Venice and the North Adriatic Ports as the European Gateway of the Greenest XXI century Maritime Silk Road

Venice Port Authority

Venice
Port Authority

Paolo Costa, President

Venice, 10-11 July 2016

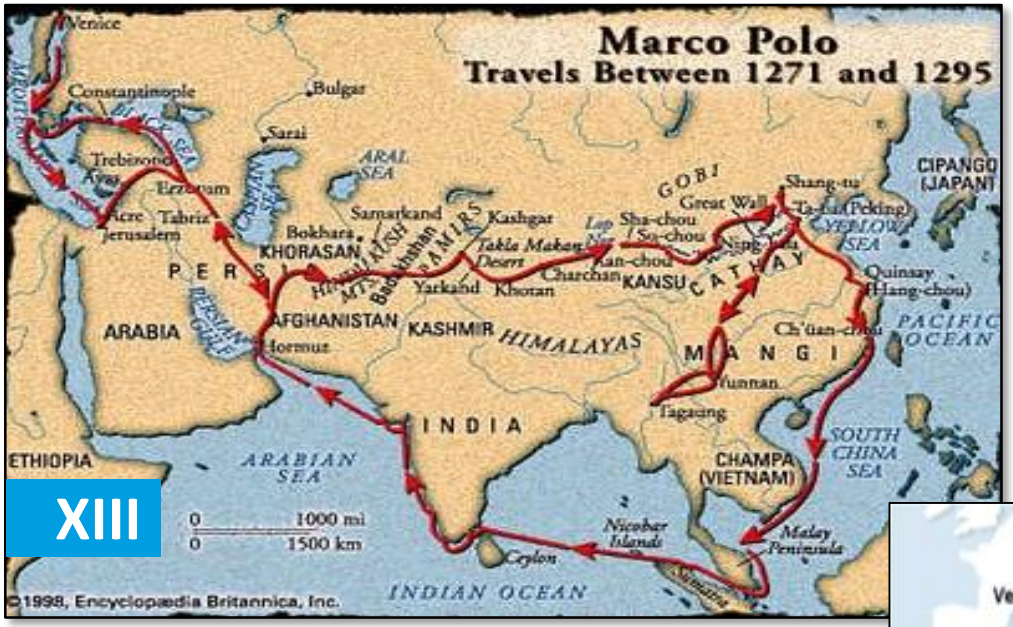
The Maritime and Land Silk Road

Map showing some of the potential routes of the maritime and land **Silk Road that was published online by Xinhua, China's state news agency, in March 2014** *Source: http://www.xinhuanet.com/*

The 21st century maritime link between Asia and Europe is only a variation of the ancient Silk Road.

The only difference between the "maritime" Silk Road used by Marco Polo and that one currently used by the "Phoenician Express", direct container service operated by Ocean Alliance between Shangai and Venice, is the modern availability of the Suez Canal.

XIII and XXI century Maritime Silk Road (Suez Canal)



- ❑ <u>In export</u>, travelling days **from Venice to Chiwan** are **30 days, 34 to Shanghai**
- ❑ From **Chiwan to Venice**, <u>in import</u>, are just **25 days**

Phoenician Express (CMA-CGM, Cosco Container Lines, Evergreen Line e Orient Overseas Container Line)

The XXI Century Maritime Silk Road in the Mediterranean

- **Athens (Piraeus) "and" Venice and the North Adriatic Ports?**

Or

- **Athens (Piraeus) "versus" Venice and the North Adriatic Ports?**

Map showing some of the potential routes of the maritime and land **Silk Road that was published online by Xinhua, China's state news agency, in March 2014** *Source: http://www.xinhuanet.com/*

The XXI Century Maritime Silk Road in the Mediterranean

Athens (Piraeus) "and" Venice in the OBOR strategy:

- **Athens as the Mediterranean transhipment port of the Maritime Silk Road**

"and"

- **Venice and the North Adriatic Ports as its European destination gateway?**

The XXI Century Maritime Silk Road in the Mediterranean

Athens (Piraeus) "versus" Venice and the North Adriatic Ports

Athens as European destination gateway would add a longer land leg against the longer and greener maritime leg of Venice and the North Adriatic

Why Venice and the North Adriatic ports (Ravenna, Trieste, Koper and Rijeka) can become the best maritime Silk Road's European destination gateway

Because Venice and the North Adriatic are at the "right place" to make the Maritime Silk Road greener and with the best time/cost ratio:

- longest maritime leg with bigger and cleaner vessels (18.000 TEU and more);
- shortest land leg to "manufacturing Europe";
- innovative port and logistics handling of megacargoes.

Venice and the greenest and most time/cost efficient XXI Century Maritime Silk Road

Venice and other North Adriatic ports can take mega vessels (ULCV of 18.000 TEU and beyond) carrying **more than 6 million TEU per year** by 2030 to the heart of the European market because of its:

Shortest route from China to «Manufacturing Europe»

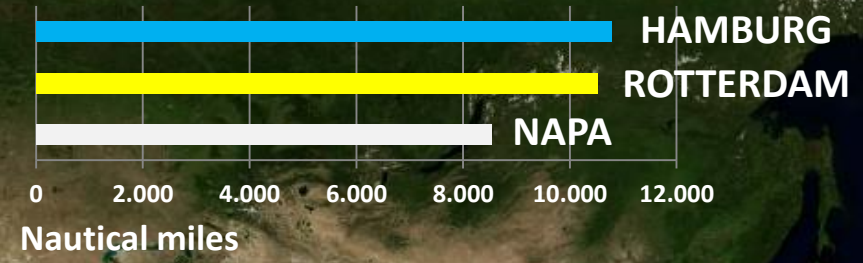
1. The shortest (and less costly) maritime-leg;
2. The most efficient port and logistics handling;
3. The shortest land-leg.

ECONOMIC DRIVERS

Least generalized transport cost

1. Lower direct costs;
2. Lower indirect costs;
3. The (least costly) port & logistics for mega cargoes carried by mega vessels (more than 18.000 TEU).

MARITIME LEG: The shortest sea route to the heart of Europe



Port of Venice (Italy)
Port of Trieste (Italy)
Port of Ravenna (Italy)
Port of Koper (Slovenia)
Port of Rijeka (Croatia)

North Adriatic Ports

Shanghai

Close to Asia

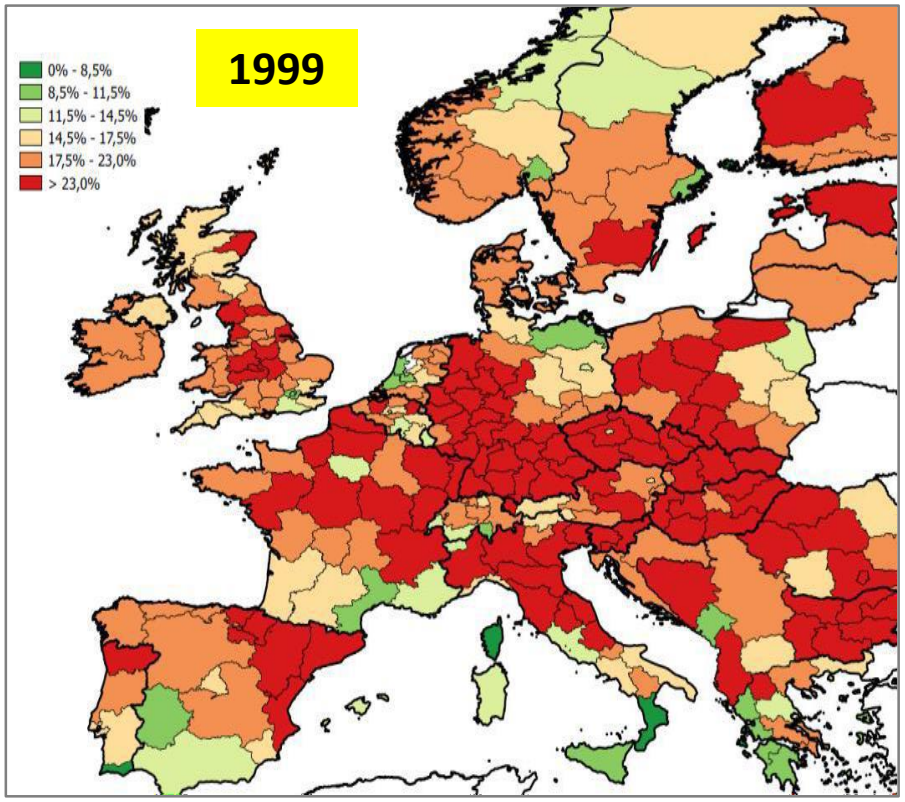
Shanghai 20 days – 8630 NM

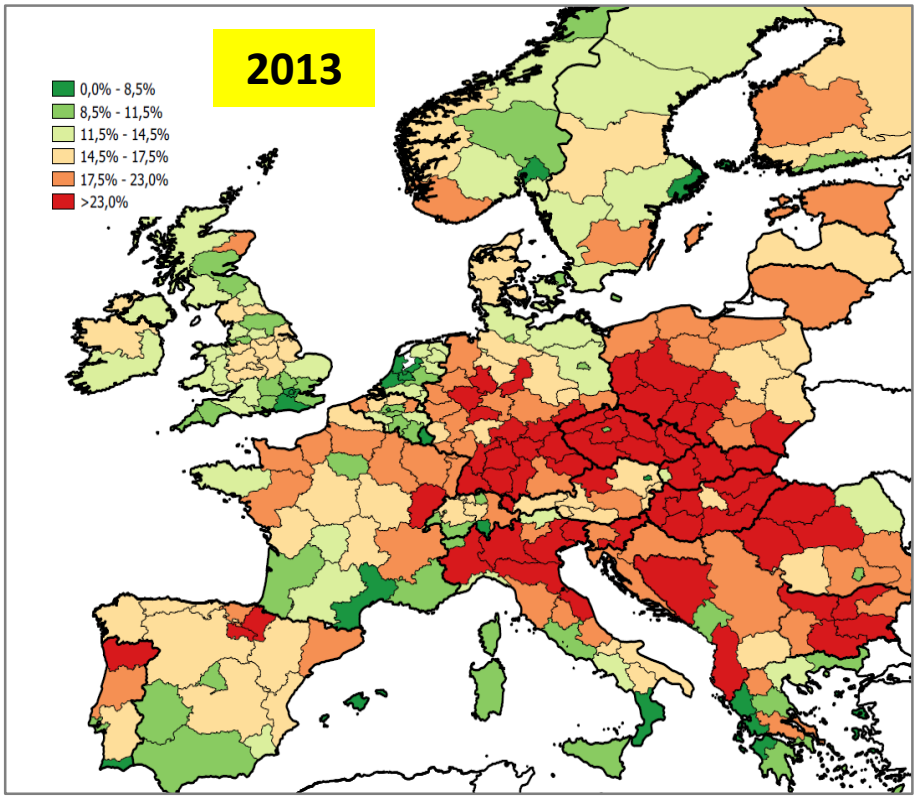
PORT OF VENICE

LAND LEG: The shortest land route to “manufacturing Europe”

The North Adriatic ports are the nearest to **manufacturing Europe**, which has moved towards East.

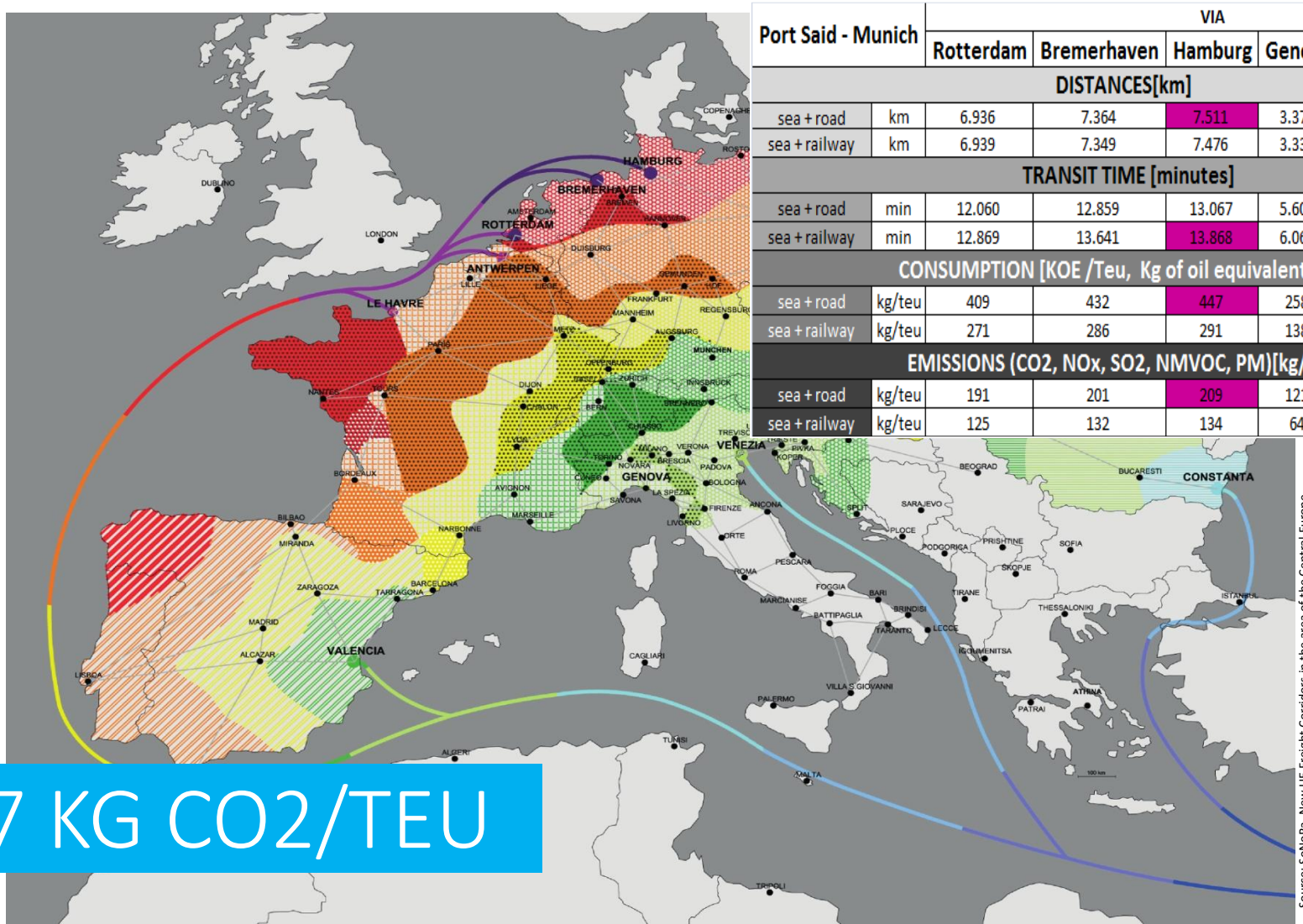
Share of manufacturing employment on total employment: the relevant eastbound shift





(source: VPA elaboration on Eurostat data)

LAND LEG: The greenest way from China to "manufacturing Europe"



Port Said - Munich		VIA					
		Rotterdam	Bremerhaven	Hamburg	Genova	Trieste	Venezia
DISTANCES[km]							
sea + road	km	6.936	7.364	7.511	3.374	3.155	3.009
sea + railway	km	6.939	7.349	7.476	3.332	3.116	2.973
TRANSIT TIME [minutes]							
sea + road	min	12.060	12.859	13.067	5.609	5.054	5.040
sea + railway	min	12.869	13.641	13.868	6.065	5.648	5.446
CONSUMPTION [KOE /Teu, Kg of oil equivalent/teu]							
sea + road	kg/teu	409	432	447	258	253	214
sea + railway	kg/teu	271	286	291	138	132	121
EMISSIONS (CO2, NOx, SO2, NMVOC, PM)[kg/teu]							
sea + road	kg/teu	191	201	209	121	119	101
sea + railway	kg/teu	125	132	134	64	61	56

-97 KG CO2/TEU

Source: SoNoRa, New UE Freight Corridors in the area of the Central Europe, Research Unit, Transport, Territory and Logistics (TTL) University IUAV of Venice, Dec 2009

How Venice and the North Adriatic ports will act as OBOR's European Gateway Terminal?

North Adriatic Ports:

current trends

North Adriatic Ports Traffic Growth in spite of the "great recession"

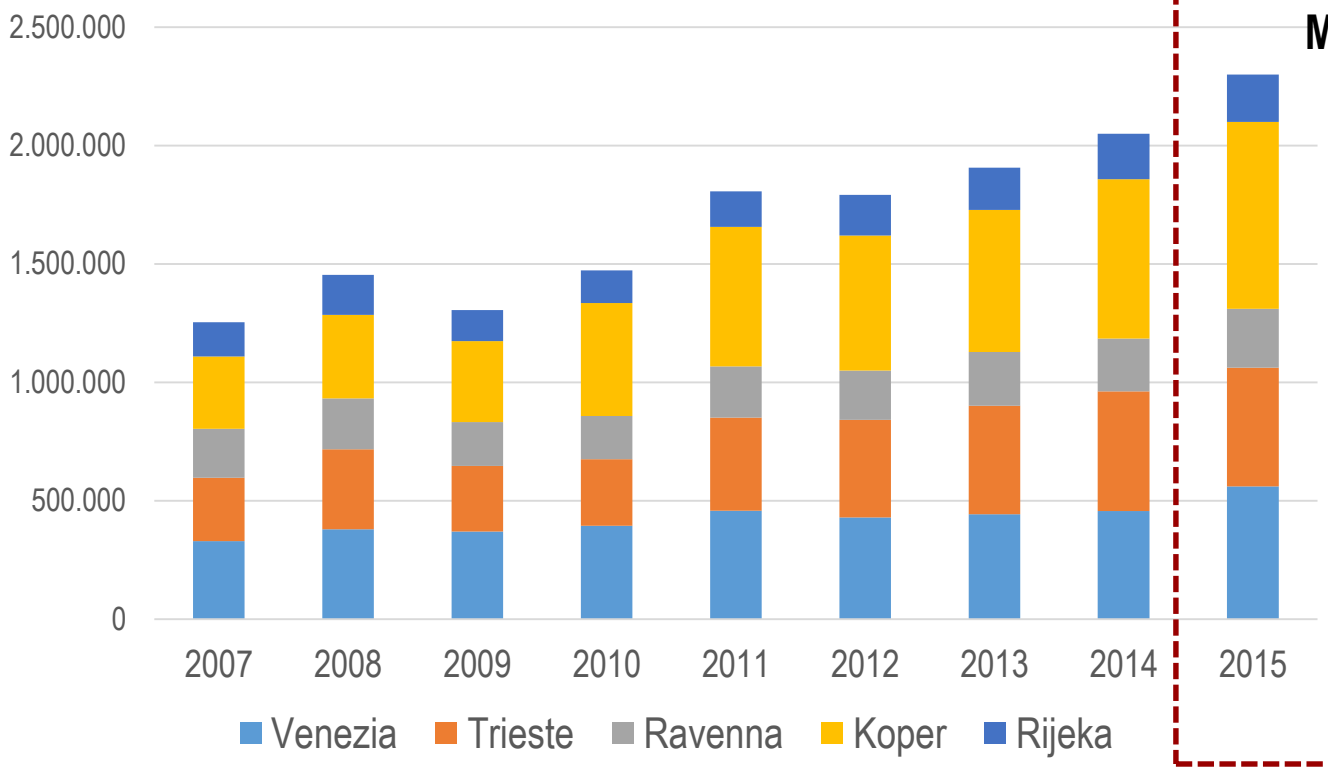
Since the financial and economic crisis has started, the North Adriatic ports traffics have continued thriving. This growth has been particularly significant for the container sector; indeed, from 2009 to 2015,

- **Northern Adriatic ports' TEU traffics raised by 77%** (from 1.3 to 2.3 million TEU)
- Baltic Ports rose their traffic by 48%,
- Northern Range ports by 22%
- Tyrrhenian ports by 31%

		2009	2010	2011	2012	2013	2014	2015
Total North Adriatic Ports	**Container (TEUs)**	**1.305.358**	**1.467.791**	**1.806.876**	**1.788.757**	**1.902.451**	**2.050.664**	**2.297.220**
	Dry Bulk (ton.)	**24.911.511**	**26.188.347**	**27.121.971**	**27.153.276**	**25.279.281**	**26.247.139**	**28.099.715**
	Liquid bulk (ton.)	**60.029.773**	**61.429.186**	**59.066.473**	**58.903.022**	**64.282.074**	**61.672.762**	**64.361.301**
	General Cargo (Ton)	**27.734.866**	**33.660.349**	**38.156.545**	**36.421.584**	**40.310.093**	**43.461.469**	**46.155.678**
	Total (ton.)	**112.676.150**	**121.277.882**	**124.344.989**	**122.477.882**	**129.871.448**	**131.381.370**	**138.616.694**

		2009	2010	2011	2012	2013	2014	2015
Venice	**Container (TEUs)**	**369.474**	**393.913**	**458.363**	**429.893**	**446.591**	**456.068**	**560.301**
	Dry Bulk (ton.)	**6.321.611**	**6.425.703**	**6.608.355**	**6.458.942**	**6.542.113**	**7.001.983**	**7.332.689**
	Liquid bulk (ton.)	**11.674.399**	**11.928.847**	**11.210.813**	**11.113.184**	**9.945.840**	**6.889.980**	**8.953.918**
	General Cargo (Ton)	**7.202.168**	**8.035.208**	**8.502.533**	**7.803.708**	**7.923.424**	**7.887.095**	**8.817.611**
	Total (ton.)	**25.198.178**	**26.389.758**	**26.321.701**	**25.375.834**	**24.411.377**	**21.779.058**	**25.104.218**

North Adriatic Ports Traffic Growth: container sector

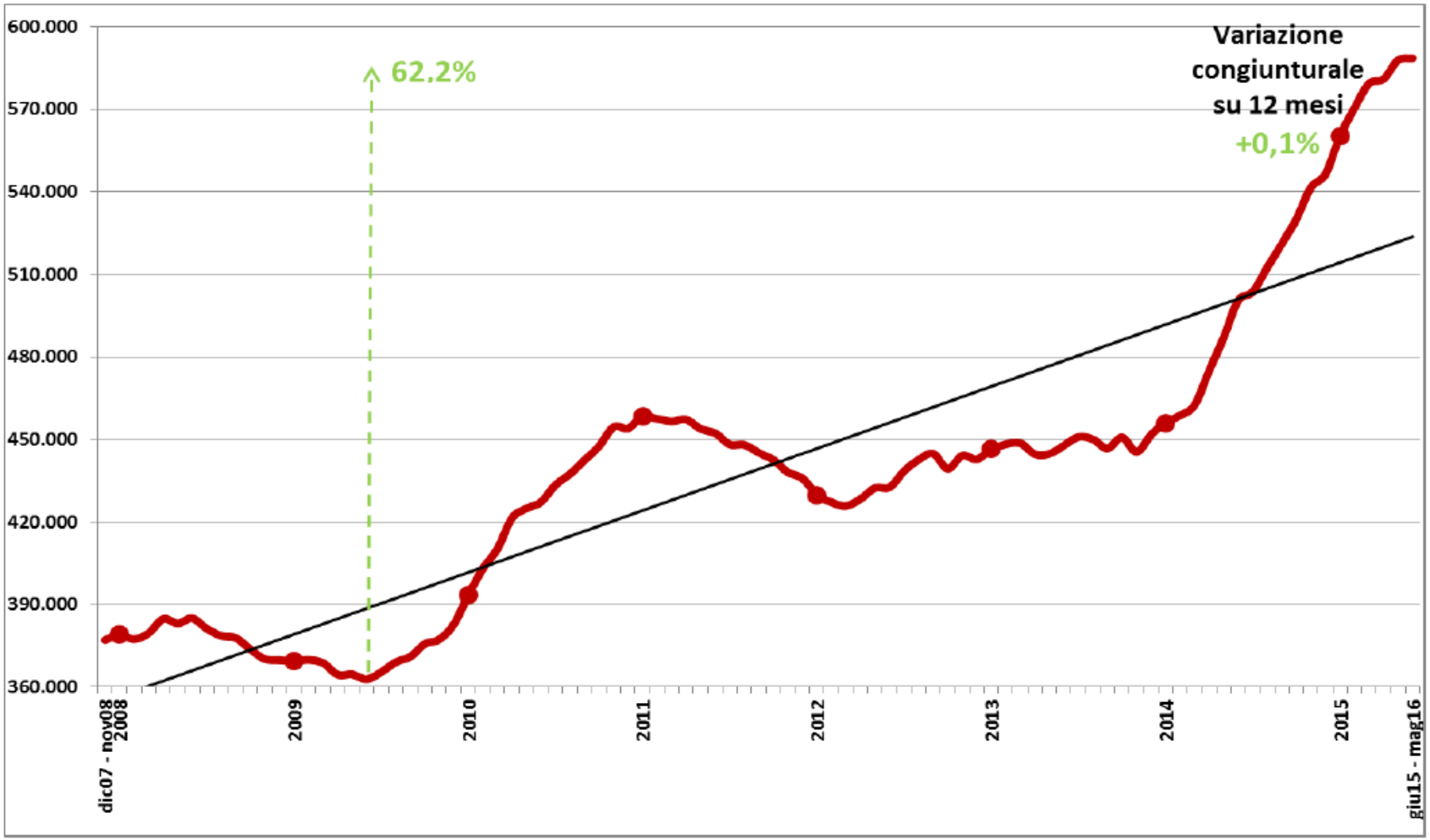


Market share 2015

Rijeka	9,5%
Koper	37,6%
Ravenna	11,9%
Trieste	23,9%
Venezia	26,7%

TEU	2007	2008	2009	2010	2011	2012	2013	2014	2015
Venezia	329.512	379.072	369.474	393.900	458.363	429.893	443.000	456.068	560.439
Trieste	267.854	338.299	277.245	281.629	393.195	411.247	458.497	506.011	501.276
Ravenna	206.580	214.324	185.022	183.053	215.336	208.152	226.879	222.548	249.000
Koper	305.648	353.880	343.165	476.731	589.314	570.744	600.000	674.033	790.000
Rijeka	145.040	168.761	130.740	137.048	150.677	171.945	177.898	192.004	200.000
Total	**1.254.634**	**1.454.336**	**1.305.646**	**1.472.361**	**1.806.885**	**1.791.981**	**1.906.274**	**2.050.664**	**2.100.715**

Venice Container Port Figures

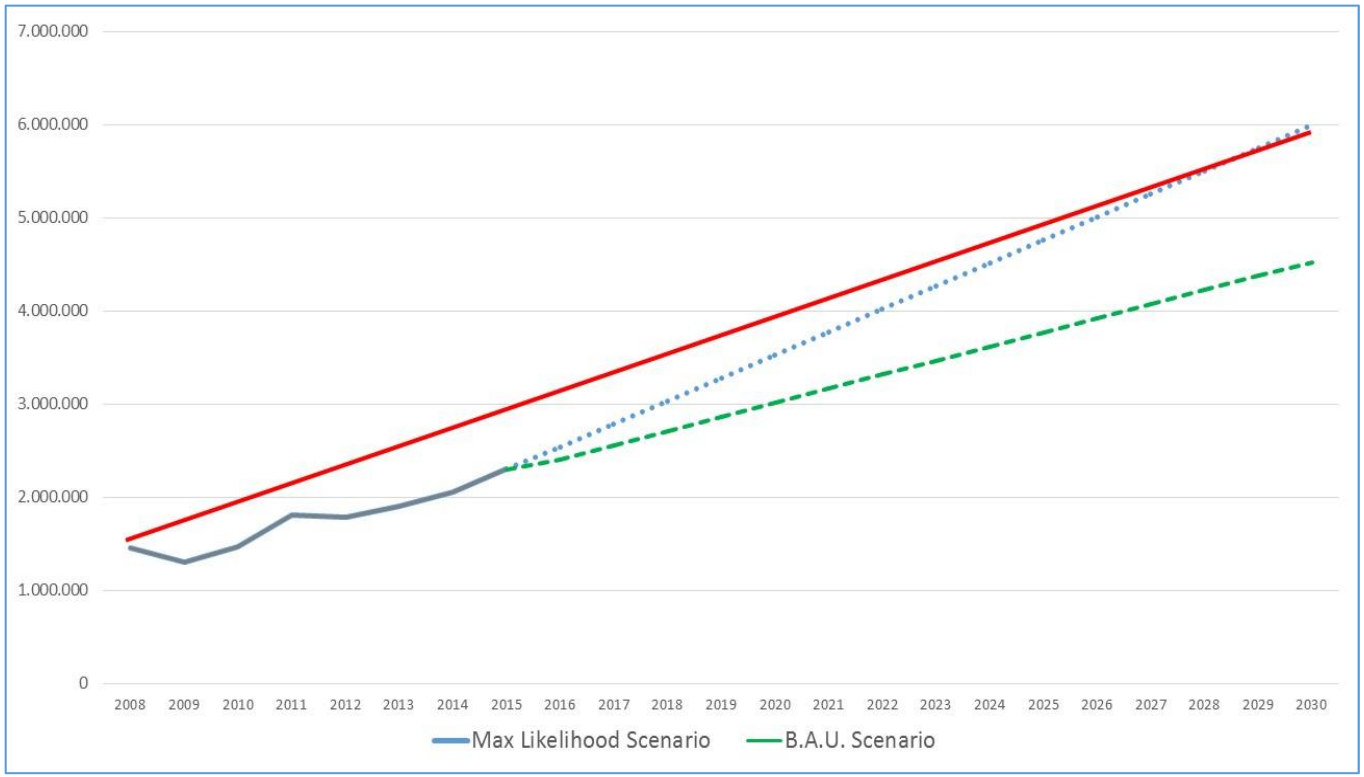


Source: VPA

North Adriatic Ports Container Traffic Forecasts

The **red line** identify the trend towards the 6 million TEU target by 2030.
The two lines covering the period 2016-2030 are two TEUs throughput forecasts, specifically:

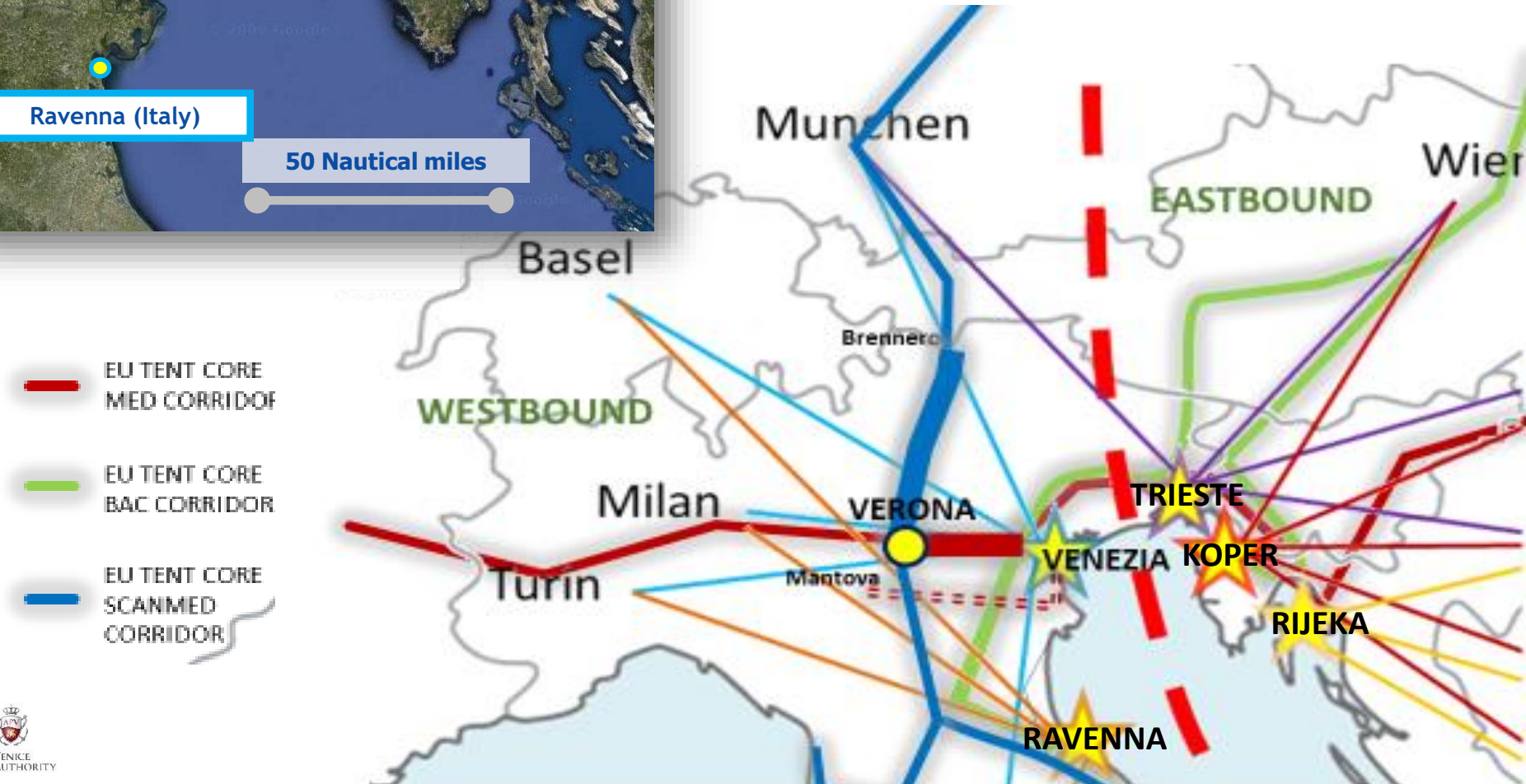
- **Green: Business as Usual**, is the traffic forecast based on the present market situation ;
- **Blue: Max Likelihood** is the traffic forecast as result of the infrastructure development for increasing the ports' capacity



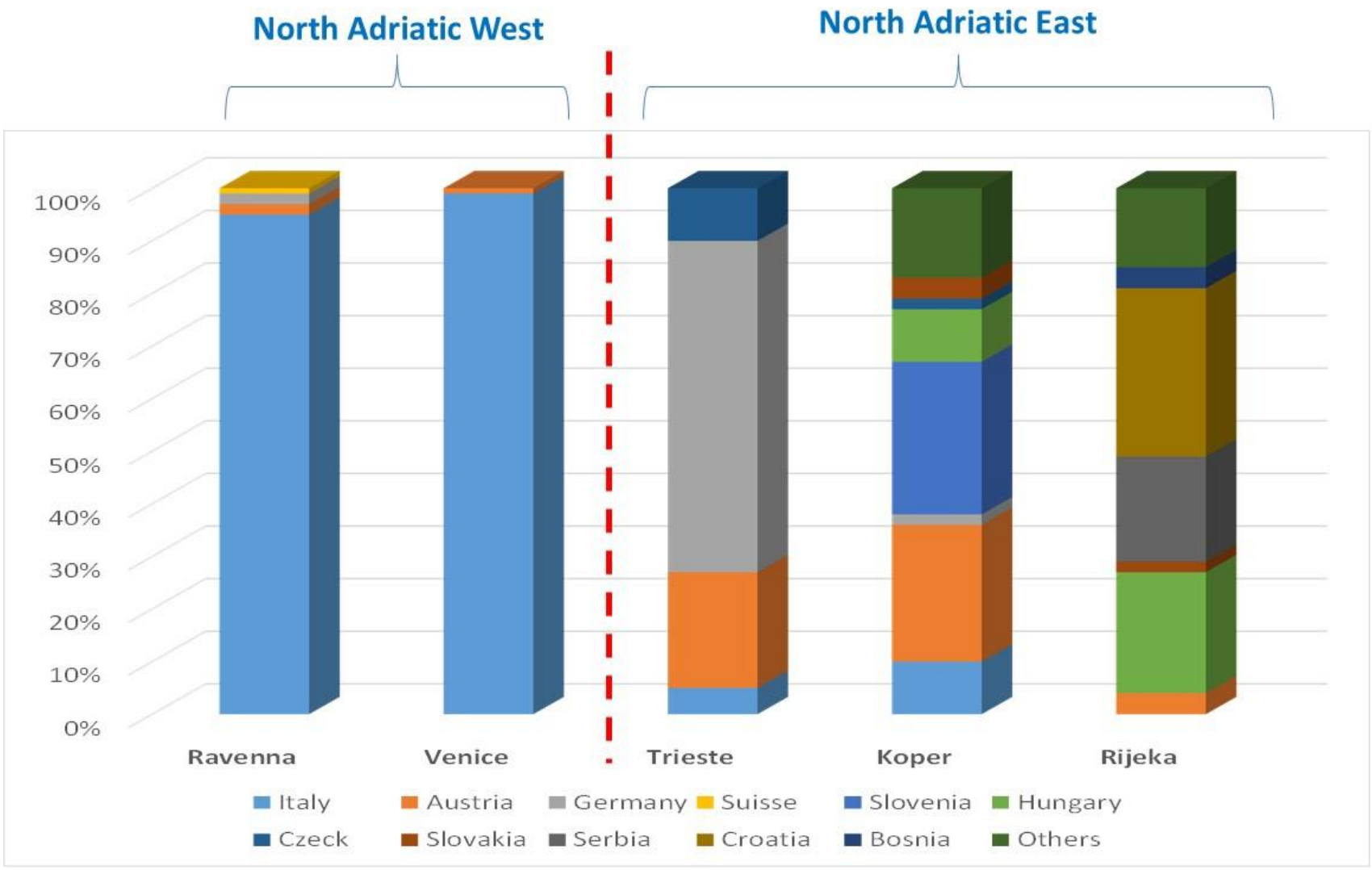
North Adriatic:

One sea, two markets

North Adriatic: one sea, two markets



North Adriatic: one sea, two markets



North Adriatic Ports:

Combining

traditional and innovative

terminal operational schemes

«ONE CALL» OFFSHORE-ONSHORE INNOVATIVE WEST TERMINAL MODEL

VENICE (ONSHORE TERMINAL)

CHIOGGIA (ONSHORE TERMINAL)

RAVENNA (ONSHORE TERMINAL)

OFFSHORE TERMINAL

MEGA SHIPS
18.000/22.000 TEUs

«MULTI CALL» TRADITIONAL EAST TERMINAL MODEL

TRIESTE

KOPER

RIJEKA

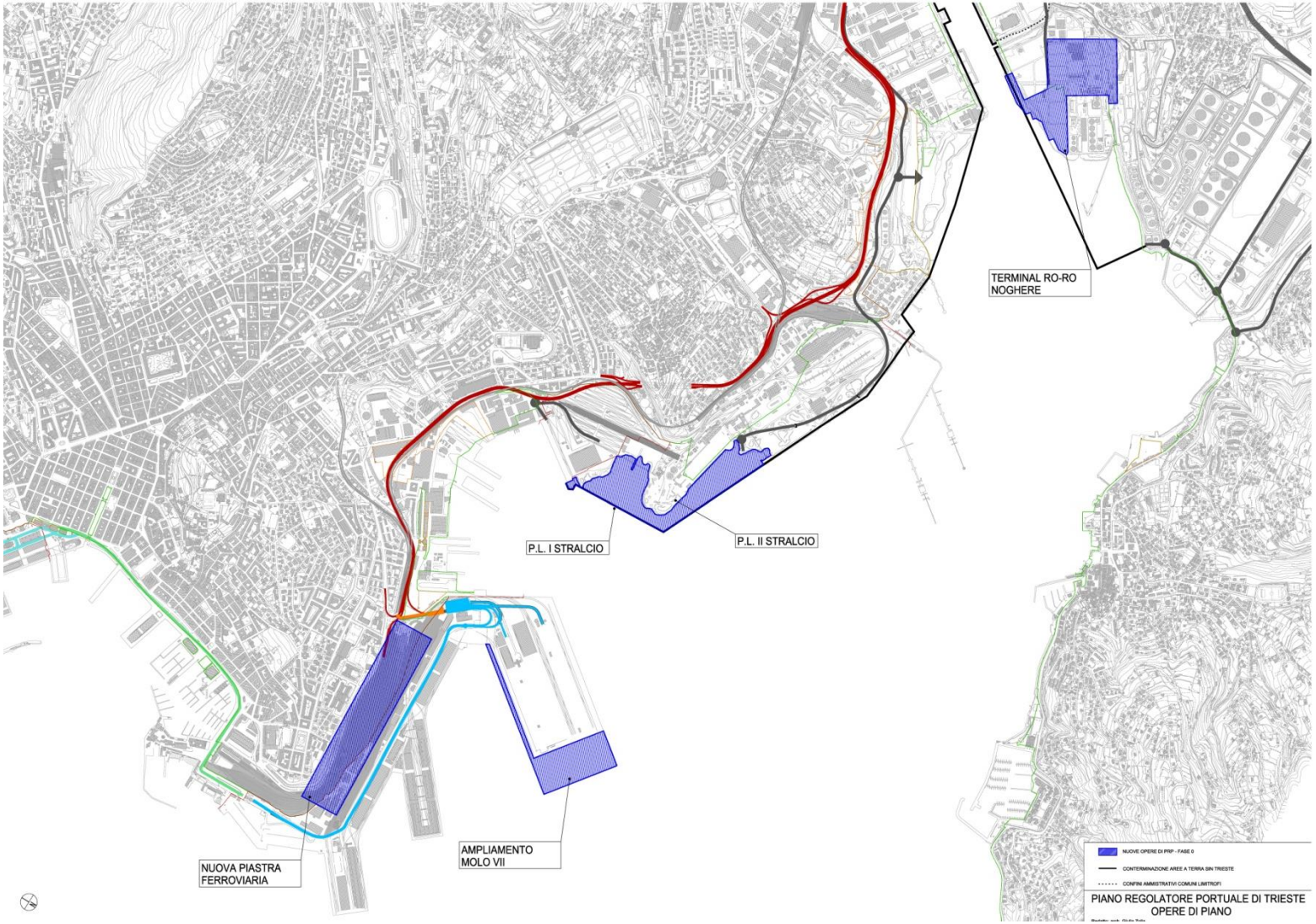
MEGA SHIPS
18.000/22.000 TEUs

North Adriatic Ports:

Infrastructure Developments

Adapting for the «multi-call» traditional model

Future actions and investments: Port of Trieste



Adapting for the «multi-call» traditional model

Future actions and investments: Port of Koper

LUKA KOPER
Port of Koper

Construction of port facilities to support the development of container traffics supported by intermodal infrastructure;
new capacity **1,3 million TEU/year**

Adapting for the «multi-call» traditional model

Future actions and investments: Port of Rijeka

Construction of the new container terminal Zagreb pier involves the total area of the future container terminal of 25 hectares will be composed of approximately 10 ha of new areas that will be created by embanking the seashore

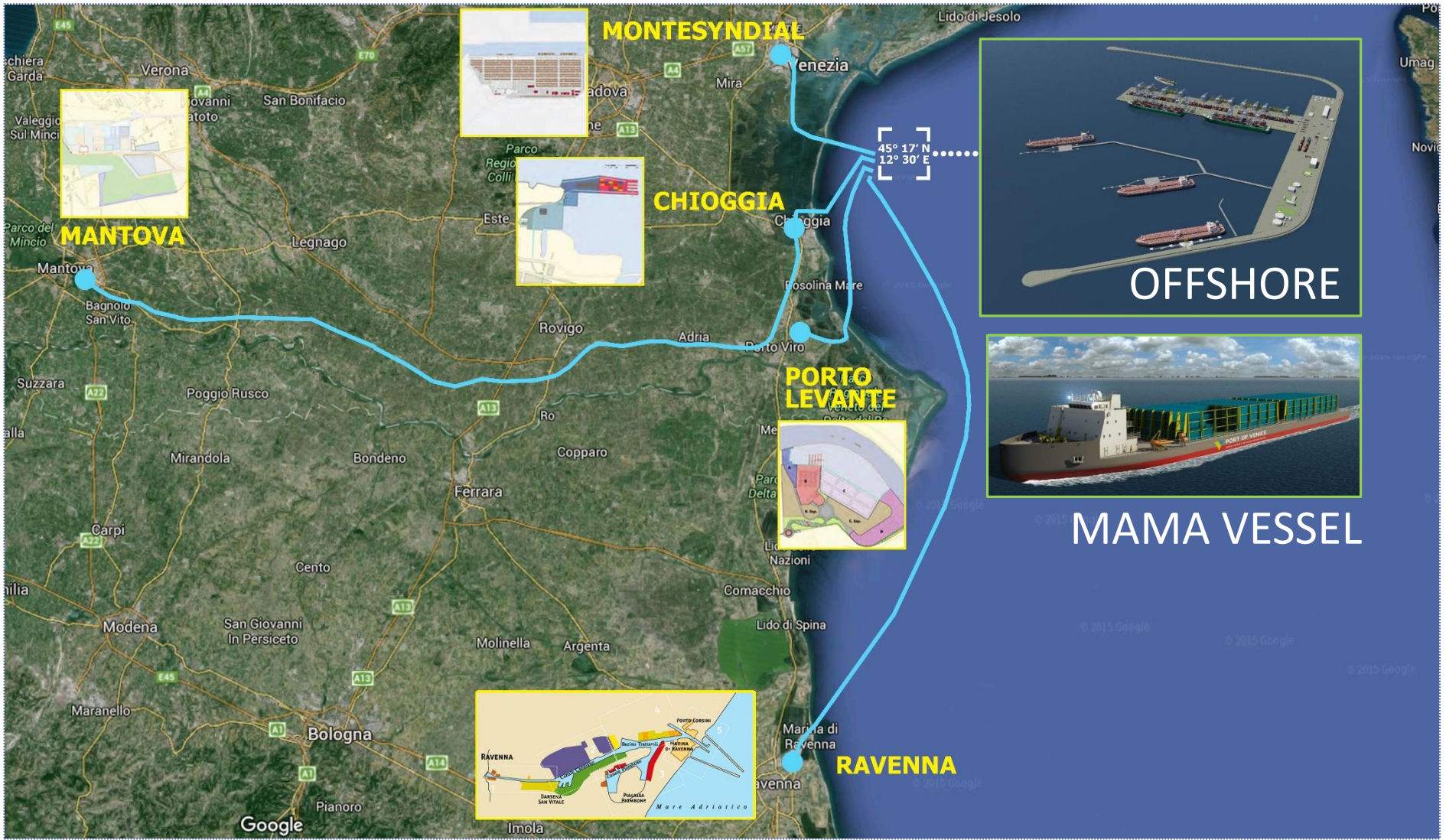
North Adriatic Ports:

the innovative

Venice Offshore Onshore Port System

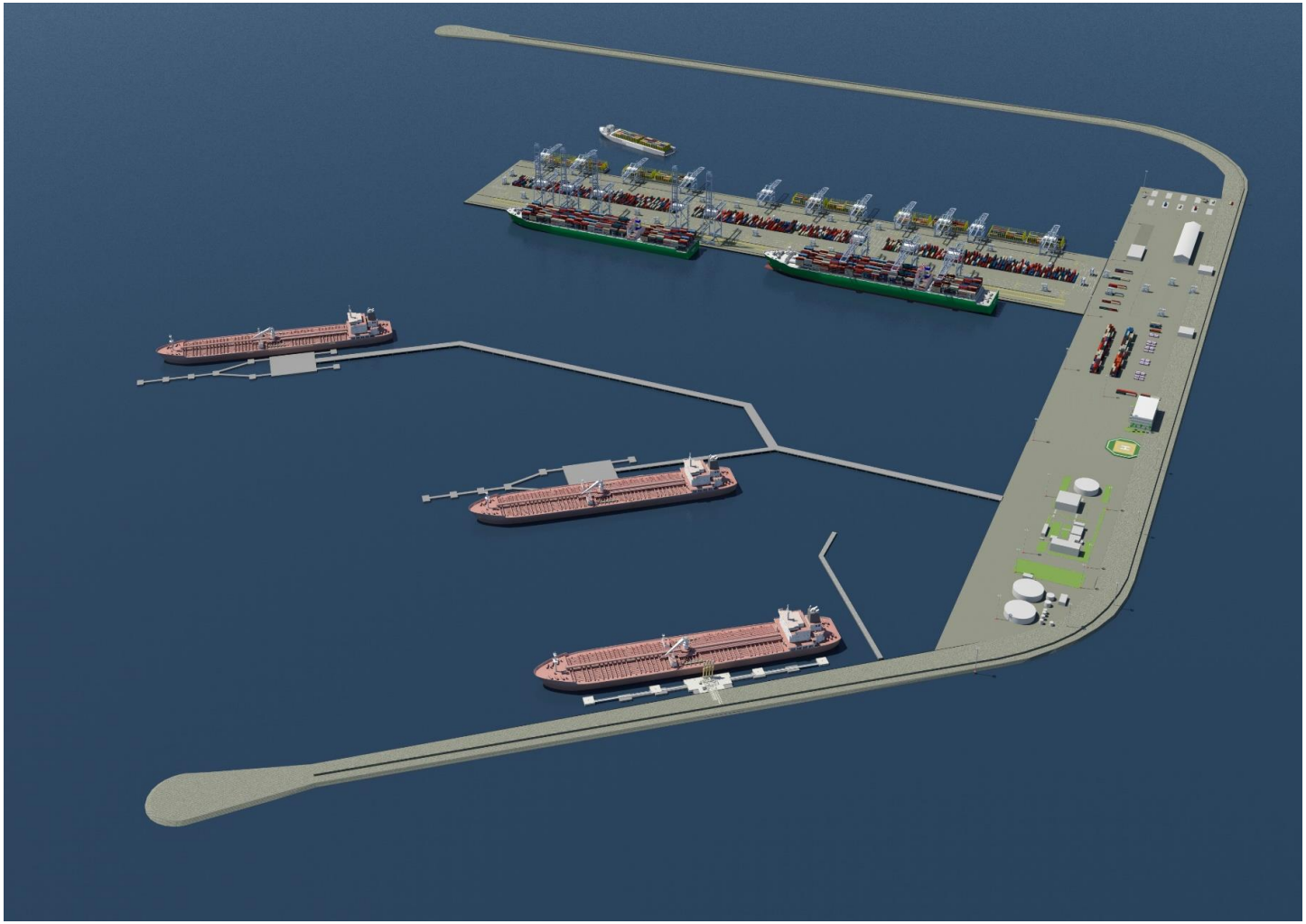
Adapting to the «one-call» offshore-onshore innovative model:

Port of Venice



Adapting to the «one-call» offshore-onshore innovative model:
Port of Venice

Offshore container and energy terminal



Adapting to the «one-call» offshore-onshore innovative model: Port of Venice

Breakthrought innovations: Mama Vessel and Cassettes

VENICE PORT AUTHORITY

THANK YOU FOR YOUR ATTENTION!

Prof. Paolo Costa
President
Venice Port Authority