

**MEDITERRANEAN
RAIL FREIGHT CORRIDOR**
Spain-France-Italy-Slovenia-Croatia-Hungary

International End-to-End Freight Traffic Monitoring Pilot along the Mediterranean corridor

Return on Experience and Next Steps

In cooperation with

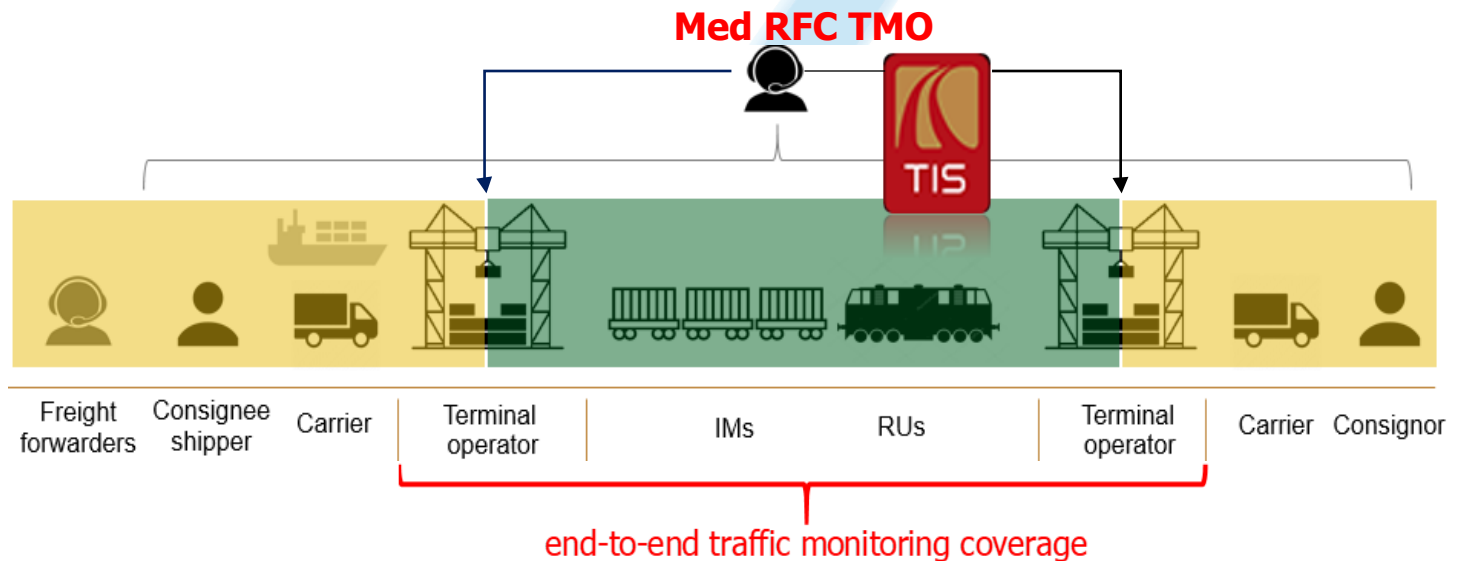


Co-financed by the Connecting Europe
Facility of the European Union

1 / The Pilot's concept

Project Idea: Set-up of a Temporary Monitoring Team (TMO) to improve the coordination among all the actors in the rail supply chain, to monitor the quality of the selected services and to verify the reliability of the ICT systems

- Med RFC Pilot monitored a limited number of trains running between Italy, France and Spain, checking their punctuality and data quality. The information was collected using e-mails and phone calls, checking the train runs in TIS as a primary source of information.
- The Monitoring was extended to the departure and destination Terminals, extremely important from the point of view of the final Customer, considering consequently non only departure and arrival times of the trains, but also HLR and MAD times.



2 / The Pilot's Frame

Project Implementation:

3 Phases

Pilot
preparation

July-August 2020
TMO set-up in
partnership with **Polimi**

Traffic
Monitoring

September-October 2020
6 relations selected between **Italy, France** and **Spain**
131 trains and **1.407** operations monitored

Pilot
Evaluation

November 2020
Evaluation based on quantitative and qualitative parameters
on **traffic performance, information flow** and **ICT** reliability

	JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER			
weeks	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Phase 1 - Pilot proposal																												
1.1 Pilot proposal preparation																												
1.2 Pilot approval by Med RFC GA																												
Phase 2 Pilot preparation																												
2.1 Project Team & TMO set-up																												
2.2 TMO Monitoring tools acquisition																												
2.3 TMO ICT tools test and training (TIS + IMs)																												
2.4 Traffic Monitoring procedures set-up																												
2.5 Agreements with RUs and Terminals																												
2.6 Final Monitoring Plan set-up																												
2.7 Kick-off meeting with Project Team																												
Phase 3 Traffic Monitoring																												
3.1 Traffic Monitoring																												
3.2 Daily collection of Traffic Monitoring data																												
3.3a Operational meetings with Project Team (every week)																												
3.3b Evaluation meetings with Project Team (once a month)																												
Phase 4 Final Report preparation																												
4.1 Traffic Monitoring data consolidation & analysis																												
4.2 Pilot evaluation																												
4.3 Final Report preparation																												
4.4 Final Report sharing with Project Team																												
4.5 Final Report delivery																												
4.6 Final Report approval by Med RFC GA																												

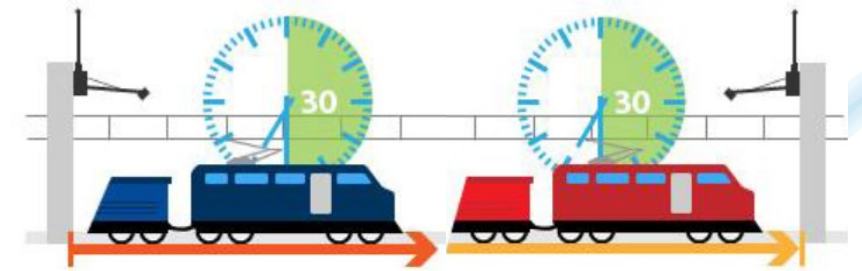


The Final Report has been formally approved by the General Assembly on December 8th and shared with Med RFC Executive Board

3 / The Pilot evaluation

Quantitative indicators – Process/Traffic performance

- Traffic performance (delays per trains runs, main causes of delay, main locations of delay etc.)
- Process performance (completeness, proper timing, flows of communication etc)
- Enhancements in planning for next TT



Quantitative indicators - Check of the ICT consistency

- Number of inconsistencies detected
- Split of inconsistencies per source/cause
- Suggestions for an improvement of Data Quality



Qualitative indicators

■ very unsatisfied ■ unsatisfied ■ slightly unsatisfied ■ slightly satisfied ■ satisfied ■ very satisfied

- Stakeholder and End Users Satisfaction Survey
- Improvement in the information sharing
- Improvement in the process effectiveness



4 / The Pilot's Results: Traffic Performance

Route Id	OTN changes [%]	Average delay [min] on			
		HLR	Train departure	Train arrival	MAD
1	15,8%	23	76	22	73
2	80,8%	-71	10	90	357
3	15,6%	-15	33	66	90
4	9,1%	-47	8	67	485
5	44,4%	-29	56	16	640
6	66,7%	20	2	87	126
Total	33,6%	-20	31	58	295

Traffic performance: main conclusions

- 1 train every 3 changes its OTN
- Terminals are on time (or ahead) in HLR
- Train departure has a limited delay (1/2 hour)
- Train arrival doubles the delay (1 hour in the avg, but sometimes recovers the delay)
- But MAD always multiplies the delay (5 hrs in avg)

Actions suggested

- Improved Int'l trains ICT mgmt.
- Proper integration with the terminal from the infrastructural and time-tabling point of view is a key factor
- Optimization of the first and last mile, so to remove bottlenecks

4 / The Pilot's Results: TIS consistency

Route Id	TIS non-conformities			
	Missing Trains/Sections	Not linked trains	Status error	Missing data
1	5,3%	15,8%	12,3%	28,1%
2	7,7%	65,4%	10,9%	26,7%
3	18,8%	34,4%	13,2%	21,4%
4	0,0%	27,3%	1,1%	22,8%
5	11,1%	55,6%	20,1%	21,2%
6	50,0%	75,0%	14,0%	27,2%
Total	12,2%	41,2%	9,7%	24,3%

TIS non-conformities: main conclusions

- TIS data-quality is still too low
- 1 train over 8 is missing totally or in part
- 1 train over 2 is not properly linked
- 1 ops over 3 has a status error or is missing

Actions suggested

- Improvement of TIS data quality
- Better integration with IM's ICT tools (in planning and ops phases)
- More regular linking of trains (who is in charge of it?)
- Split of Paths and Trains' Id

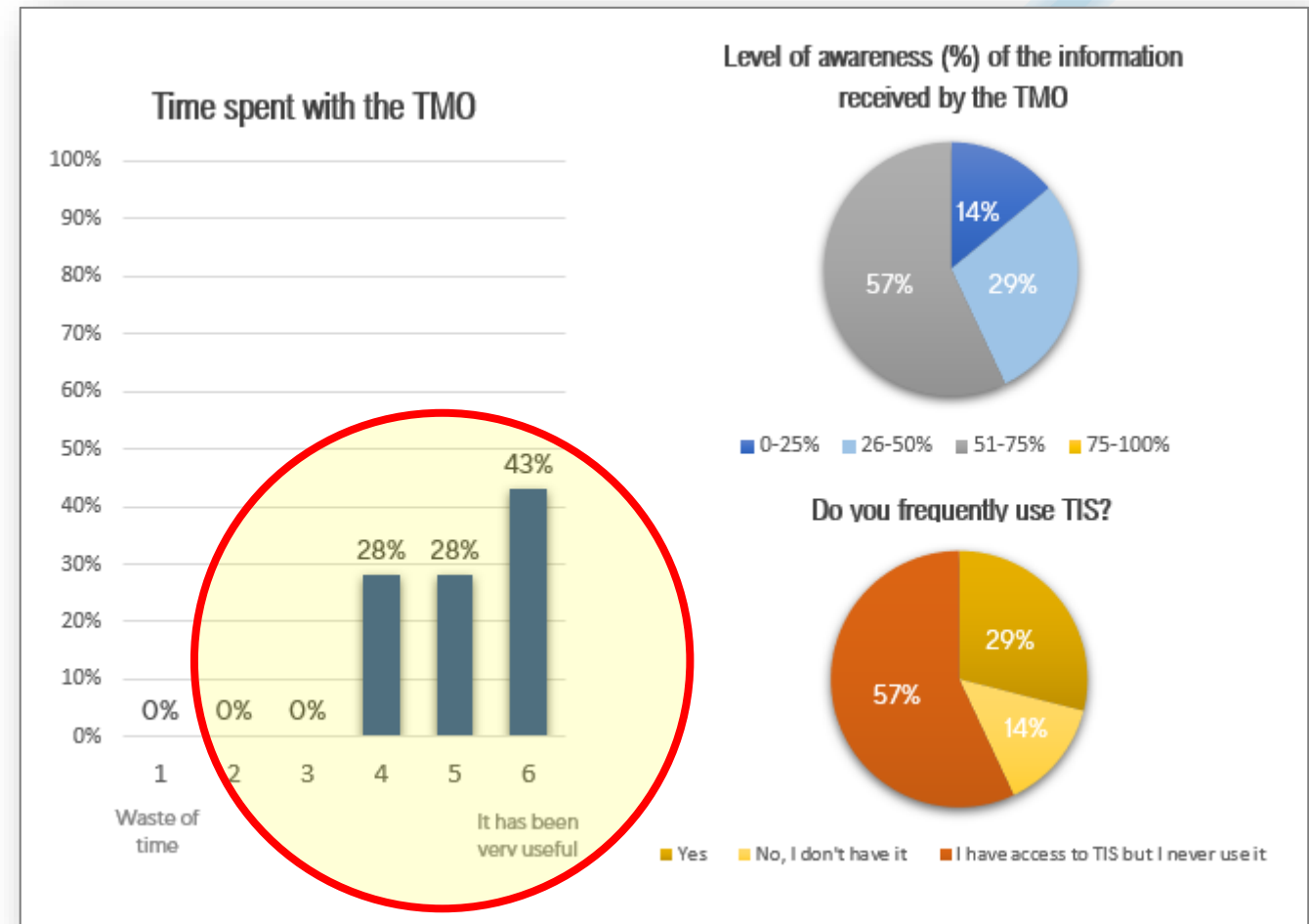
4 The Pilot's Results: the Satisfaction Survey

Satisfaction Survey main outcomes

- About 60% of the information were already known, but more than 40% were not known or not in detail
- The direct link of communication provided by TMO has been considered useful by all the parties
- Only 29% of the participants to the Survey is currently using TIS

Actions suggested

- Promote the use TIS as a common tool
- Develop common platforms/tools for a more effective information sharing among all the parties (including Terminals and MTOs)



4 / The Pilot's Results: the Satisfaction Survey

Dear Pamela,

I just filled the survey. Sorry for my late reply.

I would like to say: "thank you for the project and everyone whom had helped us a lot and for this monitoring."

This had a very good effect on the people into the stations in SNCF RESEAU and in Italy too.

I do believe that it changes their prospective on our trains and it is better monitored by the people on the circulations than before...

And also on the works, the people in charged of those works managed in advanced with us now and finally 😊

Thanks!!!

Best regards



5 / The Pilot's Results: Suggestions for improvement

- Focus on the **main critical points** of the routes to **reduce bottlenecks**
- Stronger Involvement of the **Terminals, RUs and MTOs** in planning and operations
- Improve **ICT systems integration** and **TIS data quality**
- Promote the use of **TIS** as a **common ICT system**
- Development of **Common Information Sharing** environment/tools (e.g. Teams)
- Improve **Sensitive Information** management
- Split **Train numbering** vs **Path numbering**
- **Intelligent Video Gates (IVG)** along the Med RFC to improve regular monitoring
- **Reduce changes in train/path number**, with a better management of Int'l trains

6 / The Pilot's Results: Key messages and Next Steps

- To achieve an high Rail Traffic Performance requires many issues to be tackled and the involvement of all the stakeholders on a European and Regional level
- Technology is a key issue but without a common sharing it does not work
- Cooperation among all the parties (IMs, RUs, Terminals, Freight forwarders, MTOs and End Users) is needed with mutual communication and common tools
- Integrated Planning of Rail Services has to be strictly connected to Permanent Monitoring within a continuous plan-do-check-act cycle
- RFCs are the proper organisation to develop and manage full cooperation among stake holders at European and Regional Level (Task Forces, QCOs etc)
- Final goals should be set-up and implementation of Performance Pacts offering to End Users a reliable and integrated rail service with agreed service levels



MEDITERRANEAN RAIL FREIGHT CORRIDOR

Spain-France-Italy-Slovenia-Croatia-Hungary

Amministrazione Trasparente

COVID-19

ABOUT US

ADVISORY GROUPS

COMMERCIAL OFFER

DOCUMENTS

NEWS & EVENTS

CONTACTS

13th-15th May 2020

The Mediterranean Rail Freight Corridor participation from May, 13th until 15th on the TEN-T DAYS 2020 in Šibenik with the RFC Network and RNE is **cancelled due COVID19 emergency restrictions.**



Mediterranean Rail Freight Corridor connects you!

*Thank
you*

