



source: : cargobeamer, 2017

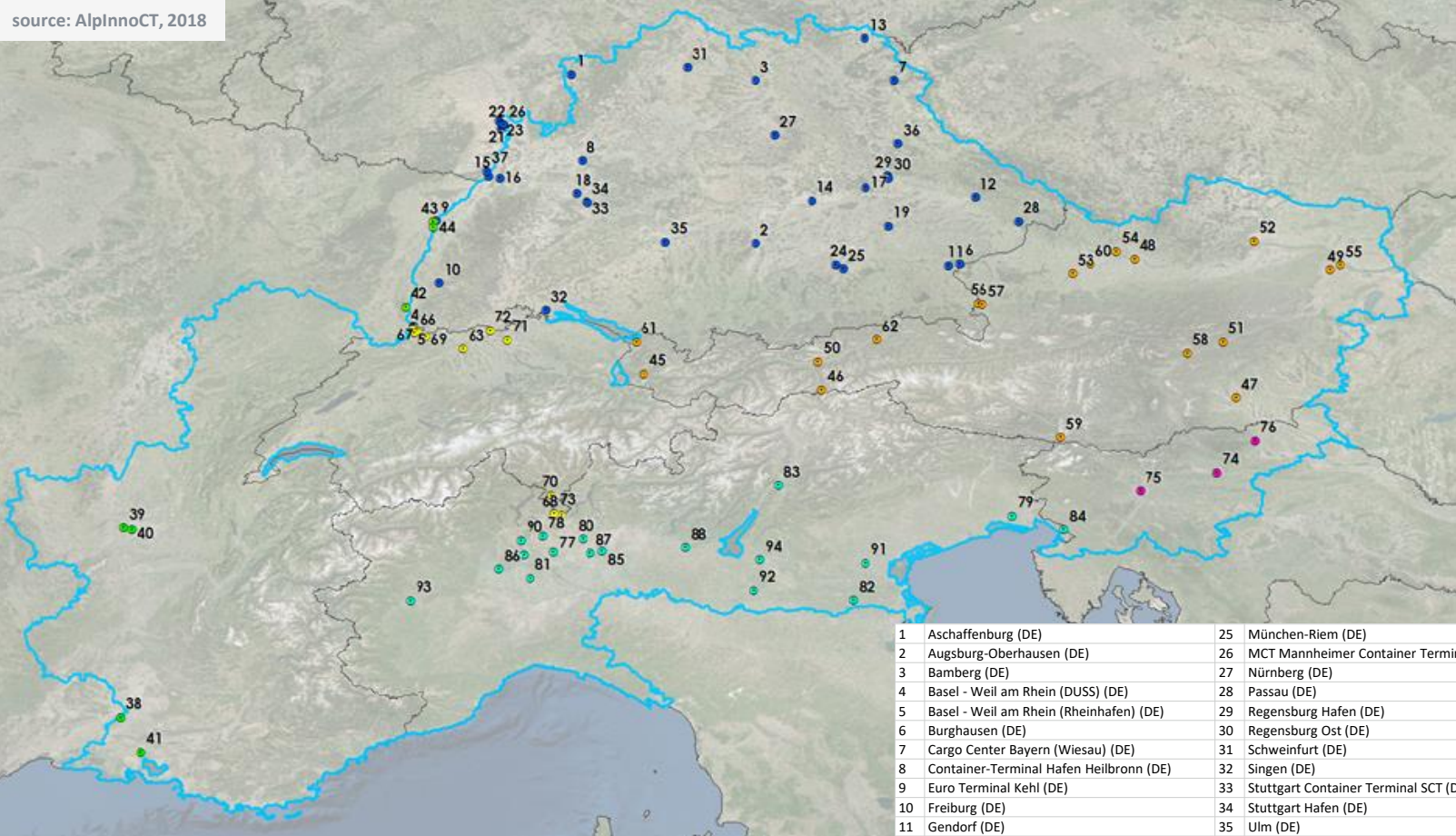
# The main intermodal terminals in the Alpine macro-region

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8<sup>th</sup> AG4 Meeting, 19<sup>th</sup> June 2018, Trento

# Inland terminals in the Eusalp

source: AlpInnoCT, 2018



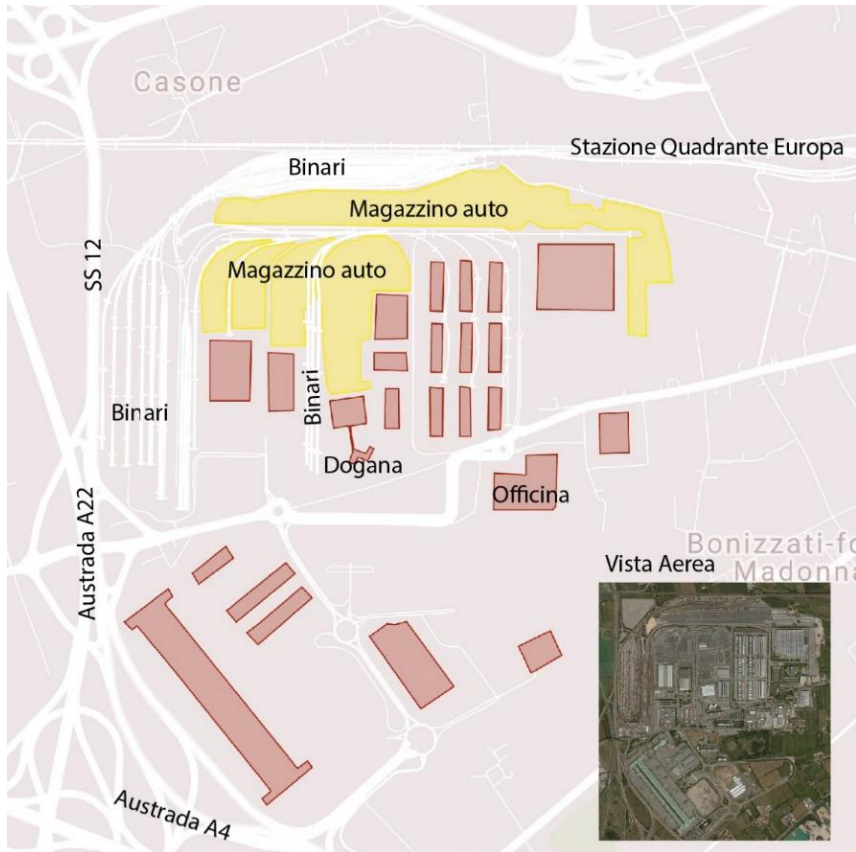
- DE
  - FR
  - AT
  - CH
  - SI
  - IT
- EUSALP PERIMETER

94 terminals: mostly in peri-alpine territory; near ports, main urban agglomerations and infrastructures

1	Aschaffenburg (DE)	25	München-Riem (DE)	49	Güterzentrum Wien Süd (AT)	73	Stabio (CH)
2	Augsburg-Oberhausen (DE)	26	MCT Mannheimer Container Terminal (DE)	50	Hall i. T. CCT (AT)	74	Celje (SI)
3	Bamberg (DE)	27	Nürnberg (DE)	51	Kapfenberg CCT (AT)	75	Ljubljana KT (SI)
4	Basel - Weil am Rhein (DUSS) (DE)	28	Passau (DE)	52	Krems a.d. Donau CCT (AT)	76	Maribor Tezno KT (SI)
5	Basel - Weil am Rhein (Rheinhafen) (DE)	29	Regensburg Hafen (DE)	53	Lambach (AT)	77	Arluno (IT)
6	Burghausen (DE)	30	Regensburg Ost (DE)	54	Linz Stadthafen CCT (AT)	78	Busto Arsizio-Gallarate (IT)
7	Cargo Center Bayern (Wiesau) (DE)	31	Schweinfurt (DE)	55	Port of Vienna (AT)	79	Cervignano (IT)
8	Container-Terminal Hafen Heilbronn (DE)	32	Singen (DE)	56	Salzburg CTS (AT)	80	Desio (IT)
9	Euro Terminal Kehl (DE)	33	Stuttgart Container Terminal SCT (DE)	57	Salzburg Hbf- ROLA (AT)	81	Intermodal terminal of Mortara (IT)
10	Freiburg (DE)	34	Stuttgart Hafen (DE)	58	St. Michael CCT (AT)	82	Intermodal terminal of Rovigo (IT)
11	Gendorf (DE)	35	Ulm (DE)	59	Villach Süd CCT (AT)	83	Intermodal terminal of Trento (IT)
12	Hafen Deggendorf (DE)	36	Wackersdorf (DE)	60	Wels Vbf. CCT (AT)	84	Intermodal terminal of Trieste Ferneti (IT)
13	Holf (DE)	37	Wörth (DE)	61	Wolfurt CCT (AT)	85	Melzo (IT)
14	Ingolstadt (DE)	38	Avignon (FR)	62	Wörgl CCT (AT)	86	MGDV Vercelli (IT)
15	Karlsruhe (Contargo) (DE)	39	Lyon Terminal SA (FR)	63	Aarau (CH)	87	Milan CT-terminals (IT)
16	Karlsruhe (DUSS) (DE)	40	Lyon Terminal Venissieux (FR)	64	Basel - Kleinhüningen (CH)	88	Nord-Est Terminal S.P.A. (IT)
17	Kelheim Hafen (DE)	41	Miramas (FR)	65	Basel - Swissterminal (CH)	89	Novara CIM (IT)
18	Kornwestheim (DE)	42	Ottmarsheim (FR)	66	Basel Wolf (CH)	90	Oleggio Terminal (IT)
19	Landshut (DE)	43	Strasbourg Terminal Conteneurs Nord (FR)	67	Birsfelden (CH)	91	Padua Interport Terminal (IT)
20	Ludwigshafen (Contargo) (DE)	44	Strasbourg Terminal Conteneurs Sud (FR)	68	Chiasso (CH)	92	Port of Mantua - Valdaro (IT)
21	Ludwigshafen KTL (DE)	45	Bludenz CCT (AT)	69	Frenkendorf (CH)	93	S.I.TO Interport of Torino Orbassano (IT)
22	Mannheim Container-Terminal Contargo (DE)	46	Brennersee (RoLa) (AT)	70	Lugano Veduggio (CH)	94	Verona Quadrante Europa (IT)
23	Mannheim-Handelshafen (DE)	47	CCG Cargo Center Graz (AT)	71	Niederglatt (CH)		
24	München CDM (DE)	48	Enns Hafen CCT (AT)	72	Rekingen (CH)		



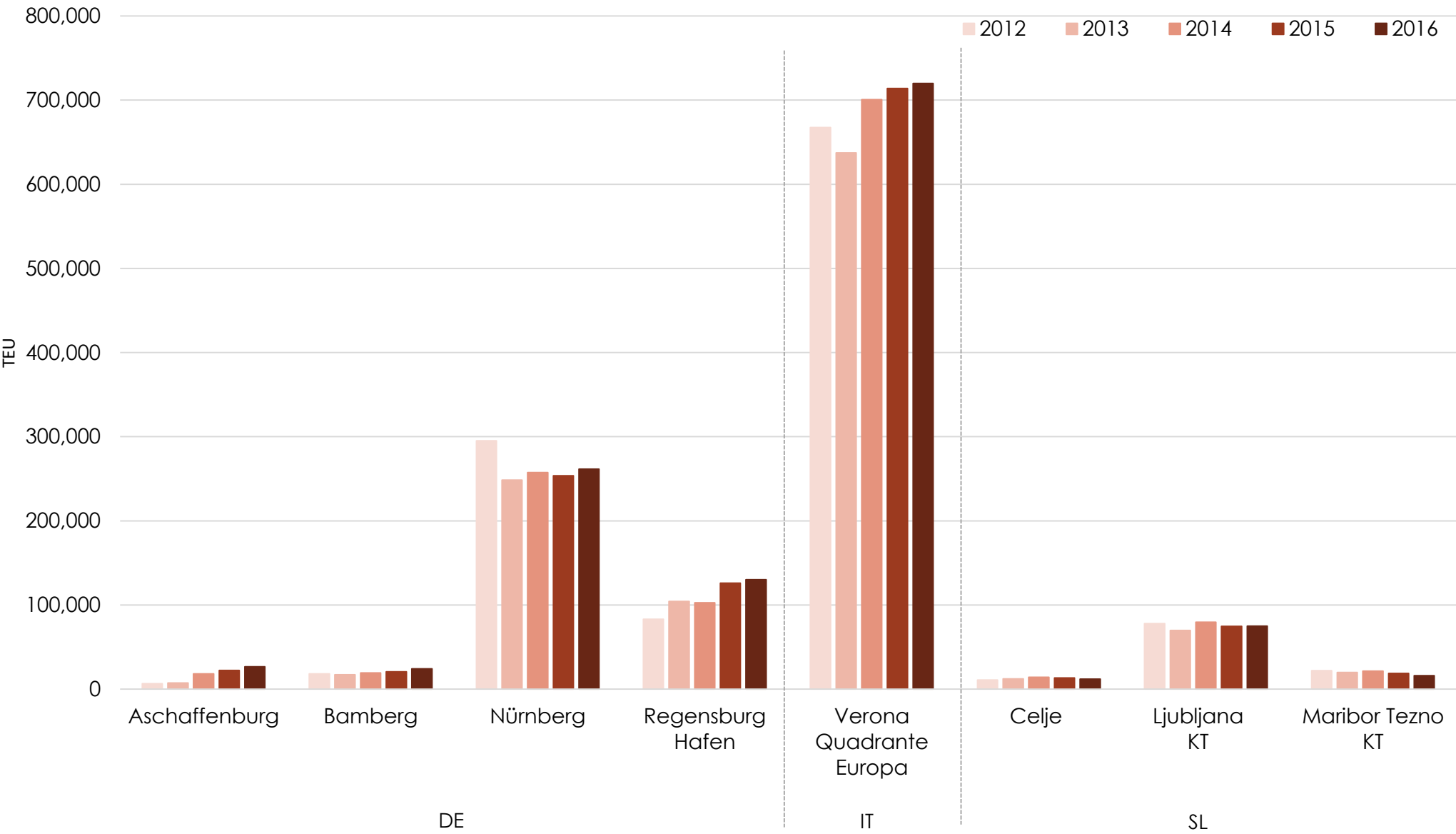
# Interporto Quadrante Europa – Verona (IT)



source: EUSALP AG4, 2018

- is managed by Consorzio ZAI
- is classified as RR Terminal in the TEN-T Core Network and it is located on the Scandinavian Mediterranean and Mediterranean Corridors
- covers a total area of about 4,200,000 m<sup>2</sup>; of which 2,823,600 m<sup>2</sup> are built
- inside the Interporto there are three intermodal terminals. The terminal area is of 265,000 m<sup>2</sup> with 13 reach stackers and 7 gantry cranes
- the intermodal terminal is equipped with 18 side-by-side tracks, of which 5 are 650 m long, 13 are 550 m long
- there is a railway station equipped with 20 tracks dedicated to arrival/departing all electrified, 600 m long

# Volumes for selected intermodal terminals



source: AlpInnoCT, 2018

# NEED FOR A BROADER PERSPECTIVE



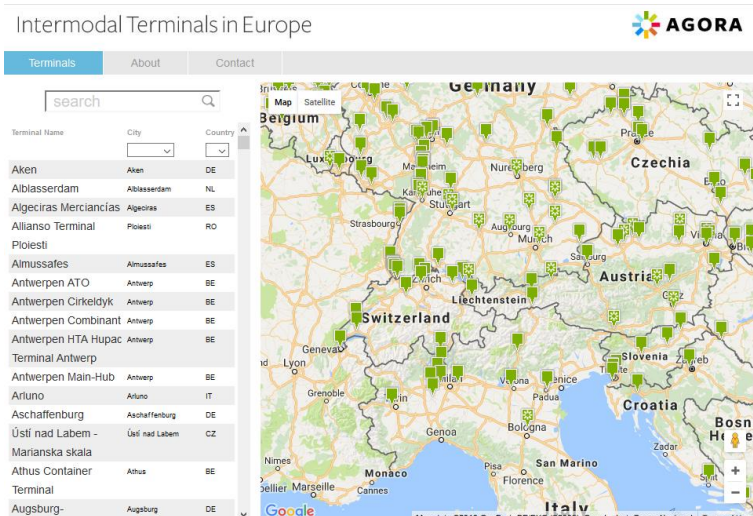
source: Interbrennero S.p.A., 2018

Primary and secondary intermodal terminals are present in the Eusalp region.

At the macro-regional level, it is important to find an integrated balance between them: each terminal is not in competition with the others, but is part of a **common framework** that aims at promoting the modal shift.

Towards a specialization (but with enough **flexibility**) of the intermodal terminals.

> The importance of **technical** and **political** solutions.



source: AGORA - Intermodal Terminals, 2018

# 0) Combined Transport: a definition

**COMBINED TRANSPORT** - source: Council Directive 92/106/EEC

*“the transport of goods between Member States where the lorry, trailer, semi-trailer, with or without tractor unit, swap body or container of 20 feet or more uses the road on the initial or final leg of the journey and, on the other leg, **rail or inland waterway or maritime services** where this section **exceeds 100 km** as the crow flies and make the initial or final road transport leg of the journey; **between the point where the goods are loaded and the nearest suitable rail loading station for the initial leg, and between the nearest suitable rail unloading station and the point where the goods are unloaded for the final leg**, or within a radius not exceeding 150 km as the crow flies from the inland waterway port or seaport of loading or unloading”*

**Directive about CT under revision: changes are expected**



# 1) Accessibility



source: Interporto Quadrante Europa Verona, 2018

**Accessibility** (not proximity) affects the types of relationship, the origin and destination of the goods and the frequency of the services.

**Example:** Verona Quadrante Europa

Accessibility is not only physical, but also **digital**: integrated database for intermodal centers with updated (operational) information that is easily available for operators



source: AlpinnoCT, 2018

## 2) CT transshipment technologies



source: International Rail Partners, 2018

Conventional Transport, ACT and UCT with further distinction on:

- **type of loading unit** (container, swap body, craneable / non-craneable semitrailer)
- **type of transshipment** (vertical, horizontal)



Source: LKW WALTER, 2018

Every technology has **specific features** in terms of flexibility, handling time and costs, investments...

For further details: Data base and comparative analysis of CT and transshipment technologies for CT,

<http://www.alpine-space.eu/projects/alpinnoct/outputs/deliverable-d.t1.2.1.pdf>



## 2) CT transshipment technologies - ACT



source: AlpinnoCT, 2018

**PIGGYBACK TECHNOLOGY (Rolling Highway)** is a railway rack onto which trucks drive horizontally and in a row. Whole trucks are loaded onto special rail wagons at the terminal, while drivers travel in a separate sleeping car.



source: AlpinnoCT, 2018

**FLEXIWAGON** is a rail-rack which is added to a train. Whole trucks or other vehicles can be loaded and unloaded individually.

# 2) CT transshipment technologies - UCT

## a) NON-CRANEABLE SEMITRAILERS



source: AlpinnoCT, 2018

**MODALOHR HORIZONTAL** allows horizontal handling using a low-floor double carriage with revolving structure.

**NiKRASA** enables non-craneable semitrailers to be loaded onto standard pocket wagons.



source: AlpinnoCT, 2018

## b) SEMITRAILER, CONTAINERS AND SWAP BODIES



source: AlpinnoCT, 2018

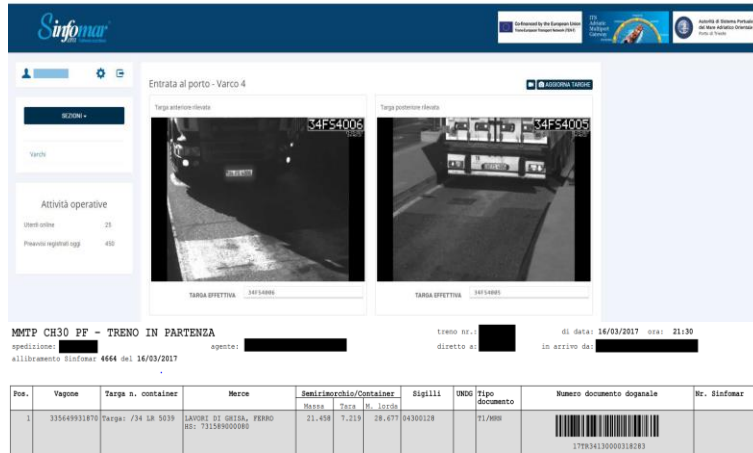
**MOBILER** is a truck-mounted hydraulic system which is used to load swap bodies and containers with adapters onto railway freight cars.

**CONTAINERMOVER 3000** unloads the swap bodies sideways onto a rail-rack, enabling independent road-to-rail transshipment at every freight station.



source: AlpinnoCT, 2018

### 3) Measures relevant for CT: ICT solutions



source: Sinfomar – Port of Trieste, 2018

#### ELECTRONIC SYSTEM FOR FREIGHT TRANSPORT

It enfolds paperless, electronic flow of information for a simple and harmonised procedure to support the physical flow of goods (e.g. Port of Trieste–IT).



source: Alstom – Raillynew, 2018

#### DRIVERLESS TRAIN OPERATION

A train is driven automatically. A human operator might be on board for door closure and operation in case of emergencies (e.g. tests on 150-km double-track freight line connecting Rotterdam to Germany, part of the European freight Corridor A).



## 4) Policies

**Nuovo Ferrobonus** (It, 2016-2018). The overall budget is 20M €, equally distributed per each year. It is dedicated to companies operating intermodal and/or combined rail transport services and to multimodal transport operators that purchase full train sets and commit to maintain the traffic volumes and increase them during the period of time covered by the incentive. The maximum aid cannot exceed 2.50 euro per train\*km and the total distance covered must be higher than 150 km, with the exception of intermodal rail transport services carried out between a port and an interport.

**The Delibera n. 655 del 13 Giugno 2017** (Resolution n. 655, 13 June 2017) **of the Autonomous Province of Bolzano/Bozen, grants aids** to the companies located in the EU: to the OTM and to the railway companies that do freight services on rail in the provincial territory. The aids are pointed **to the development of provincial CT**. They are related to the rail freight services and to the building, the management, the adjustment or the extension of railway infrastructures and/or of intermodal terminals.

# Thanks for your attention!

**eurac**  
research



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