

LNG investments in the Venice port system

26 April 2022



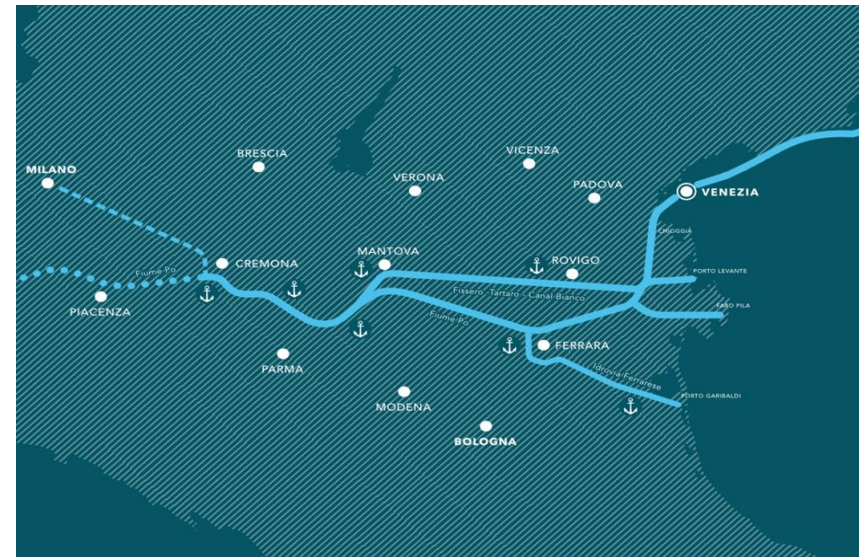
NORTH ADRIATIC SEA PORT AUTHORITY



Port of Venezia (Core)
Port of Chioggia (Comprehensive)

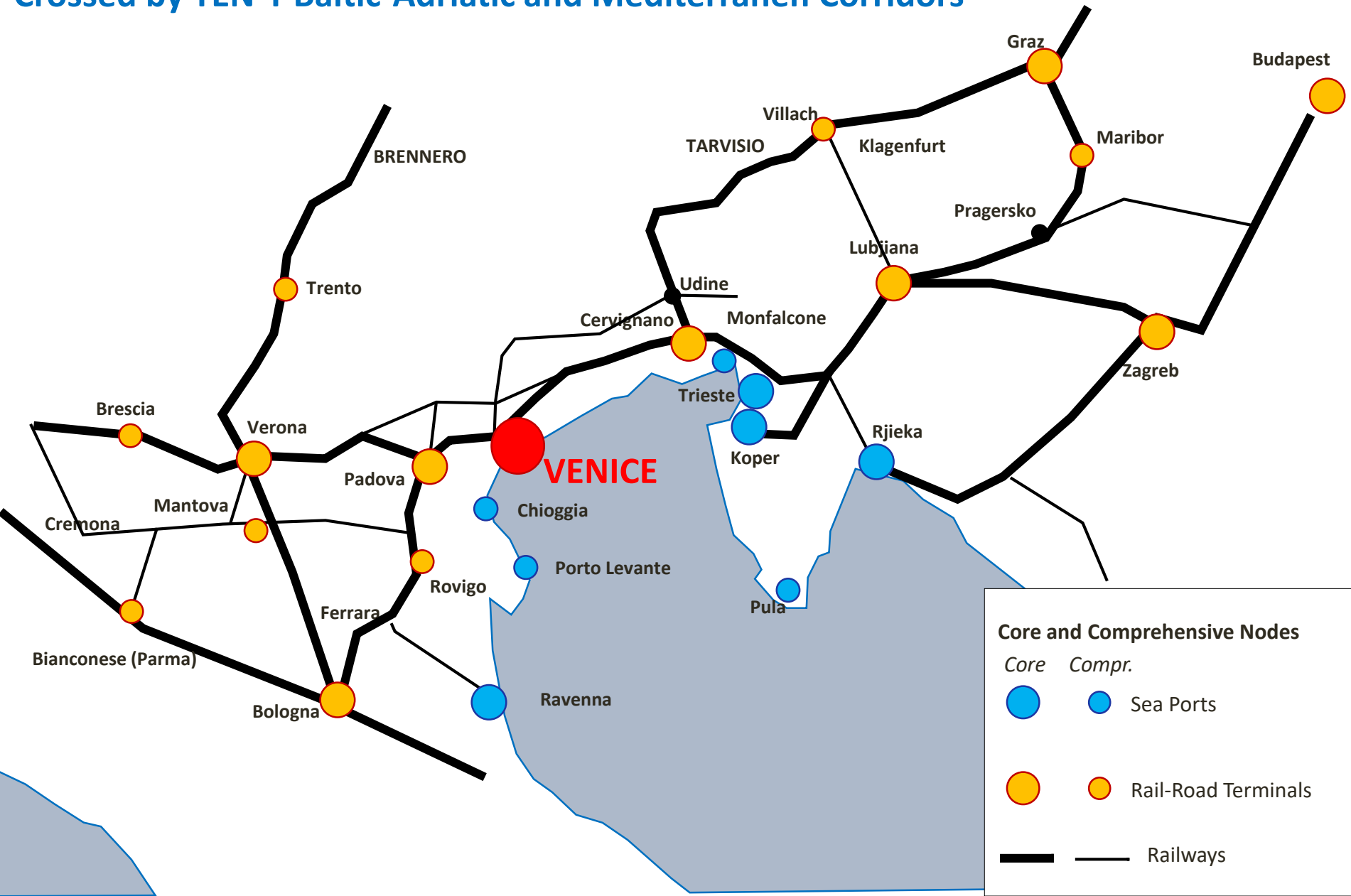
Unique port in Italy combining
all transport modes:

- Maritime
- Railways
- Road
- IWW



NORTH ADRIATIC LOGISTICS CLUSTER

Crossed by TEN-T Baltic-Adriatic and Mediterranean Corridors



ITALIAN LNG STRATEGY: GAINN IT INITIATIVE

The «**Italian Alternative Fuels infrastructure Network**» coordinated by the Italian Ministry of Infrastructure and Transport (MIT) according to the **D.Lgs n. 257 of 16.12.2016** adopting the EU Directive 2014/94/UE



ITALIAN POLICY FRAMEWORK 3 NATIONAL LNG GRIDS

- **Thyrrenian-Ligurian:** Genova, La Spezia and Livorno
- **South-Italy:** Augusta, Messina
- **Adriatic-Ionian:** Venice, Ravenna and Ancona

VENICE

LNG Terminal 30.000 m3 by 2024

Lng bunkering barge «mobile infrastructure» for the Adriatic-Ionian grid

A NEW LNG FACILITY

The new **LNG storage** will be located within the area of **Decal** terminal in Porto Marghera



LNG TERMINAL (1)

Project name (ID-1279) Baltic-Adriatic Corridor Work Plan

LNG supply facilities implementation at the Port of Venice

Total costs [M Euro] is approx. 101 M €

Refuelling trucks, trains and barges

- **32.000 m3** LNG storage capacity
- **900.000 m3 / year** of LNG handling

The terminal supplied by LNG medium size vessels, while the distribution and bunkering will be done by **trucks, barges and trains**

Start date	2018
End date	2024



LNG TERMINAL (2)

- Full maritime, rail and road accessibility.
- Connections to North Adriatic ports and IWW of North Italy
- **18.5 M € co-financed by CEF Programme** (2017 Blending call)
- Permitting phase closing in **December 2020** (EIA national)
- Works completed by the **end of 2024**



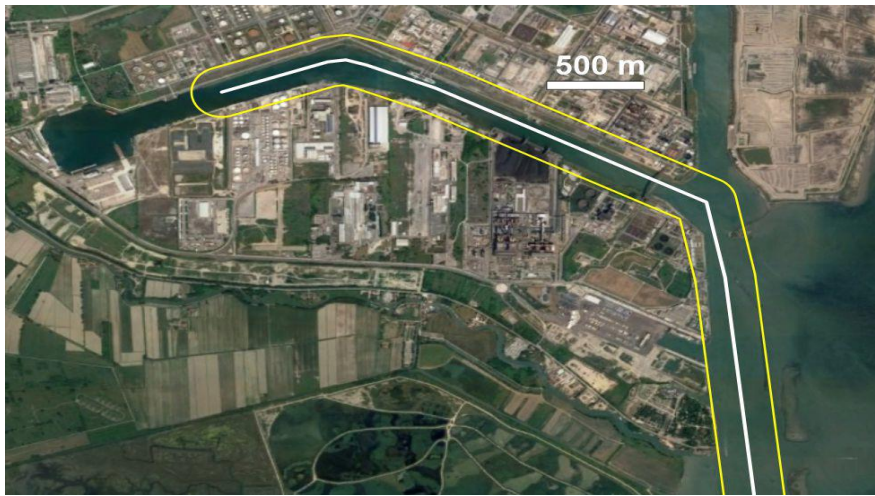
PORT NAVIGATION RISK ANALYSIS

Risk analysis to support local authority to discipline LNG ships navigation in the port.

- **co-presence of other port activities**
- **Interference of traffic of other ships.**

Both geometrical constraints and operative constraints have been considered.

Minor mitigation measures to be adopted.



LNG BUNKERING VESSEL

Prototype of «bunkering barge» for LNG transport and refuelling

- Ability to carry large volume of LNG (4.000 m³);
- Dual fuel propulsion system (diesel/Lng);
- **First solution in the Adriatic sea**, able to serve North Adriatic ports and Italian Inland waterways system (“wider benefits”).
- **Total investment: 36 M. €**
- **9.5 M € co-financed by CEF Programme (Poseidon Med II project)**



LNG SUPPLY CHAIN

INTERNATIONAL PROJECT

- Project Designer: SENER – Spain
- LNG System and Tanks: TGE Marine – Germany
- Propulsion: Voith - Germany
- Main Engine: Niigata – Japan
- Tug & Barge Coupling: Intercon – USA
- Italian Shipyard: Rosetti Marino



TRAINING: TRUCK TO SHIP BUNKERING OPERATIONS

The assessment of other ports procedures and regulation related to bunkering operations.

As an example a **technical visit** to the port of Valencia organized in December 2018.

A delegation from Venice (Port Authority, Coast Guards, Fire brigades, Regional Environmental Agency), attended to bunkering operations in Valencia.



The scope of visit is to discuss the procedures and to share best practises with experts of the Port Authority and Balearia shipping line experts

ALTERNATIVE FUELS: STRENGTHS

1. The deployment of alternative fuels and innovation technologies for **green & smart ports** has a double implication of "less pollution - more efficiency" for ports. Efficiency is strictly linked to a higher competitiveness.
3. The use of alternative fuels could reinforce the possibility to **attract private investments**. Concretely, this means the development of port traffics and thus new business opportunities.
2. The application of new procedures in the companies brings to **significant changes** in terms of process innovation.
4. More synergies among the actors involved and more public **funding blended** with private capitals.



ALTERNATIVE FUELS: WEAKNESSES



1. **Financial gap.** The use of alternative fuels requires high investments: deep feasibility assessments are required to evaluate the expected return on investment.
2. **Permitting.** Different levels of laws and guidelines can rule out the private interest for port investments (e.g. several years for final authorization)
3. **Technological and digital gap** for the production and utilization of alternative fuels.
4. Action plans in this sector are influenced by geopolitical factors and scenarios.



North Adriatic Sea Port Authority
Strategic Planning and Development Department



Thank you for your attention