



e-bridge

November 27th, 2023



Project evolution & update

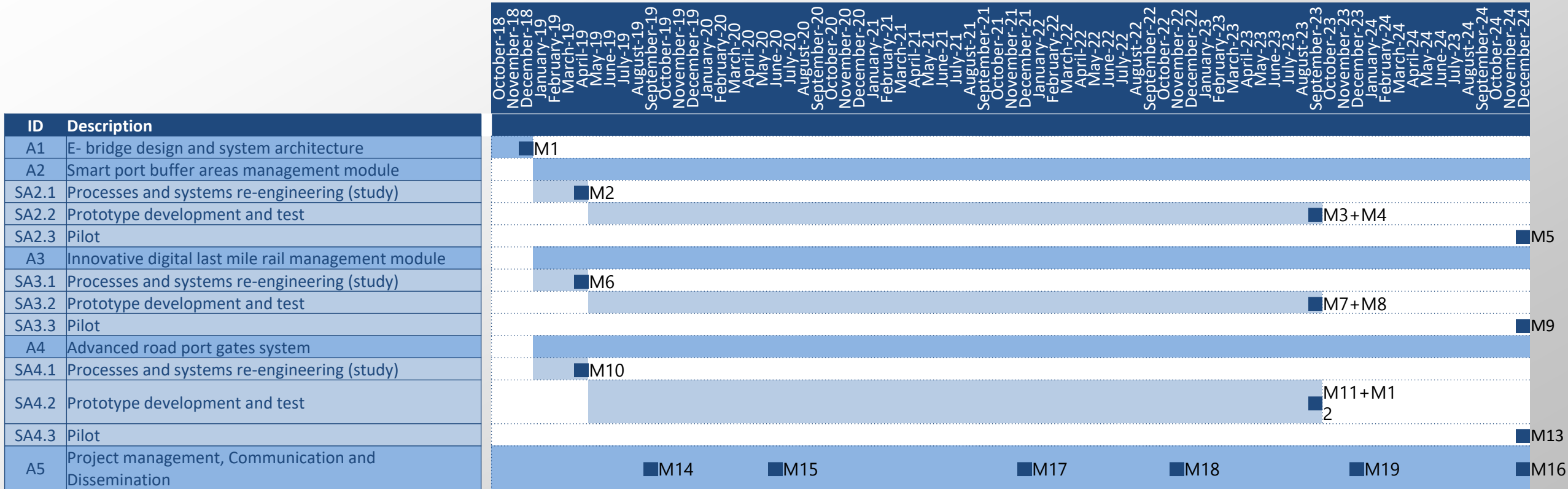
- ✓ Amendment to the Grant Agreement signed in August 2023
- ✓ Project extended until December 2024
- ✓ New beneficiary (Hub Telematica)
- ✓ New implementing bodies (RAM & inland terminals supporting actions)
- ✓ Ongoing synergy with Italian Transport Minister Supply Chain Digitalisation Roadmap and e-FTI implementations

Updated partnership

Total budget	12'185'050.00 €
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Beneficiaries	
Ministero delle Infrastrutture (MIT)	
Autorità di Sistema Portuale del Mar Ligure Occidentale (ASPMALO)	
digITALog S.p.A.	
Circle S.p.A.	
Hub Telematica S.R.L. (new)	
Implementing Bodies	
PSA Genova Prà S.p.A.	
Ignazio Messina & C S.p.A.	
Terminal Contenitori Porto di Genova S.p.A.	
Spinelli S.R.L.	
Terminal San Giorgio S.R.L.	
Bettolo S.R.L.	
Vado Gateway S.p.A.	
Logtainer S.R.L.	
Hannibal S.p.A.	
Mercitalia Intermodal S.p.A.	
Medlog Italia S.R.L.	
Truck Rail Container S.p.A.	
Interporto di Padova S.p.A. (new)	
Rail Hub Europe S.p.A. (new)	
TRI S.p.A. (new)	
Luigi Cozza Trasporti S.R.L. (new)	
RAM S.p.A. (new)	

Updated gantt





Cofinanziato dal meccanismo per collegare l'Europa dell'Unione europea

eBridge Project

Optimizing the management of rail flows between Port and Inland Areas: innovative technologies and federative services

Luca Abatello, President & CEO

Veronica Asta, AI & Optimisation Manager
Circle Group

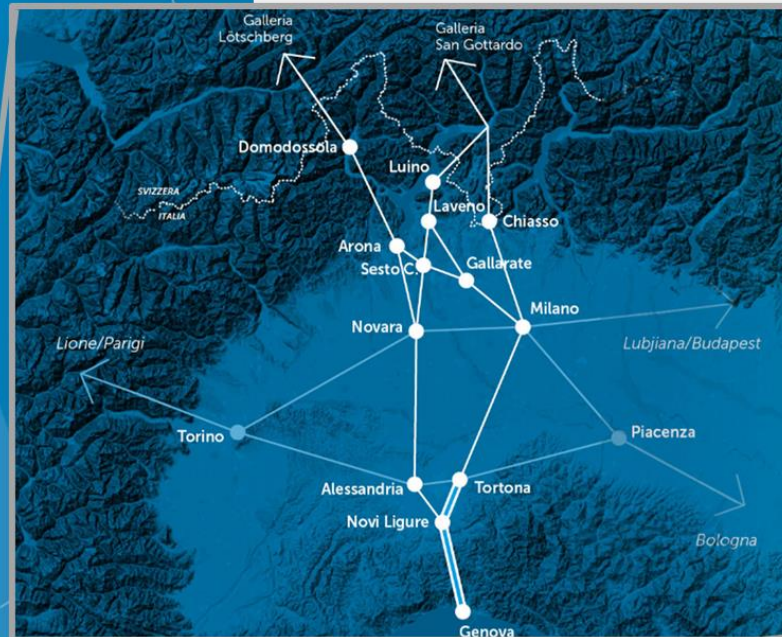
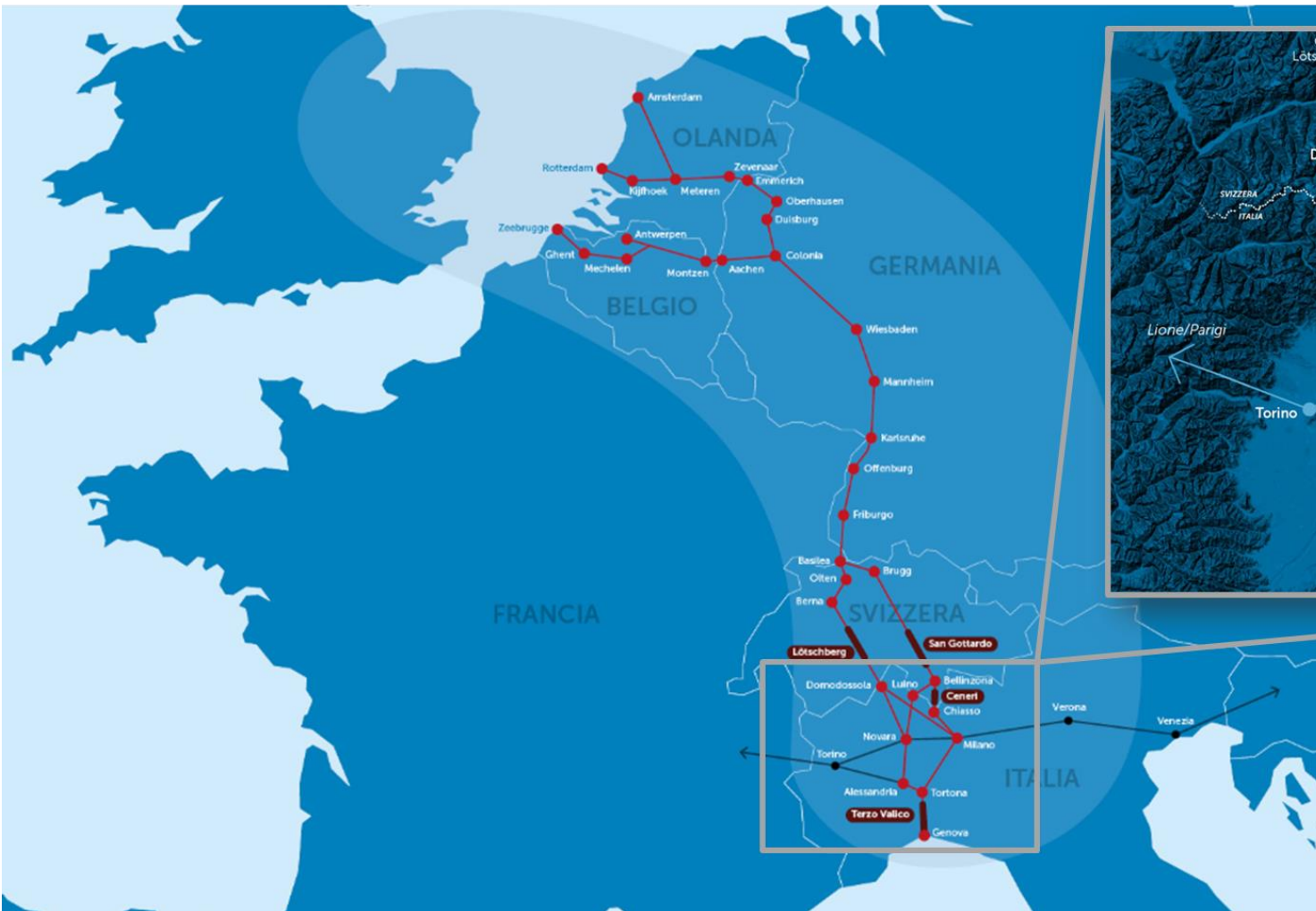
eBRIDGE event

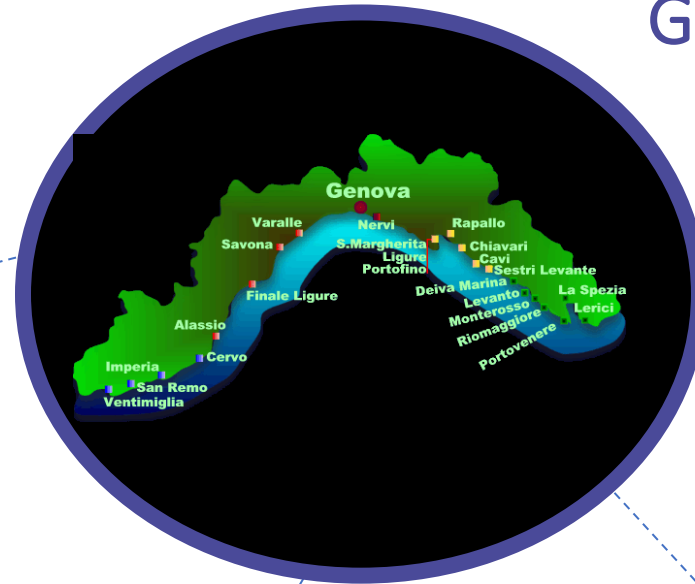
27th november 2023





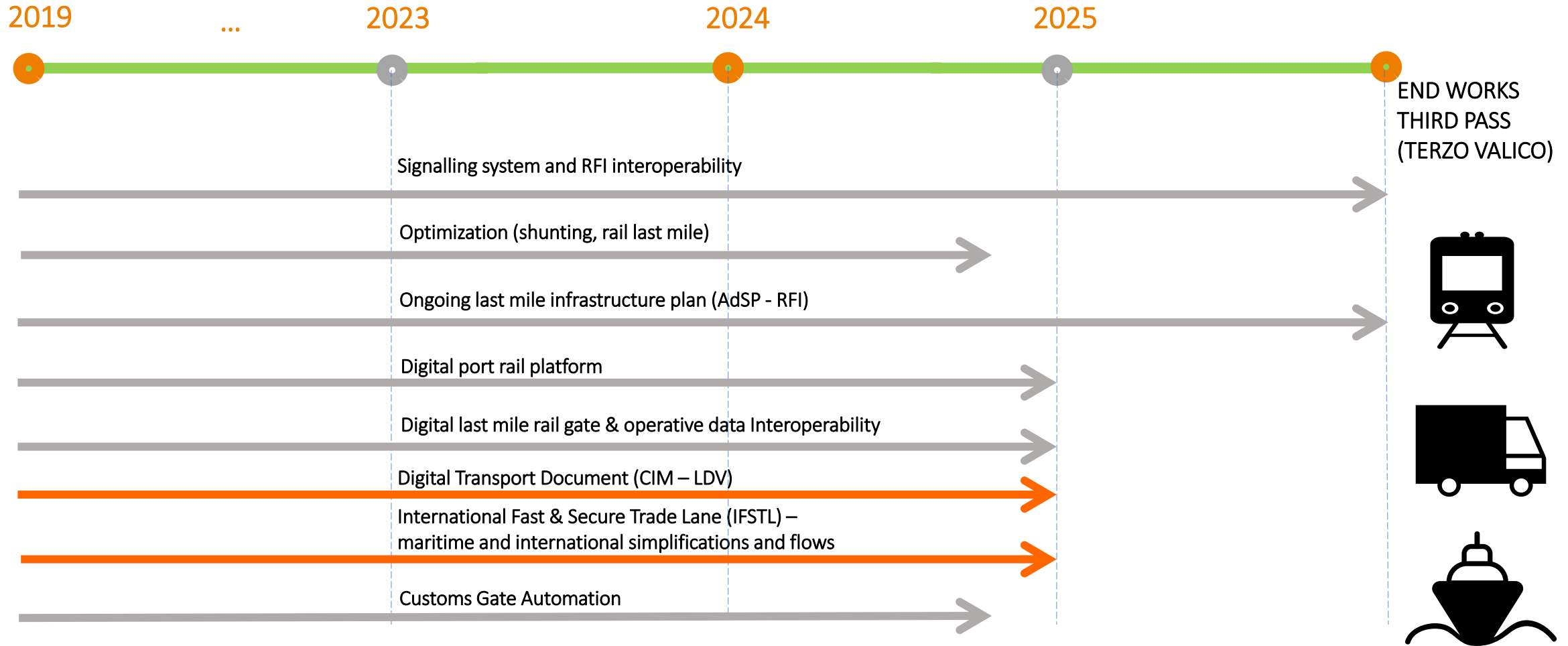
Rhine-Alpine Corridor – e-Bridge Project







Towards 2024/2025





Digital last mile rail gate & operative data interoperability



Signalling
project

2020-25



Shunting
Optimization pilot

2021-24



Gate
Interoperability

2021-24





Truck Gate Automation



<https://www.youtube.com/watch?v= RH6ipSM65w>

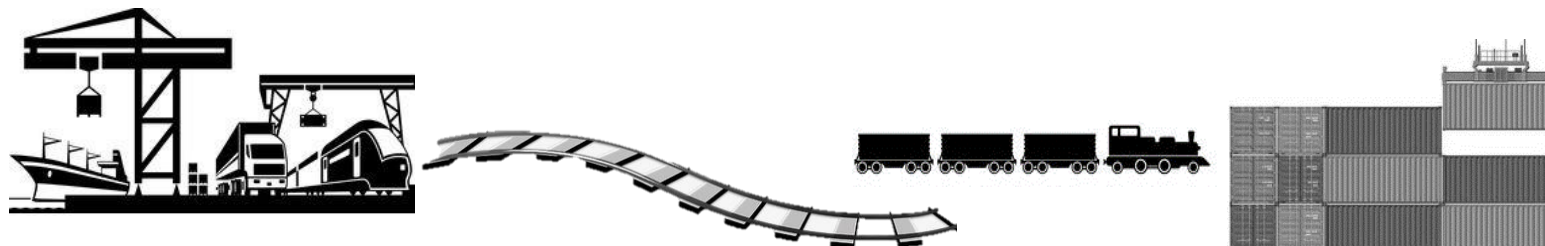


Rail Last Mile digital services for the operators



Interoperability model between the parties involved for the organization and optimal management of the last railway mile:

- RFI PIC information flows to/from port node
- Integration of shunting operator – railway paths
- «Recomaf/M53» digitalization
- Tracks occupation management and last mile optimization models





OPTIMIZATION & RAIL LAST MILE VIEW

Inland Terminal & Road Network

MTO interoperability

Rail inland interoperability

Rail actors & RFI

Train Operations

Track & trace



Shunting Area & Rail Network

Port Rail Shunting Optimisation

Simulation & Digital Twin

Maritime Terminal

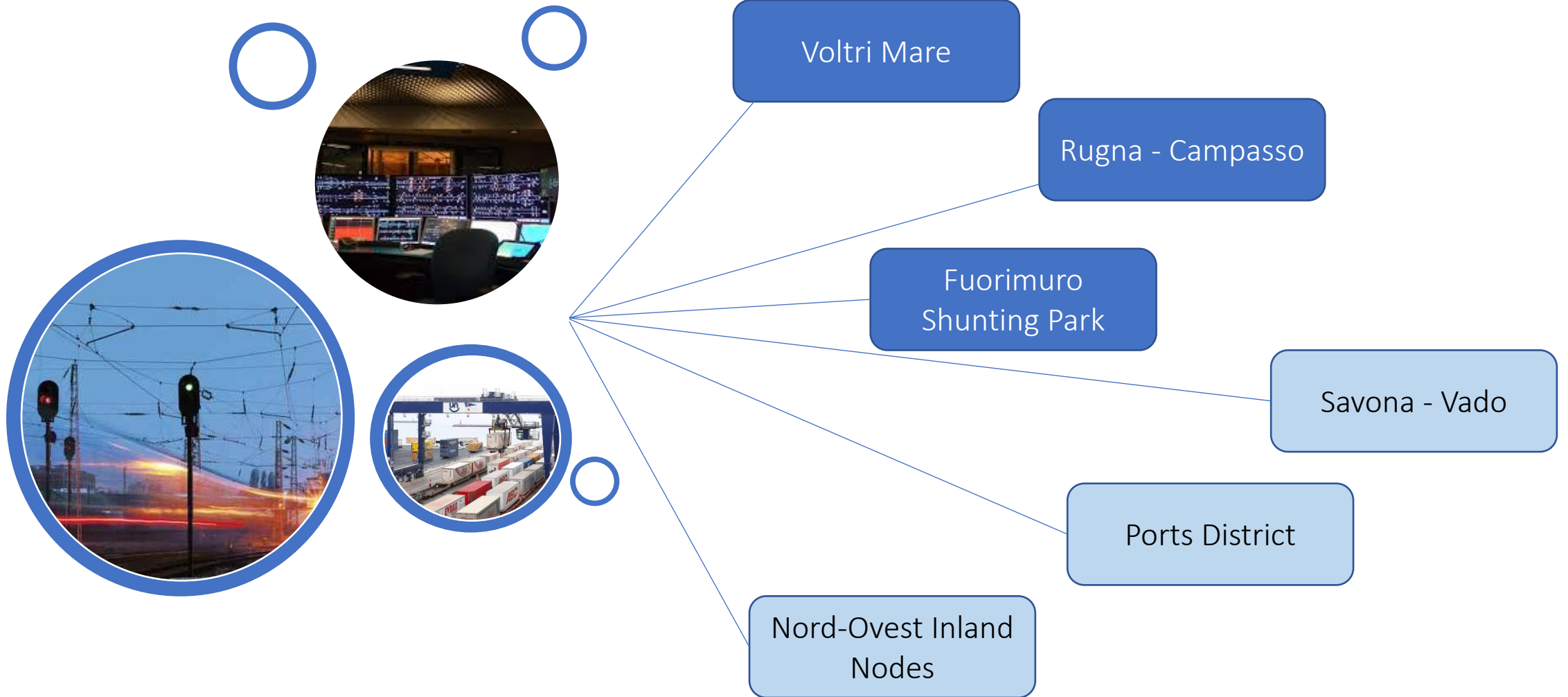
Train Operations

Digital Twin





Signalling systems & RFI interoperability - Port nodes & more



(Customs) Gate Automation



ADM national services development

Implementation within AdSP & PCS team





RAIL (RFI) PIC Dashboard

RAIL DASHBOARD

· PIC connector ·

Gestione operativa treni					
		MELZO SCALO		25/11/2023 23:33:00	PIANIFICATO
		BS EST F. MERCI		25/11/2023 23:28:00	SOPPRESSO
		Marzaglia		25/11/2023 23:25:00	PIANIFICATO
		Marzaglia		25/11/2023 23:11:00	PIANIFICATO
		Rivalta Scriv.		25/11/2023 21:52:00	PIANIFICATO
		PD INTERPORTO		25/11/2023 17:37:00	PIANIFICATO
		PD INTERPORTO		25/11/2023 17:22:00	PIANIFICATO
		PD INTERPORTO		25/11/2023 16:52:00	PIANIFICATO
		MELZO SCALO		25/11/2023 16:29:00	PIANIFICATO
		Marzaglia		25/11/2023 14:09:00	PIANIFICATO



RAIL DASHBOARD

- RFI Dashboard
- Gestione operativa treni
- RAIL Dashboard
- Lista di carico**
- Composizione treno
- Distinta treno
- Viaggi treno
- Action queues
- Anagrafiche
- Utenti
- Compagnie

Lista di carico



MTO

Booking

MTO	Numero viaggio MTO	Terminal partenza	Terminal arrivo	Numero treno RFI	Data treno RFI	Compagnia ferroviaria	Definitivo	Azioni
IT02716640103	2023_1734			1734	16/11/2023	IT06663350723		⋮

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RAIL DASHBOARD

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Composizione treno

CERCA

AZZERA

MTO	Viaggio	Numero treno RFI	Data treno RFI	Parte	Parti totali	Ettr	Locode destinazione	Definitivo	Azioni
IT02716640103	2023_1734	1734	16/11/2023	1	1		ITRNE	<input checked="" type="checkbox"/>	⋮
IT02716640103	2023_1734	1734	16/11/2023	0			ITRNE	<input type="checkbox"/>	⋮

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RAIL DASHBOARD

- RFI Dashboard
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Distinta treno

MTO	Viaggio	Terminal partenza	Terminal arrivo
Numero treno RFI	Data treno RFI	Compagnia ferroviaria	Booking
Unità			

CERCA

AZZERA

MTO	Viaggio	Terminal partenza	Origine	Terminal arrivo	Destinazione	Numero treno RFI	Data treno RFI	Compagnia ferroviaria	Definitivo
IT02716640103	2023_1734				ITRNE	75648/56122/5612	16/11/2023	IT06663350723	

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Customs & Security (GDF) check and Rail Dashboard

RAIL DASHBOARD

RFI Dashboard

Gestione operativa treni

RAIL Dashboard

Lista di carico

Composizione treno

Distinta treno

Viaggi treno

Action queues

Anagrafiche

Utenti

Compagnie

Viaggi treno

	Lista di carico	Composizione treno	Distinta treno	Tipo processo	MTO	Viaggio	Numero treno RFI	Data treno RFI	Impresa ferroviaria
^	✓	✓	✓	IMPORT	IT02716640103	2023_1734	75648/56122/5612	16/11/2023	IT06663350723

- TRAIN NUMBER NOTIFICATION
- DEPARTURE STATION NOTIFICATION
- TRACK ASSIGNMENT
- TRACK ASSIGNMENT RESPONSE
- RAIL MATERIAL READY
- SECONDARY MANEUVER START
- TRAIN GATE OUT
- SECONDARY MANEUVER END
- MANEUVER RESPONSE
- PRIMARY MANEUVER START
- PRIMARY MANEUVER END
- RAIL MATERIAL READY RESPONSE
- TRAIN DEPARTURE
- TRAIN ARRIVAL
- TRAIN GATE IN
- TRAIN UNLOADED

IRAIL - ADM
Train Manifest
Security control (GdF)



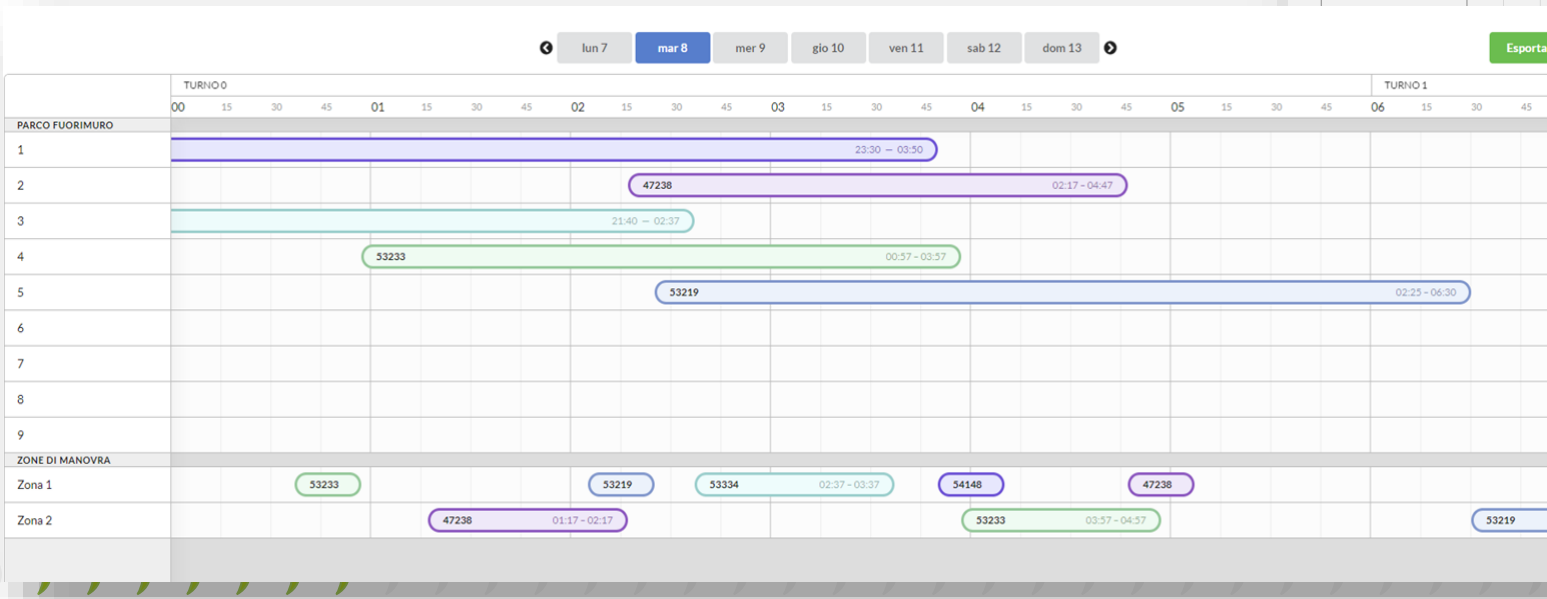
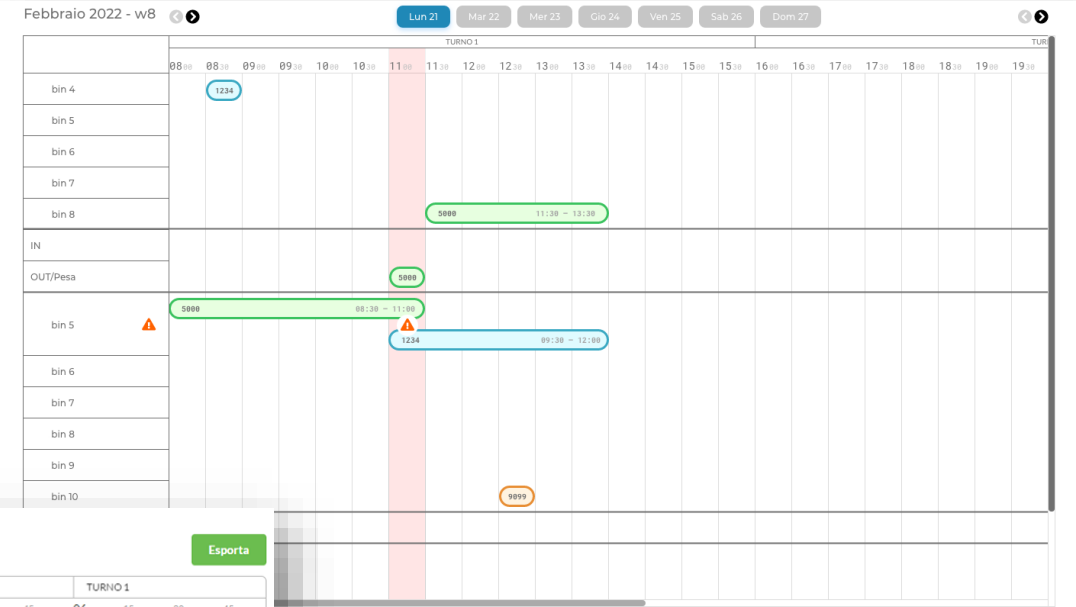


PORT RAIL SHUNTING PLANNING & OPTIMIZATION

Optimizza Selezionati Mostra ultimi ottimizzati Mostra tutti

<input type="checkbox"/>	Traccia	Orario	A/P	Terminal	Luogo	Giorni di Circolazione	Lunedì	Martedì	Mercoledì	Giovedì	Venerdì	Sabato	Domenica
<input type="checkbox"/>	90001	18:00	arrival			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90002	14:00	departure			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90003	7:00	arrival			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90004	4:00	departure			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90005	20:00	departure			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90010	12:00	departure			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90011	12:00	arrival			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	90012	12:00	arrival			1 2 3 4 5 6 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Input



Output

Graphical representation



PORT RAIL SHUNTING SIMULATION & DIGITAL TWIN

