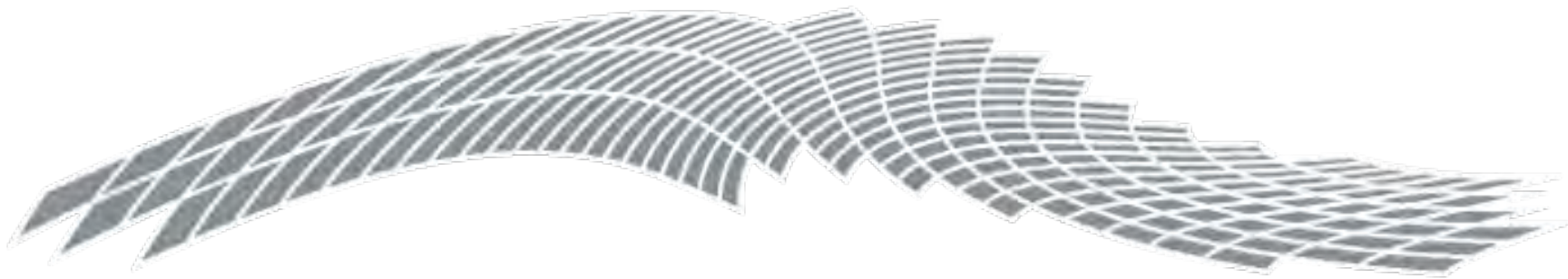
MultiAPPRO is a «Flagship Project»

## The EUSAIR Action Plan - 4 PILLARS



# WORK PACKAGES

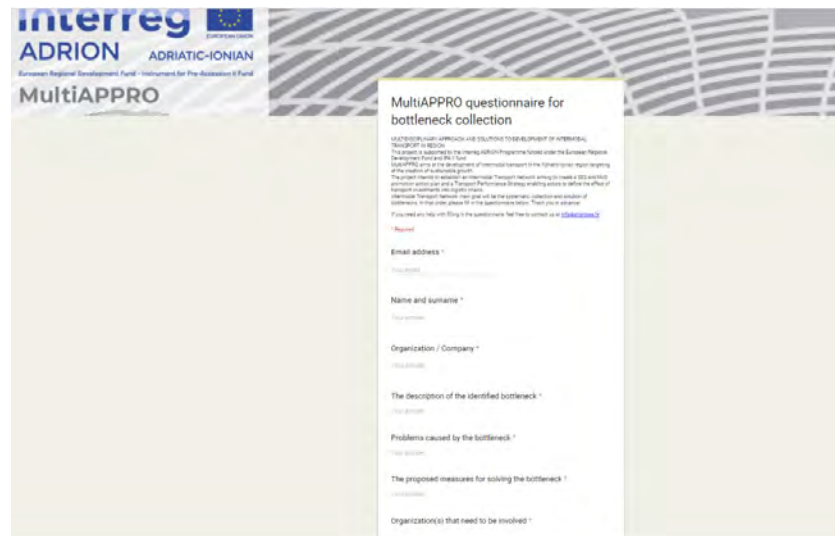
- Intermodal transport network and bottleneck analysis
- Sustainable promotion of intermodal transportation
- Transport performance model and quality management



# WEB INTERFACE FOR COLLECTION OF BOTTLENECKS

Web interface is a simple [online](#) questionnaire for collection of bottlenecks.

The stakeholders are invited to fill in this questionnaire, and all collected bottlenecks are then sent to a common database.



The screenshot shows a web interface for a questionnaire titled "MultiAPPRO questionnaire for bottleneck collection". The header includes the "Interreg ADRIATIC-IONIAN" logo and the text "European Regional Development Fund - Instrument for Pre-Accession II Fund". The questionnaire form contains the following fields:

- Email address \*** (text input)
- Name and surname \*** (text input)
- Organization / Company \*** (text input)
- The description of the identified bottleneck \*** (text area)
- Problems caused by the bottleneck \*** (text area)
- The proposed measures for solving the bottleneck \*** (text area)
- Organization(s) that need to be involved \*** (text area)

- The description of the identified bottleneck
- Problems caused by the bottleneck
- The proposed measures for solving the bottleneck
- Etc.



# ORGANIZATION OF INFORMATION AND EDUCATION WORKSHOPS

In each partner country, partners organize an information and education workshops. Workshops are held for stakeholders, in order to inform them about the project activities and ask them to fill in the online questionnaire about bottlenecks.



# INTERMODAL TRANSPORT NETWORK - ITN

ITN is a representative body of all included states. Their main goal is to investigate the causes of poor intermodal transport in the region and propose measures and activities for its improvement.

The Network will work on all three project topics - bottleneck solution, promotion and quality management.

First meeting was organized in Rijeka in April 2018. Next is planned in Athens in June 2019.



# Guidelines for establishing PCs: check-list

STEP 1:  
Establishment of a  
legal entity



STEP 2:  
Finding an  
expert



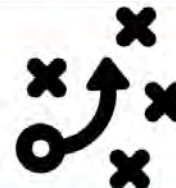
STEP 3:  
Involve  
stakeholders



STEP 4  
Initial  
funding



STEP 5:  
Aim at  
independence



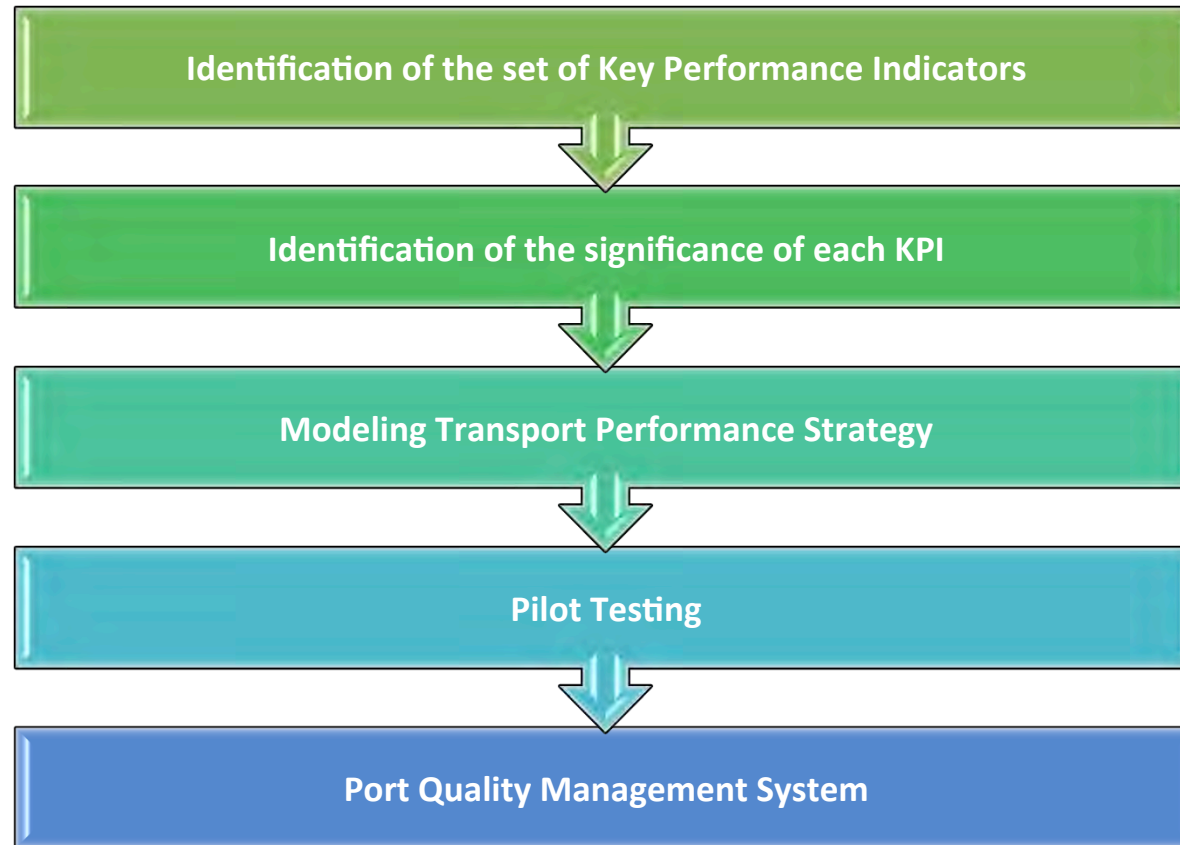


# T3 – Overall Objectives

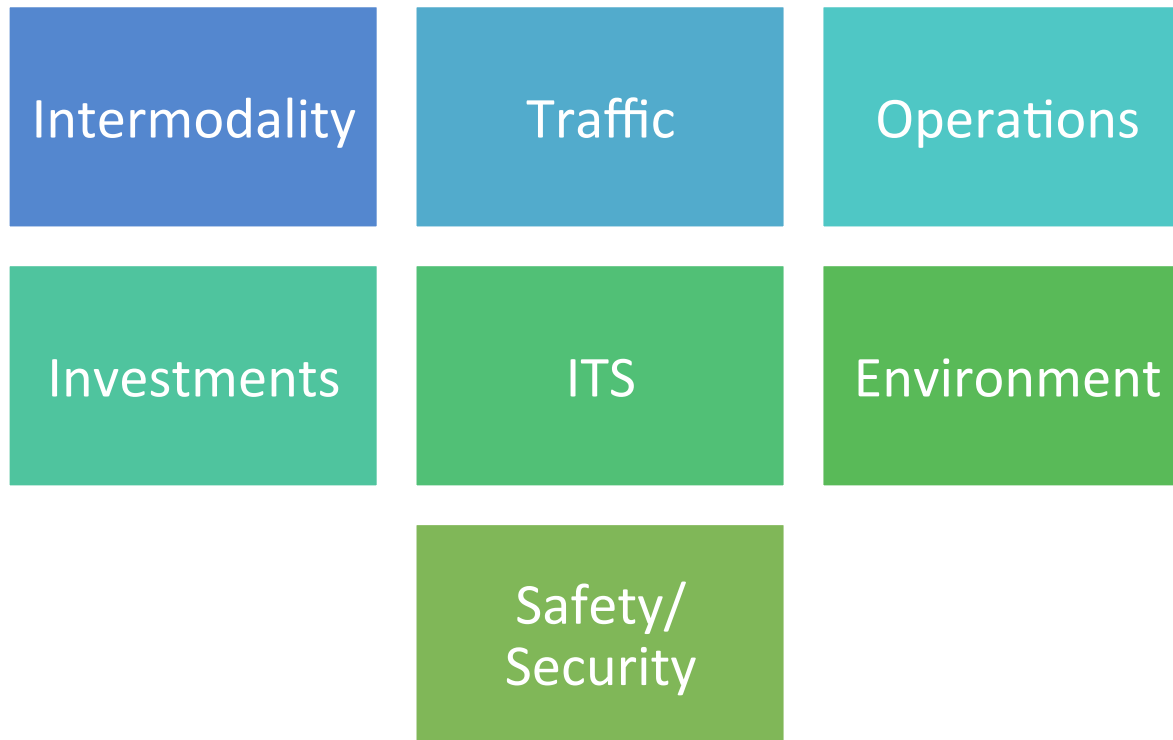
## Transport performance strategy

- Identification of better transport investment optimisation techniques that can efficiently address 3 parameters for a single “transport infrastructure investment project system”:
  - ✓ governance
  - ✓ management
  - ✓ finance elements
- Better designation of future investments of a single “transport infrastructure investment project system” through state-of-the-art research and innovation concepts that minimise risks and uncertainty.
- Innovative analytical framework for impacts and benefits arising from various different investments across modes, links and nodes of an integrated transport system

# T3 – Methodology Steps



# T3 - Identification of the set of Key Performance Indicators





# IDENTIFICATION OF TRANSPORT PERFORMANCE ELEMENTS AND CRITERIA

The partners are working to identify and analyse the Key performance indicators. These indicators are important part of Transport Performance Strategy. Transport Performance strategy is a methodology, that will enable to define the effect of any investment (infrastructure, administration, organisation) very precisely, defining therefore the strategy and action plan for future investments in the region in the field of environment-friendly, intermodal transport.

Key performance indicators:

SCORING	0,0	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9	1,0
SIGNIFICANCE	LDW				AVERAGE				HIGH		

Selected KPIs	Scores
<b>Intermodality indicators</b>	
1 Direct access to intermodality	
2 Direct access to rail line	
3 Time waiting for origin to be transferred from one mode to another (time in storage and time from origin to storage)	
4 Time spent by cargo awaiting departure of next mode of transport (road or rail)	
<b>Volume indicators</b>	
5 Net of cargo units per year	
6 Average tonnage per trip	
7 Total annual throughput (tons)	
8 Annual truck time	
9 Annual tonnage bulk commodities (dry, liquid)	
10 Annual tonnage non-bulk commodities	
11 Annual passenger traffic	
12 Annual vehicle traffic (trucks, buses, private)	
<b>Economic indicators</b>	
13 Business volume (turnover)	
14 Employment - both internal / turnover	
15 Return on Capital Employed (ROCE) - profits (EBITDA) / (Net Assets - Current liabilities)	
16 Congestion Travel Costs	
17 Contribution of Transportation to economic growth	
18 User logistics as a fraction of national GDP	
19 Transportation costs as a portion of total economic activity (per unit of GDP)	
<b>Operational indicators</b>	
20 Cargo dwell time	
21 Staff - non authority staff	
22 Staff - port community staff (ports terminal workers, etc.)	
23 Total gate discharge point	
24 Turn-around time (days)	
25 Loading time after berthing for unloading (in hours)	
26 Time spent in transferring cargo from storage to next mode of transport (including loading time)	
27 Time required for goods clearance	
<b>ITS indicators</b>	
28 Availability of GPS system	
29 Availability of visible VTS system for remote real time information exchange (electronic)	
30 Awareness shared between all stakeholders	
31 Availability of port community system	
32 Availability of berthing management system	
33 Availability of decision support system	
34 Electronic Customs Declaration (SAD)	
<b>Environment indicators</b>	
35 Environmental Management System (ISO 14001)	
36 Availability of alternative fueling facilities for trucks and ships	
37 Energy Management System	
38 Berthing Management System	
39 Pollution Recovery System	
<b>Security indicators</b>	
40 Compliance with ISPS	
41 Cyber Security System	
Total Score	

	Selected KPIs	Scores
	Intermodality Indicators	
1	Direct access to motorway	
2	Direct access to rail line	
3	Time waiting for cargo to be transferred from one mode to another (time in storage and time from quay to storage)	
4	Time spent by cargo awaiting departure of next mode of transport (road or rail)	
	Traffic Indicators	
5	No of Ships calls per year	
6	Average tonnage per ship	
7	Total annual throughput (tons)	
8	Annual TEUs total	
9	Annual tonnage bulk commodities (dry, liquid)	
10	Annual tonnage non-bulk commodities	
11	Annual passenger traffic	
12	Annual vehicle traffic (trucks, buses, private)	
	Economic/Investment Indicators	
13	Business volume (turnover)	
14	Profitability : Profit (EBITDA) / Turnover	
15	Return on Capital Employed (RoCE): Profit (EBITDA) / (Total Assets– Current Liabilities)	
16	Congestion Travel Costs	
17	Contribution of transportation to economic growth	
18	Local Logistics as a fraction of national GDP	
19	Transportation costs as a portion of total economic activity (per unit of GDP)	



	<b>Operational Indicators</b>	
20	Single Window	
21	Staff - Port Authority Staff	
22	Staff - Port Community staff (ports terminals' workers, etc.)	
23	Tons per ship-hour in port	
24	Turn-around time (cargo)	
25	Waiting time after berthing for unloading (in hours)	
26	Time spent in transferring cargo from storage to net mode of transport (including loading time)	
27	Time required for goods clearance	
	<b>ITS Indicators</b>	
28	Availability of EDI System	
29	Availability of suitable ICT system for remote real time information exchange (electronic document transfer) between all MoS stakeholders	
30	Availability of Port Community System	
31	Availability of bottleneck management system	
32	Availability of decision support system	
33	Electronic Customs Declaration (SAD)	
	<b>Environment Indicators</b>	
34	Environmental Management System (ISO 14001)	
35	Availability of alternative fuelling facilities for trucks and ships	
36	Energy Management System	
37	Waste Management System	
38	Pollution Recovery System	
	<b>Safety / security</b>	
39	Compliance with ISPS	
40	Cyber Security System	
	<b>Total Score</b>	



# T3 – ITS Indicators

No	Selected KPI	Brief Description	Units	Reference Values
	ITS INDICATORS			
ITI1	Availability of EDI System	Electronic data interchange system (EDI) is an electronic communication system that provides standards for exchanging data via any electronic means	-	Yes; No; Under development
ITI2	ICT system for electronic document transfer between all MoS stakeholders	Availability of suitable ICT system for remote real time information exchange (electronic document transfer) between all MoS stakeholders	-	Yes; No; Under development
ITI3	Availability of Port Community System	An electronic platform which connects the multiple systems operated by a variety of organisations	-	Yes; No; Under development
ITI4	Availability of bottleneck management system	Availability of a bottleneck management system to monitor and control transport bottlenecks	-	Yes; No; Under development
ITI5	Availability of decision support system	Availability of a door-to-door decision support system (showing prices/times of alternative services and modes)	-	Yes; No; Under development
ITI6	Electronic Customs Declaration (SAD)	Goods are declared by submitting a customs declaration in electronic form via the electronic communications channels	-	Yes; No; Under development

# HOW CAN YOU JOIN OUR WORK?

You can visit our website: <https://multiappro.adrioninterreg.eu/>

You can follow us on our social media accounts:

Linkedin : <https://www.linkedin.com/multiappro-eu-project-505924160/>

Facebook : <https://www.facebook.com/multiappro/>

Twitter: <https://twitter.com/multiappro>

Instagram: [https://www.instagram.com/multiappro\\_project/](https://www.instagram.com/multiappro_project/)

You can fill in bottleneck questionnaire (you can also find it on our official web page): <http://shortsea.hr/en/multiapproqe>

For any question, feel free to contact Lead partner :

**Intermodal Transport Cluster**

E-mail: [info@shortsea.hr](mailto:info@shortsea.hr)

Project manager: Tanja Vujnović Kereš



Thank you for your attention!

Lucio Rubini  
CFLI / Port of Venice

