INTEGRATION

INTEGRATION OF SEA LAND TECHNOLOGIES FOR AN EFFICIENT DOOR TO DOOR INTERMODAL TRANSPORT

A CONTRIBUTION OF TECHNOLOGY FOR THE ENHANCEMENT OF SHORT SEA SHIPPING AND THE EXECUTION OF THE MOTORWAYS OF THE SEA IN EUROPE

TEN-T
PUBLIC CONSULTATION CONFERENCE

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BRUSSELS, APRIL 5th 2005

THE COMMUNICATION OF THE EUROPEAN COMMISSION ON SHORT SEA SHIPPING

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 2. 7. 2004

Brussels, 2.7.2004
COM(2004) 453 final

COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

on Short Sea Shipping

{SEC(2004) 875}

"Towards increased competitiveness of the waterborne transport, the Commission funded FP5 research project INTEGRATION delivers concrete results for automated loading - unloading technologies towards increased short-sea freight transport and terminal/ports operations volumes. Gathering expertise from all around Europe, major stakeholders such as handling systems and equipment suppliers, shipyards, terminal operators and port authorities as well as shipping companies are in the stage of validation of the innovative solutions in the selected demonstration sites."

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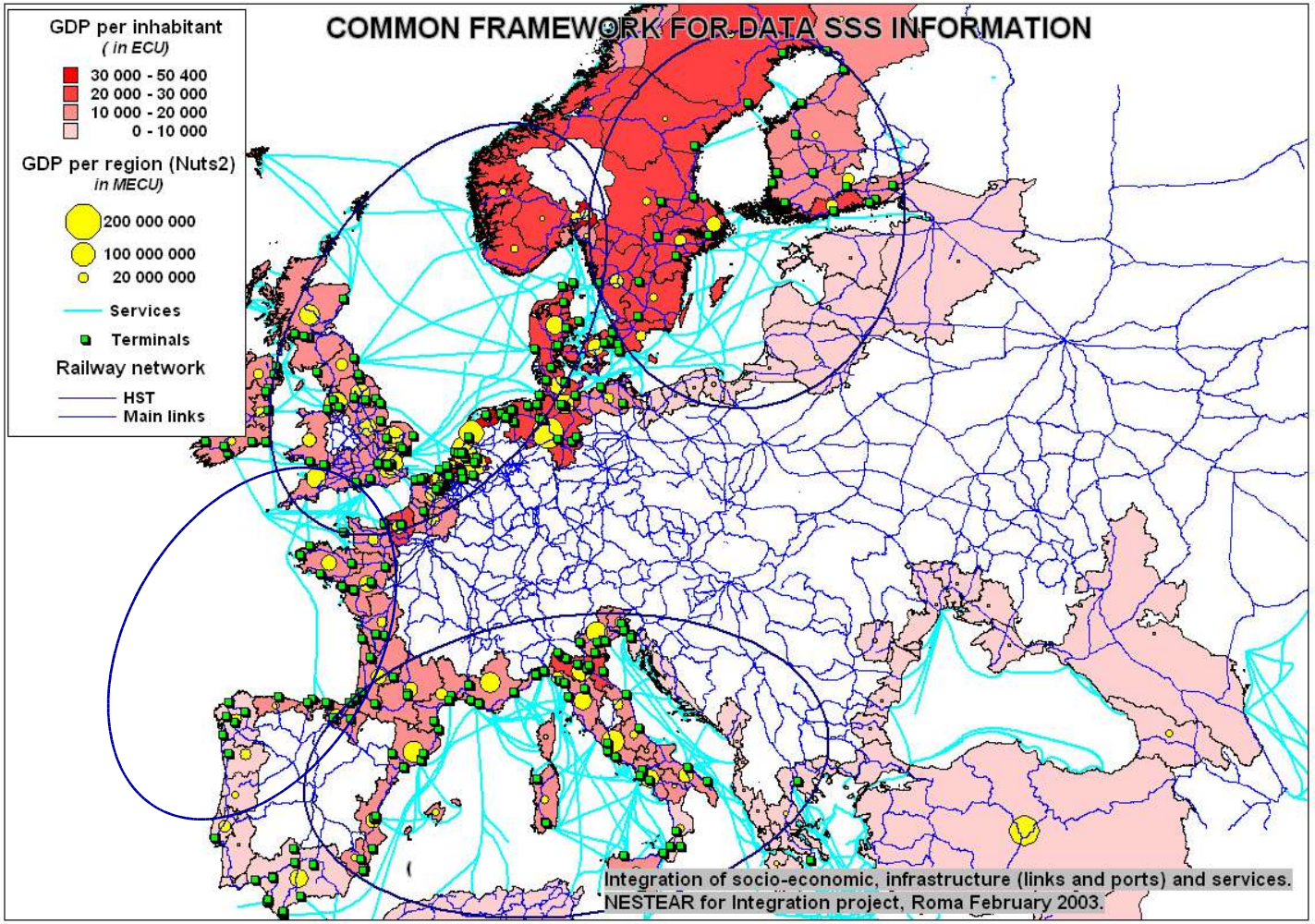
DOOR TO DOOR FREIGHT TRANSPORT SCENARIOS



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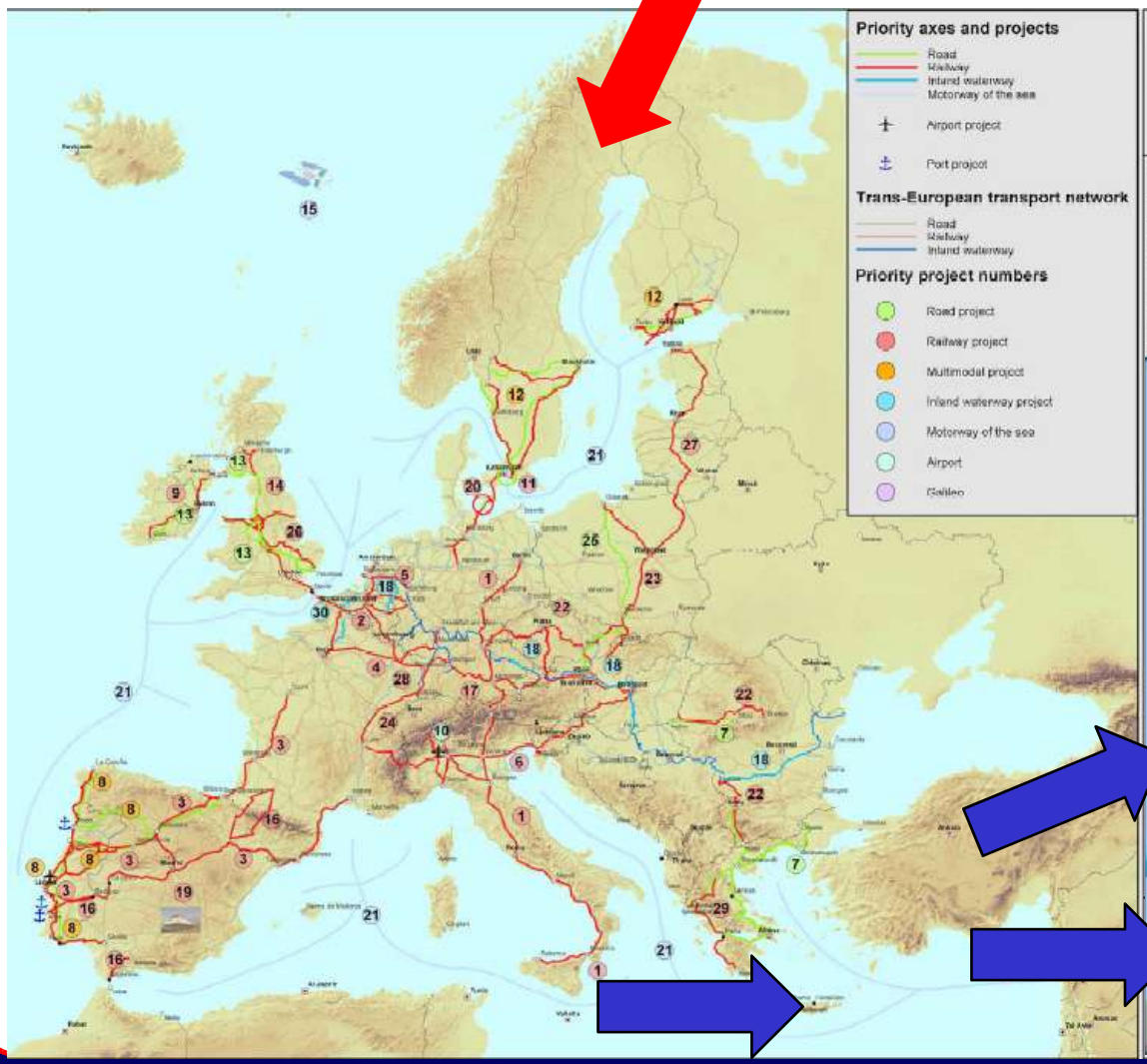
PRIORITY AXES AND PROJECTS
TRANS-EUROPEAN TRANSPORT NETWORK



MOTORWAYS OF THE SEA

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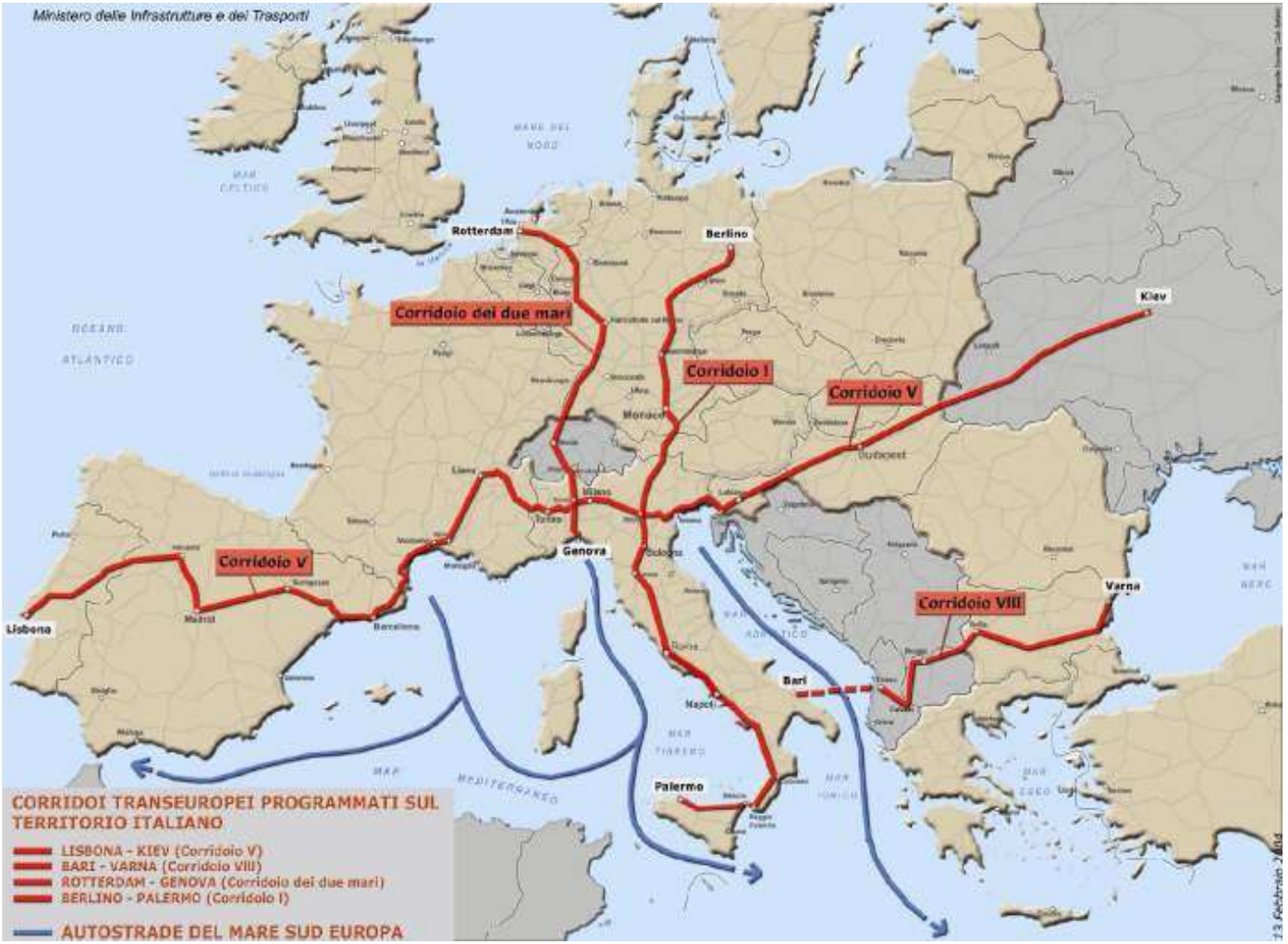
MEDITERRANEAN CASE



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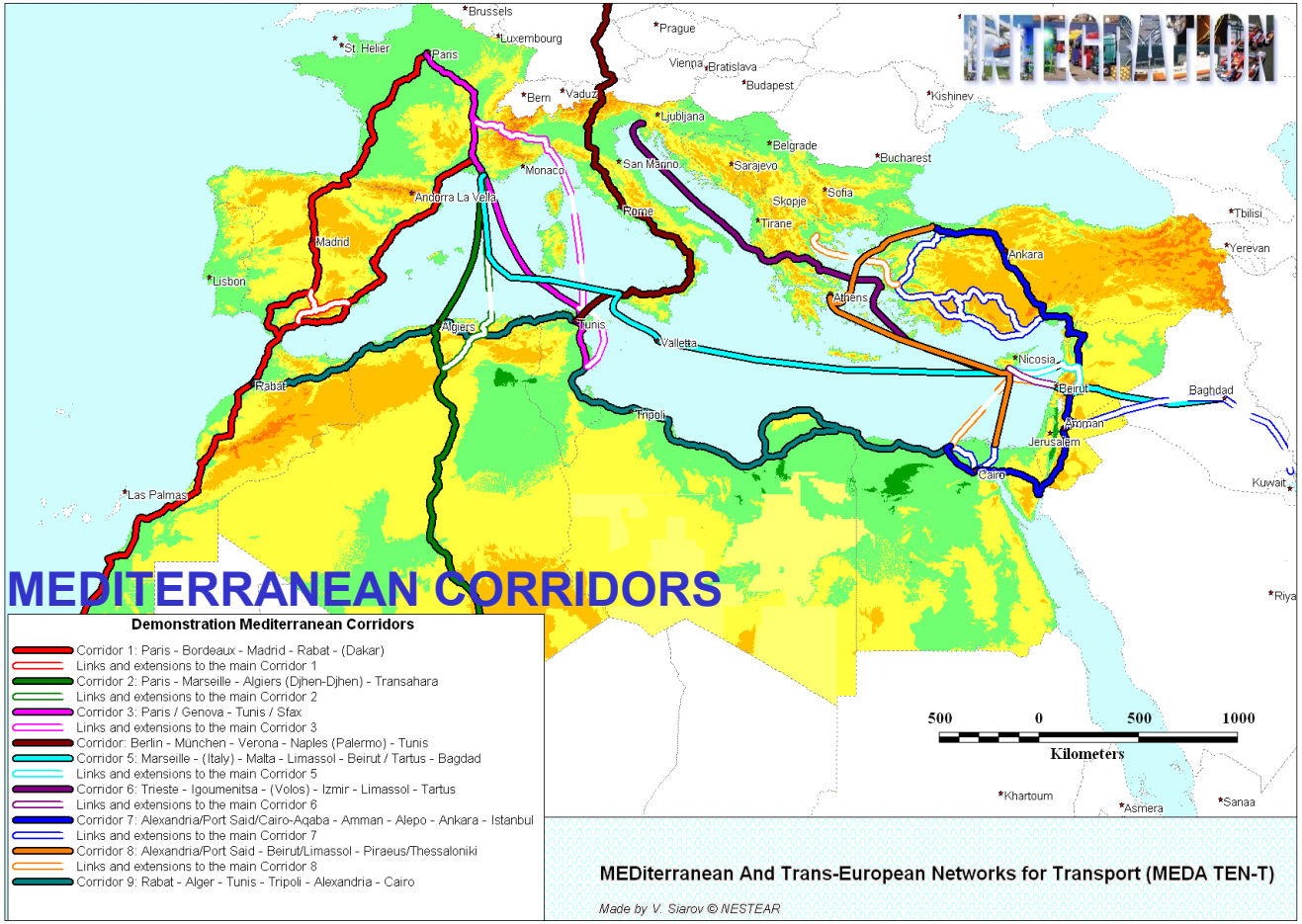
MEDITERRANEAN AND TRANSEUROPEAN NETWORK FOR TRANSPORT MEDA TEN T



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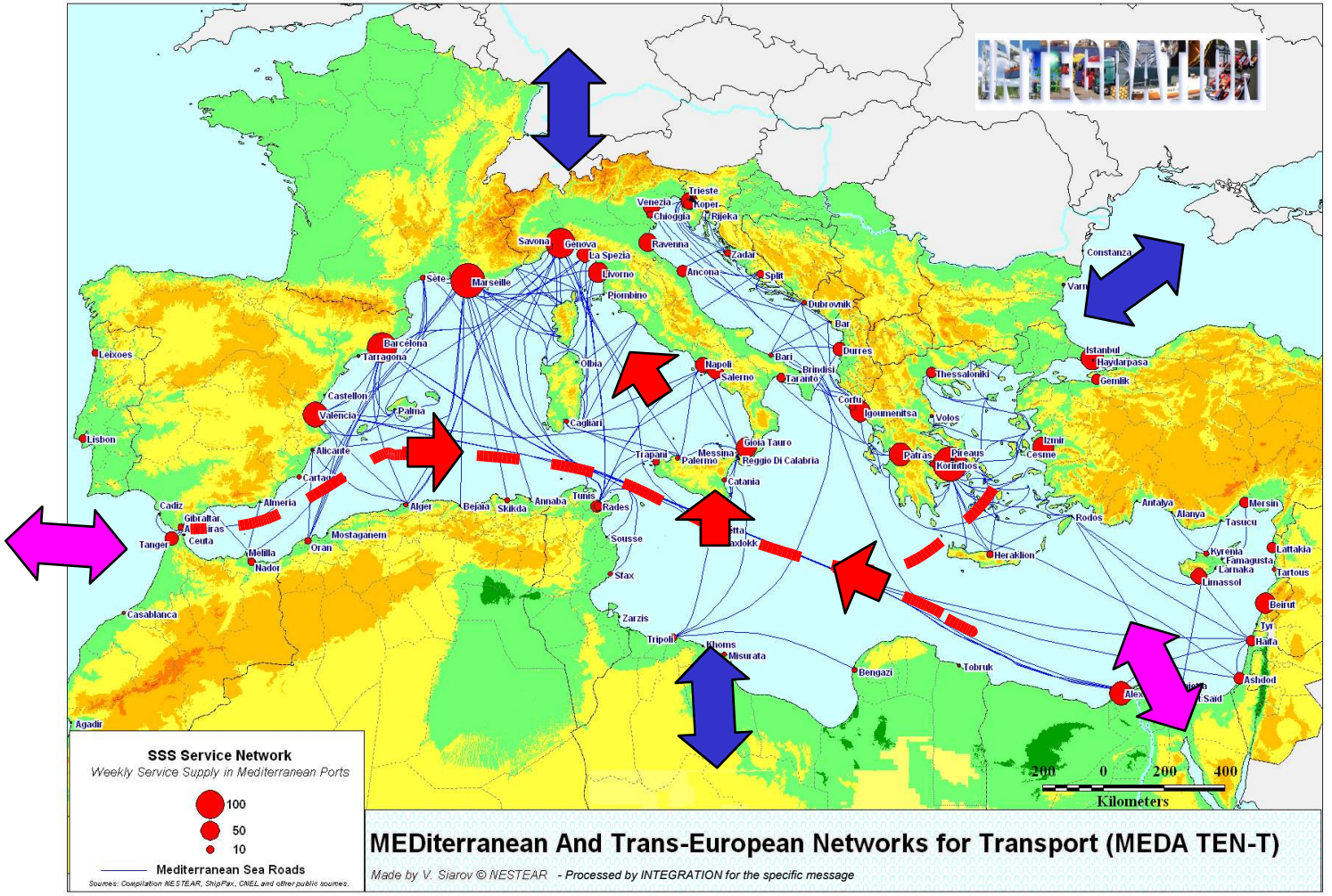
RORO MOTORWAYS OF THE SEA



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RORO MOTORWAYS OF THE SEA

THE CARGO

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INTEGRATED RORO SYSTEM SHIPS & TERMINALS

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ENABLING TECHNOLOGIES

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THE NEW 350 - 1500 TEUs RORO / FEEDER SHIP SERIES

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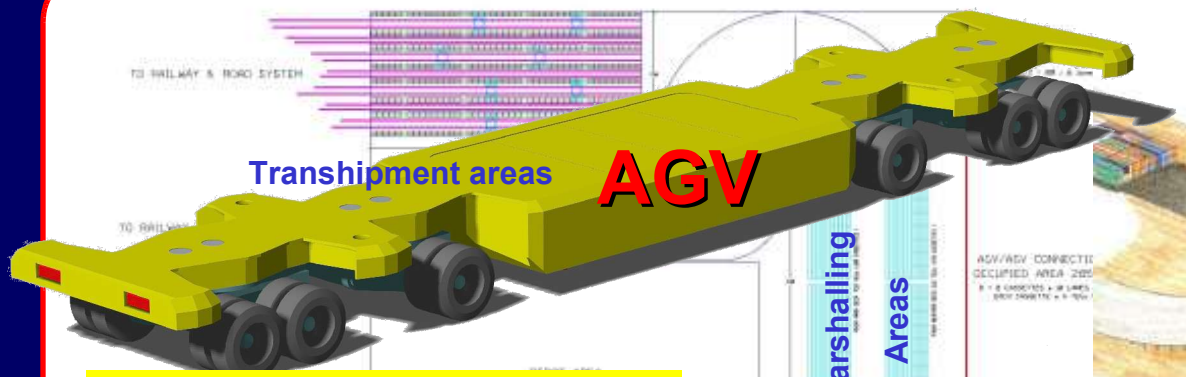
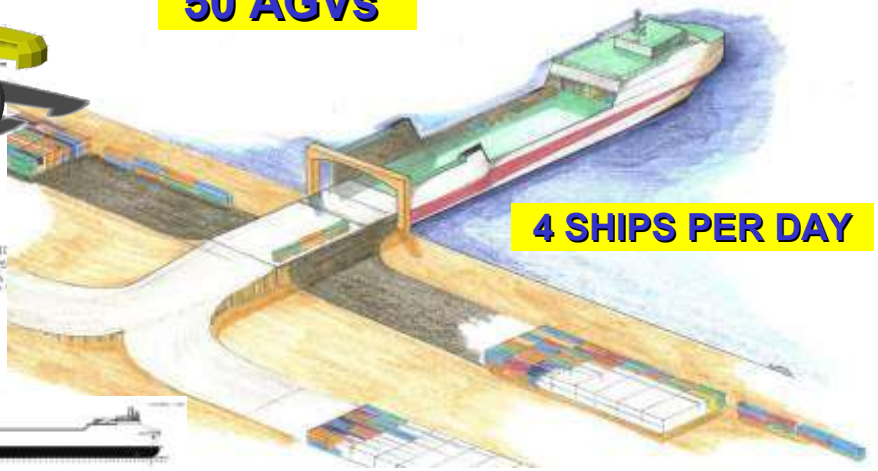
RO-RO INTEGRATED SHIP - SHORE SYSTEMS
AUTOMATED TERMINAL



Transhipment areas

50 AGVs



4 SHIPS PER DAY

Total Area 600 000 / 700 000 m2

RO-RO
Lenght 204 m
Speed 20,5 knots

70 AUTOMATED STACKING CRANE

1500 TEUs

750 CASSETTES (1500 TEUs)

TOTAL LOADING/UNLOADING TIME 6h

More than 2 Millions TEUs / Year

UP TO 30/35000 TEUs / Ha / Year

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RORO INTEGRATED SHIP – SHORE SYSTEMS

TODAY TERMINAL AT HIGH CAPACITY

LOW INVESTMENT COST

CARGO UNITS

- TRAILERS:

- CONTAINERS/ INTERMODAL UNITS:

TERMINAL AREAS

- CONTAINER MARSHALLING AREA
- TRAILER MARSHALLING AREA
- CONTAINER STOCKING AREA
- TRAILER STOCKING AREA
- TRAILER TRESTLES DEPOT
- CASSETTES DEPOT
- EXTERNAL FIXED RAMP

TERMINAL EQUIPMENT

- TRAILER TRESTLES:

- REACH STACKER:

- TUG MASTER:

- CASSETTES:

- TRANSLIFTER:

- FORK LIFT:

TO – FROM LAND

LAND MODE

- ROAD TRUCK:

- RAIL WAGON:

SHIP

- LENGTH
- NR OF DECKS
- LANES MT
- NR OF EQUIVALENT TEU

TO – FROM SEA

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CONTAINER FEEDER SERVICE
2 MILION TEUs PER YEAR

EFFICIENCY OF RORO VS LO-LO CURRENT FEEDERING SYSTEMS
THEORETICAL EXERCISE

1500 TEUs SHIPS

SHIPS SPEED 20 knots

25 CONTAINER FEEDER SHIPS

15 RORO FEEDER SHIPS

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MOTORWAYS OF THE SEA ARE TRANSPORT INFRASTRUCTURES AS RAILWAYS AND ROADS

THESE INFRASTRUCTURES ARE COMPOSED BY:

- SHIPS
- TERMINAL FACILITIES
- CARGO HANDLING FACILITIES

TO START

USING THE MOTORWAY OF THE SEA
FOR HIGH VOLUMES AND EFFICIENT
FREIGHT TRANSPORT SERVICES
NOT MORE THAN TWO YEARS ARE REQUIRED

THE RELEVANT INVESTMENTS ARE VERY LIMITED
IF COMPARED TO THOSE OF RAILWAYS AND ROADS

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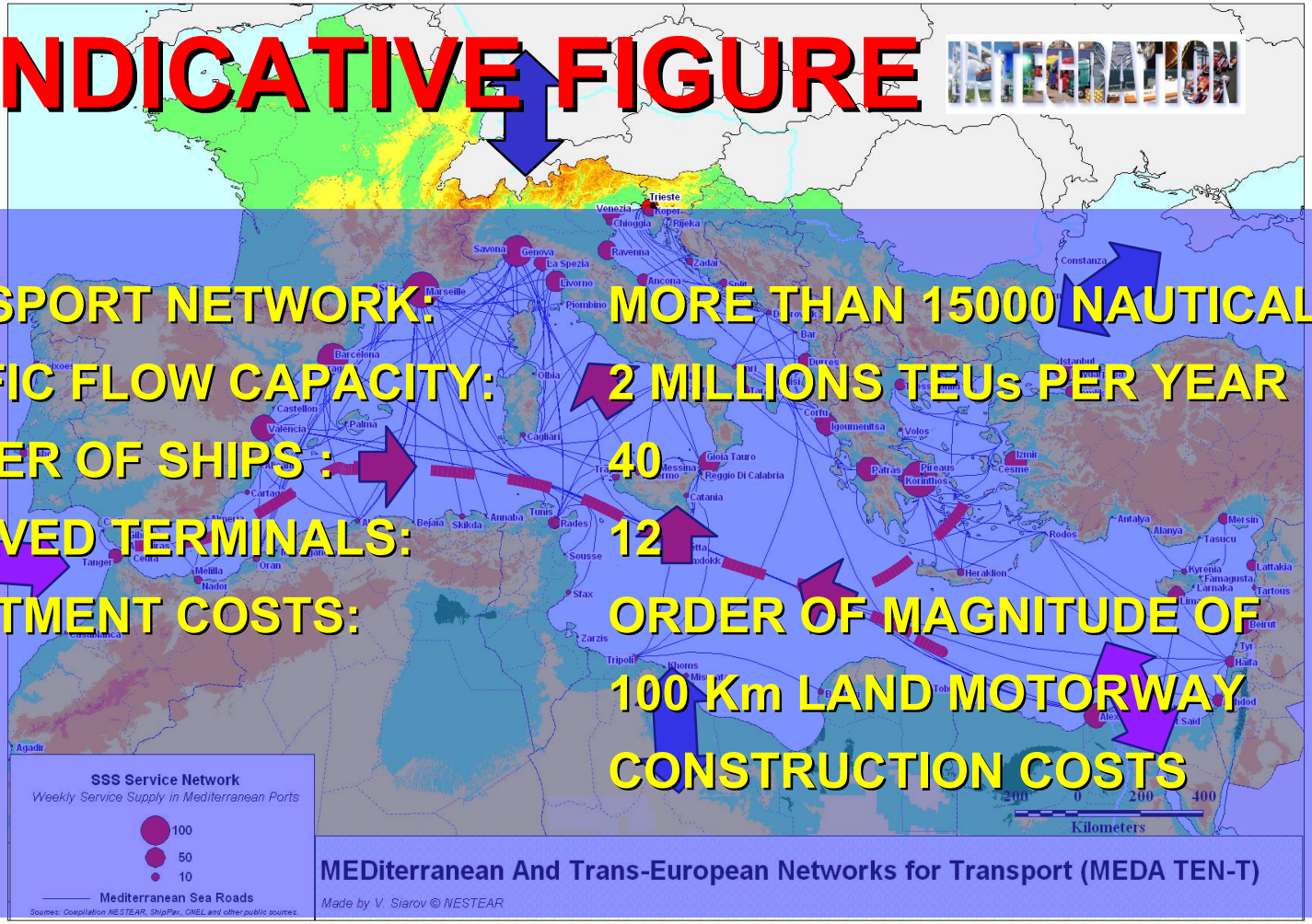
IMPLEMENTATION OF THE MOTORWAYS OF THE SEA USING "INTEGRATION RORO SYSTEMS"

AN INDICATIVE FIGURE



TRANSPORT NETWORK: MORE THAN 15000 NAUTICAL MILES

TRAFFIC FLOW CAPACITY: 2 MILLIONS TEUs PER YEAR

NUMBER OF SHIPS : 40

INVOLVED TERMINALS: 12

INVESTMENT COSTS: ORDER OF MAGNITUDE OF

100 Km LAND MOTORWAY

CONSTRUCTION COSTS