



WESTERN BALKANS TRADE AND TRANSPORT FACILITATION PROJECT

Transport Global Practice

September 16, 2020

BASIC INFORMATION

Countries in TTF 1:

- Albania
- North Macedonia
- Serbia

Implementing Agencies:

- Ministry of Construction, Transport and Infrastructure (Serbia)
- Ministry of Transport and Communication (North Macedonia)
- Ministry of Finance and Economy (Albania)

PROPOSED DEVELOPMENT OBJECTIVE(S)

The Proposed Development Objective is to **reduce the trade costs and increase transport efficiency** in Albania, North Macedonia, and Serbia.

Aligned with **WB goals of reducing poverty** and promoting shared prosperity

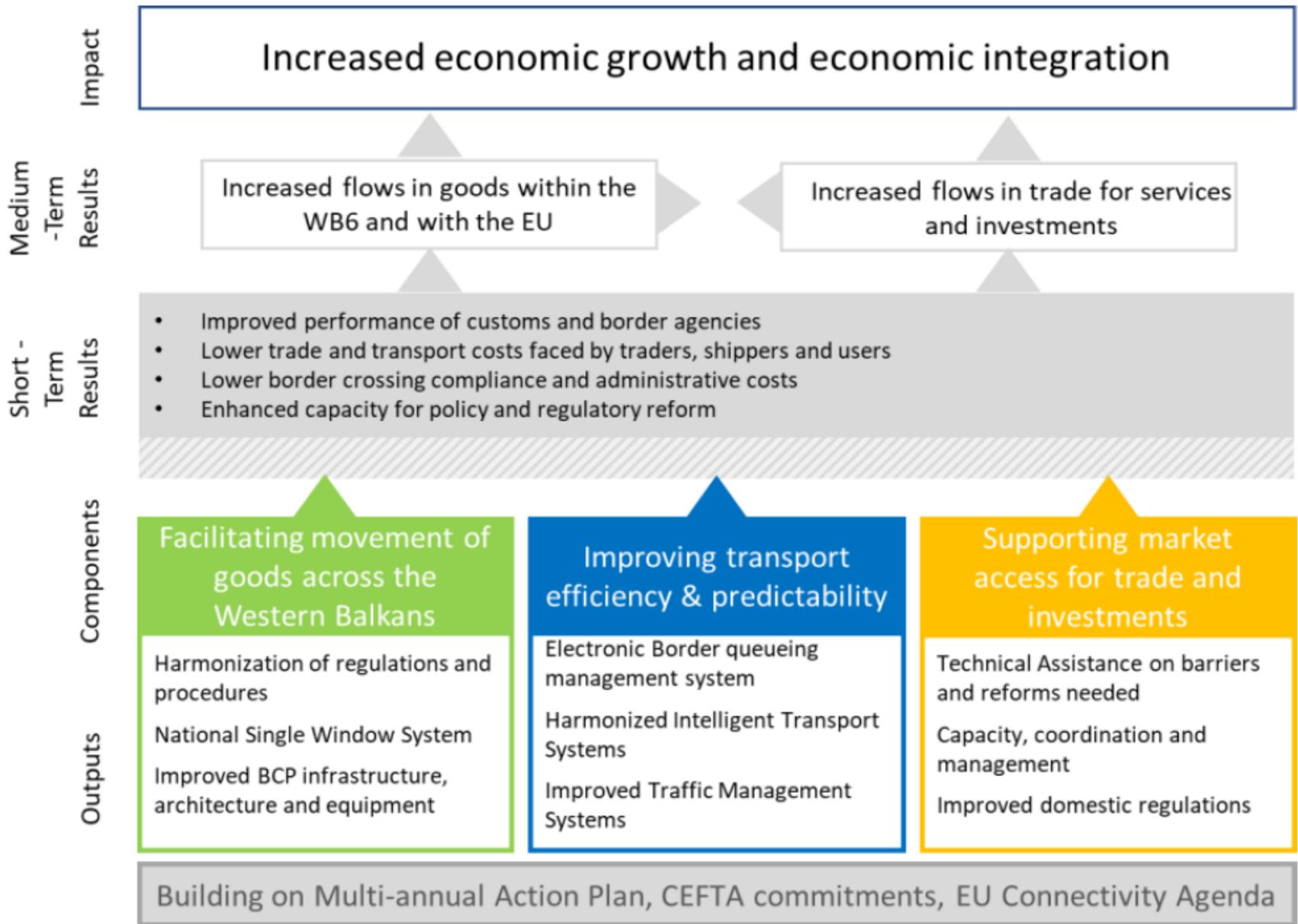
Aligned with **EU accession and integration processes** and EU efforts for closer integration within Western Balkan region

COMPONENTS

1. Facilitating movement of goods across the Western Balkans
2. Enhancing transport efficiency and predictability
3. Enhancing Market Access for Trade and Investments
4. Supporting Project Implementation and Coordination

COORDINATION

- Coordinated and collective action is necessary to **reduce trade transaction costs** along regional transport corridors and connectivity to TEN-T EU Network.
- Trade and transport facilitation are key elements of WB6's efforts to **deepening economic integration** in the region and the EU
- Western Balkans Six Clear **EU accession** perspective and integration into the multilateral trading system



IMPLEMENTATION

INVESTMENTS, TECHNICAL ASSISTANCE AND REGULATORY AND INSTITUTIONAL REFORMS.

1. Adoption and implementation of a National Single Window (NSW) solution;
2. Improvements in border crossing points and crossing points in selected trade corridors;
3. Adoption of an Intelligent Transport System (ITS);
4. Technical assistance and support for the implementation of regulatory and institutional reforms needed
5. Knowledge transfer and capacity building

ALBANIA

- Implementation of the NSW,
- Development of the National Transit Application and Economic Operator Registration and Identification (EORI),
- Adoption of Vessel Traffic Management Information System (VTMIS) system and
- Technical assistance and support for the implementation of regulatory and institutional reforms.

NORTH MACEDONIA

- Technical assistance support will be provided together with NSW
- Implementation/interface with existing systems,
- Deployment of ITS on the A1 motorway, part of Corridor X,
- Technical Assistance on ITS implementation of EU Directives (legal and technical).

SERBIA

- Adoption and implementation of a NSW solution,
- Installation of Electronic Data Interchange (EDI) systems for railways,
- Developing overall ITS architecture and deploying it on Corridor X, and
- Improving specific railway level crossings (RLC) on the network

ENHANCING TRANSPORT EFFICIENCY AND PREDICTABILITY

This component will focus on

- (a) development of **National ITS Strategy**
- (b) adoption of an **Intelligent Transport System (ITS)**
- (c) **Corridor Performance Monitoring and Measurement tool**

NATIONAL INTELLIGENT TRANSPORTATION SYSTEM (ITS) STRATEGY FOR NORTH MACEDONIA

NATIONAL INTELLIGENT TRANSPORTATION SYSTEM (ITS) STRATEGY FOR NORTH MACEDONIA

- Strategic Framework for implementation of ITS on the TEN-T Core/Comprehensive Networks in Western Balkan 6 (EU- DG Near 2017 project recommendations and results)
- Aligned with National Transport Strategy of NM
- Aligned with EU Directive legal framework and related standards for deployment of ITS (architecture, applications and services)
- High priority for Western Balkan countries and EC expectations for:
 - a) reforms and adoption of the EU acquis
 - b) ensuring an interoperable transport network in the region with standards equal to TEN-T
- Timeframe 2020-2030
- Development in 12 months

ITS NATIONAL STRATEGY DEVELOPMENT OBJECTIVES

Identify **potentials and weaknesses** in the ITS legal, organizational, technology and application implementation

Develop **strategic actions and measures** to be address for full **legal, institutional, technical and operational deployment** of ITS on National Level, aligned with International standards

2020-2030 period with recommendation of **priority areas** and timeline of projects, activities, initiatives and policies, and indicators for progress monitoring

Final Delivery shall comprise of **National ITS Strategy and Action Plan** including Financial needs for short, medium and long term actions

CORRIDOR PERFORMANCE MONITORING AND MEASUREMENT SYSTEM (CPMM)

SPECIFIC OBJECTIVES OF CPMM

- 1 Monitor the performance by following quality and reliability of the travel
- 2 Measure and identify efficient operation and management of the transport system;
- 3 Provide decisions-support for priority investment
- 4 Improve traffic safety and reduce accidents on the roads
- 5 Enhance Mobility by improving transport and logistics functions

LEVEL OF DETAILS OF CPMM

Corridor Links - homogeneous links with similar traffic flow conditions

Inter-city links which present city-to-city corridor performance

Entire Corridor measurements, for multi-corridor comparison of performances

Points of interest for monitoring:

- port areas;
- road and rail border crossings;
- road and rail custom clearance stations/terminals ;
- highway rest areas and parking (intentional stops, applicable for road transport),
- corridor segments between major economic centers
- unintentional stoppages and idling over the corridor components
- length of queueing and time to pass on Border Crossing, Customs Offices and Terminals and other points detected along the corridor (geofencing)

DATA AND DATA ANALYTIC PROCEDURES

- **Real-time data and Historical data**
- **Data sources:**
 - **Institutional** data (customs procedures, border police, ports, ITS data, traffic police data, infrastructure data...)
 - **Commercial** Data
- **Institutional:** Road data (infrastructure, ITS data and GIS data), Rail data (infrastructure and GIS), Customs IT system data, Border Police data, Ports data, Traffic Police Data
- **Commercial** data: Transport companies' data, Logistic providers and freight forwarders, Big data providers, other

INDICATORS FOR MEASURING CORRIDOR PERFORMANCE

- Travel time, time cost, quality for Road Transport
- Emission - Amounts of air pollutants (CO, HC, NOx, PM2.5 and PM10) generated at Corridor
- Safety - Road accident statistics and accident hot spot
- Reliability for Road Transport - Travel Time Index (TTI) and Planning Time Index (PTI)
- Travel time, time cost, quality and reliability for Rail Transport
- Regulatory procedures time and delaying at BC and CT
- Quality and reliability for Multi-modal integration
- Volume of Trade and Type of goods

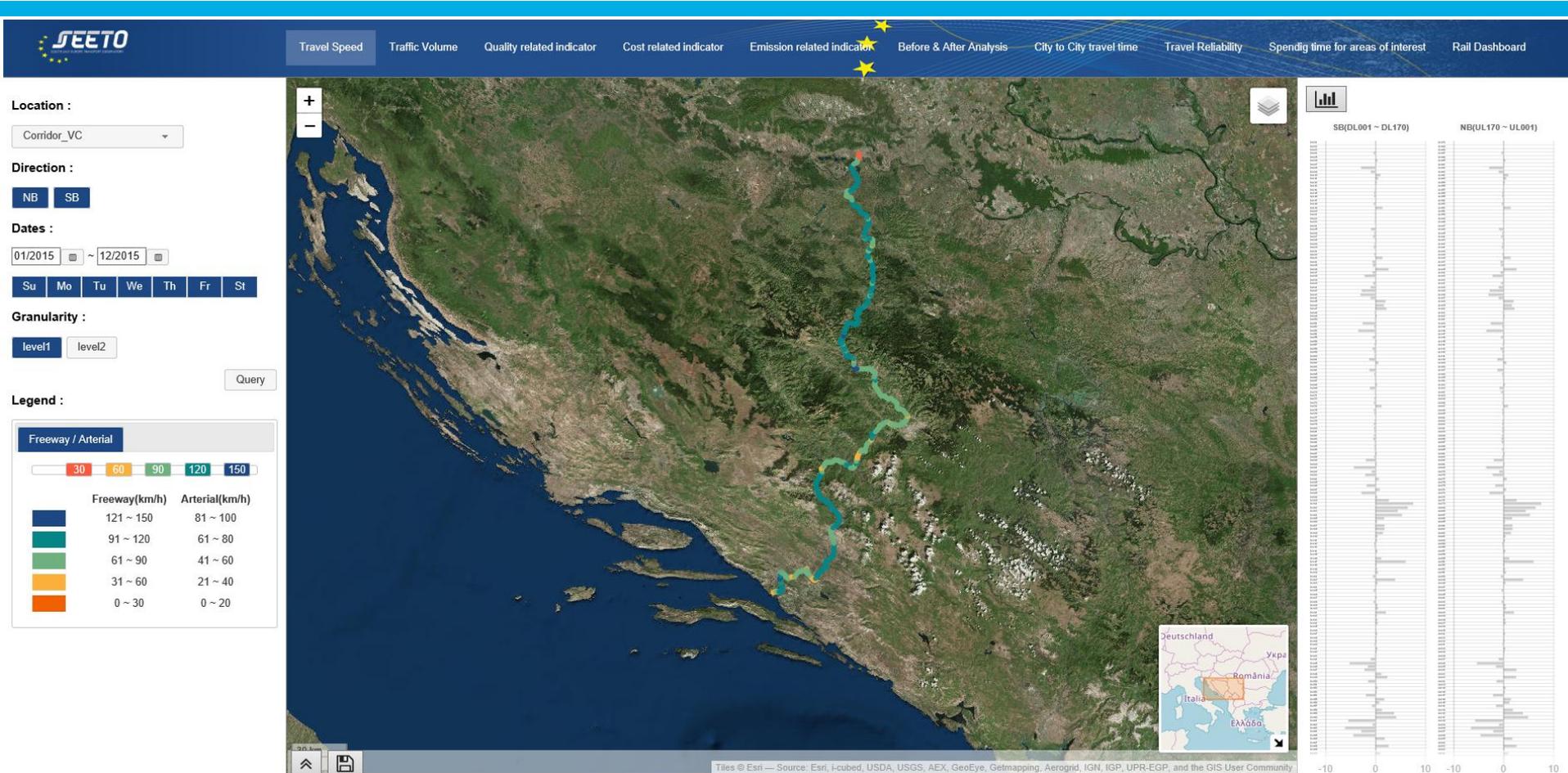
EXPERIENCE FROM CORRIDOR Vc and best practices worldwide

A. Outline of Prototype System for the Corridor Vc

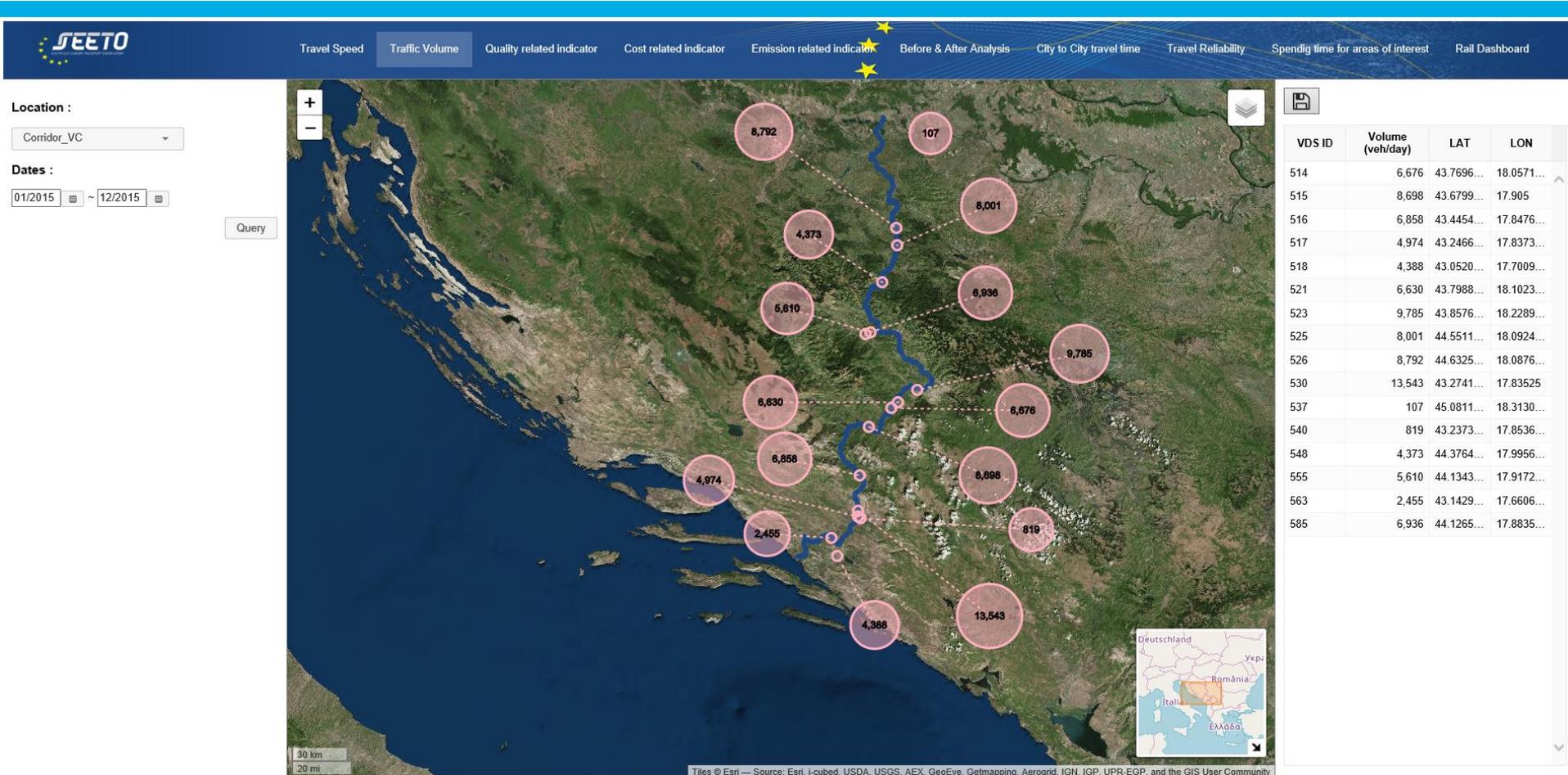
- Monitor the corridor performance & Support decision-making
- Data
 - 2015-2016 Truck GPS data
 - 2015-2016 16-Traffic Volume Data
- Features of Corridor Vc
 - 5 Major Cities
 - 2 Border Crossings
 - 7 Inland Customs
 - 1 Port



Travel Speed



Traffic Volume



Quality related Indicators



Travel Speed Traffic Volume **Quality related indicator** Cost related indicator Emission related indicator Before & After Analysis City to City travel time Travel Reliability Spending time for areas of interest Rail Dashboard

Location :
 Corridor_VC

Direction :
 NB SB

Dates :
 01/2015 ~ 12/2015

Su Mo Tu We Th Fr St

Granularity :
 level1 level2

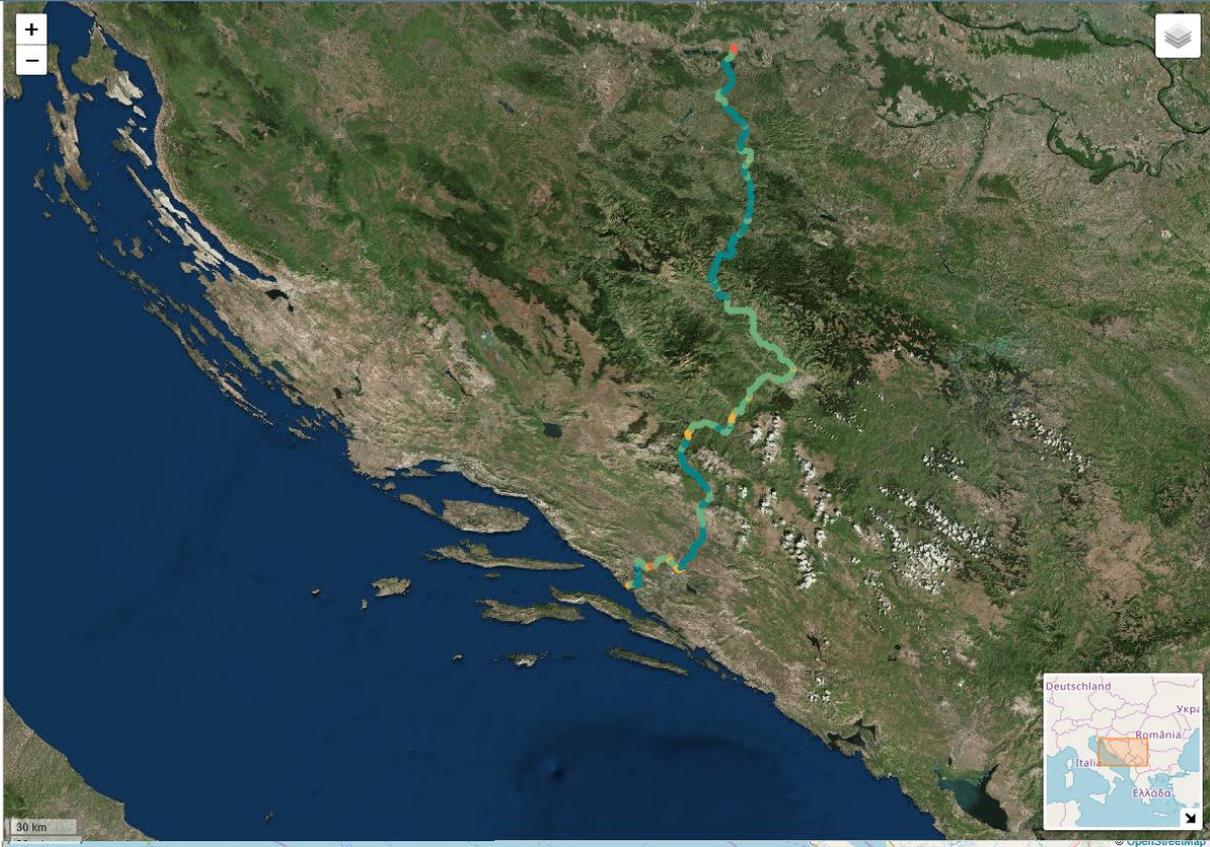
Metric :
 Ave. spot speed

Query

Legend :

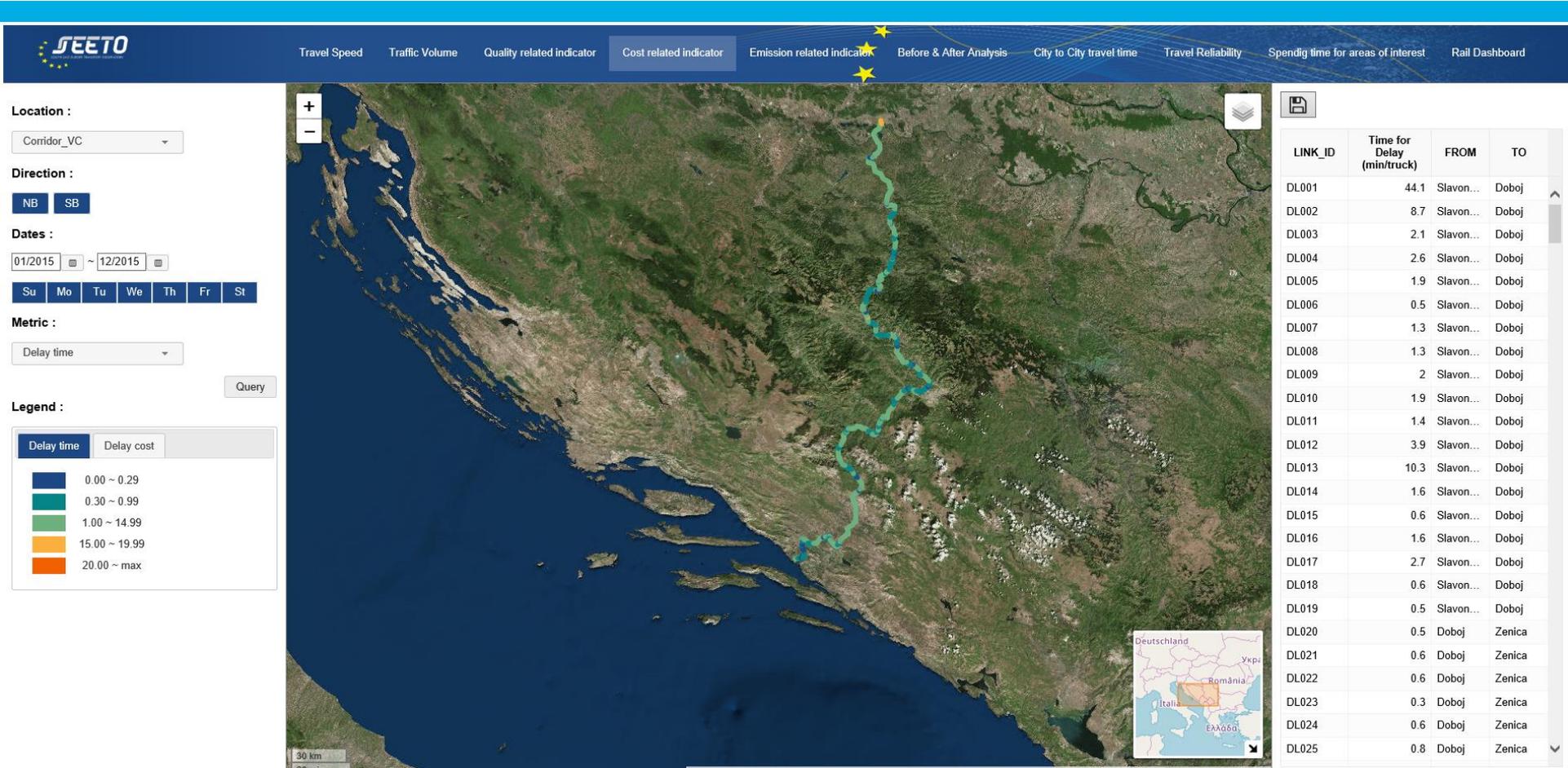
Ave. spot	Freq. low	Predictability
30	60	90
120	150	

Freeway(km/h)	Arterial(km/h)
121 ~ 150	81 ~ 100
91 ~ 120	61 ~ 80
61 ~ 90	41 ~ 60
31 ~ 60	21 ~ 40
0 ~ 30	0 ~ 20

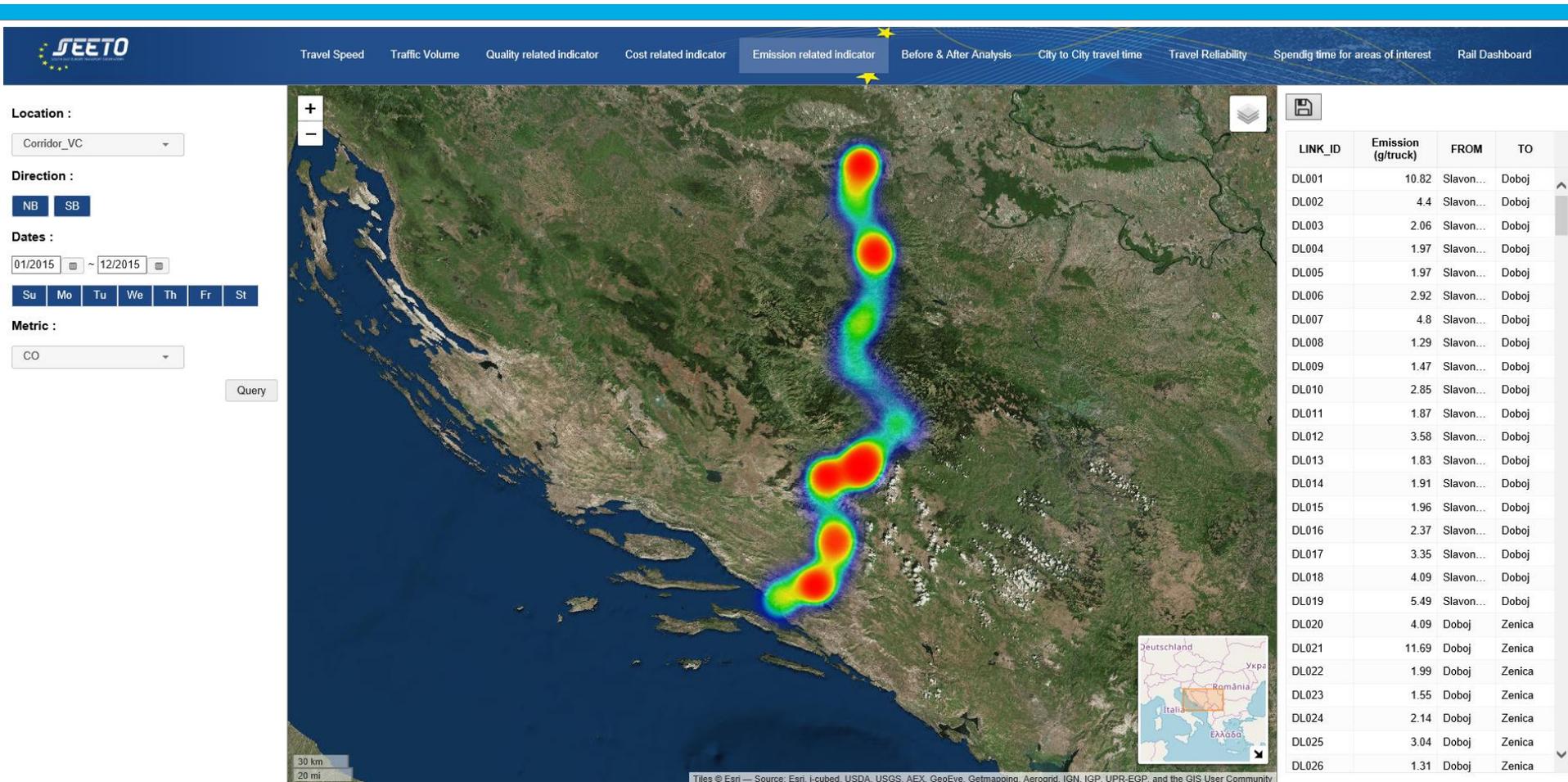


LINK_ID	Ave. spot speed (km/h)	FROM	TO
DL001	9.9	Slavonski...	Doboj
DL002	58.5	Slavonski...	Doboj
DL003	69.4	Slavonski...	Doboj
DL004	66	Slavonski...	Doboj
DL005	64.3	Slavonski...	Doboj
DL006	59.3	Slavonski...	Doboj
DL007	44.2	Slavonski...	Doboj
DL008	56.1	Slavonski...	Doboj
DL009	54.7	Slavonski...	Doboj
DL010	66.8	Slavonski...	Doboj
DL011	74.6	Slavonski...	Doboj
DL012	36.2	Slavonski...	Doboj
DL013	67.2	Slavonski...	Doboj
DL014	67.9	Slavonski...	Doboj
DL015	54.9	Slavonski...	Doboj
DL016	59.9	Slavonski...	Doboj
DL017	51.8	Slavonski...	Doboj
DL018	42.9	Slavonski...	Doboj
DL019	36.9	Slavonski...	Doboj
DL020	48.2	Doboj	Zenica
DL021	31.8	Doboj	Zenica
DL022	65.2	Doboj	Zenica
DL023	62.9	Doboj	Zenica
DL024	59.6	Doboj	Zenica
DL025	53.8	Doboj	Zenica

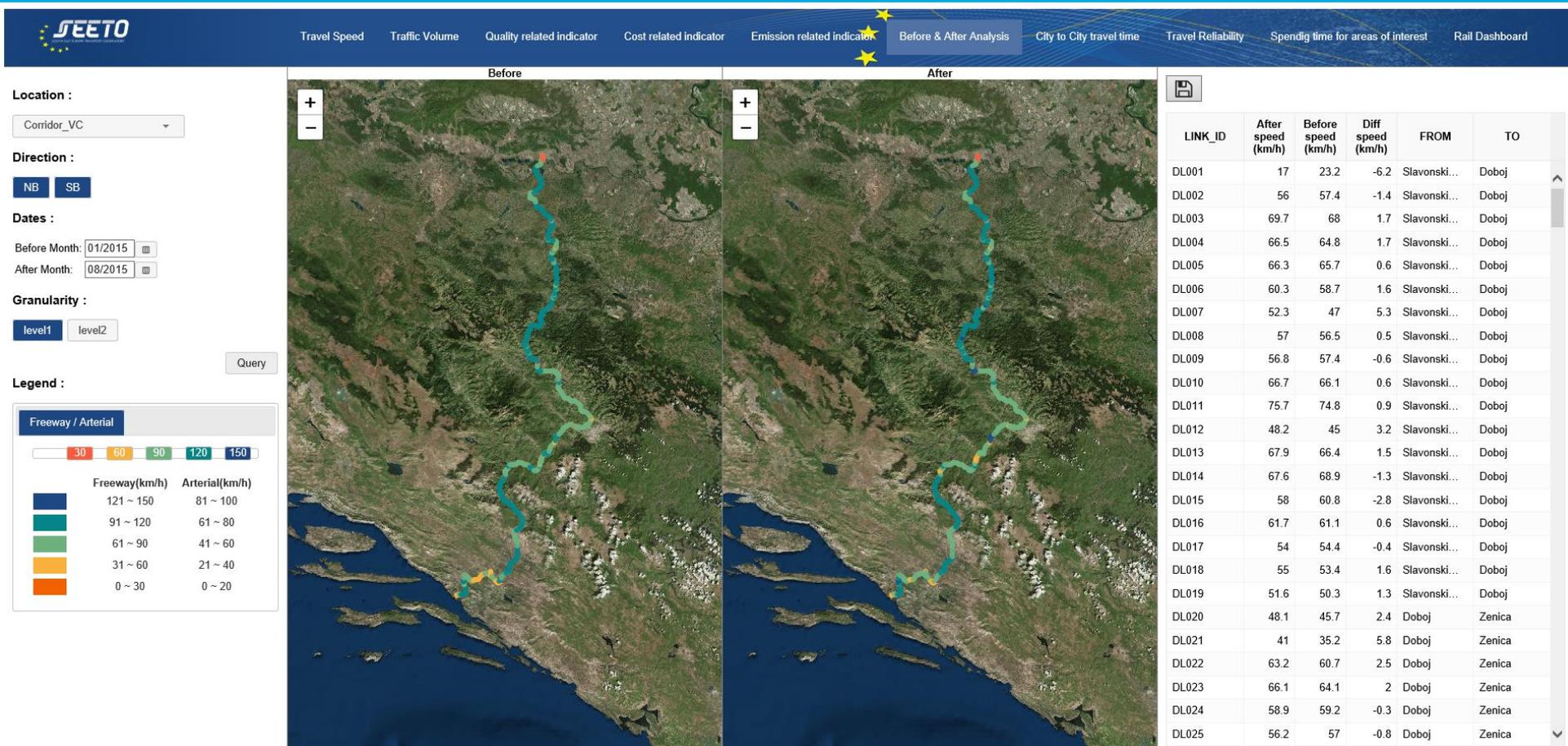
Cost related indicator



Emission related indicator



Before and After intervention Analysis



Links travel time by direction



Location :

Corridor_VC

From: Port Ploce

To: Slavonski Brod

Dates :

01/2015 ~ 12/2015

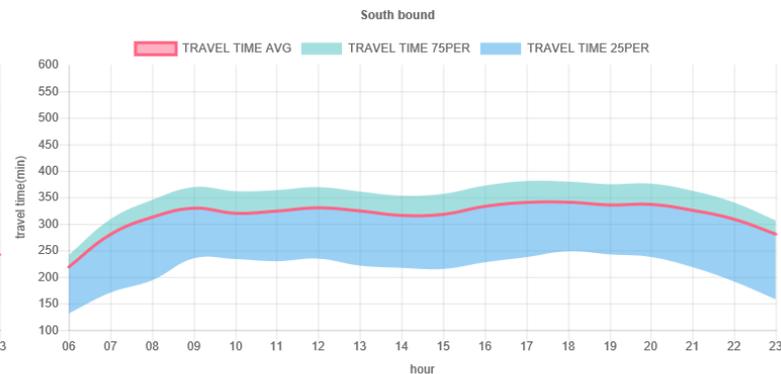
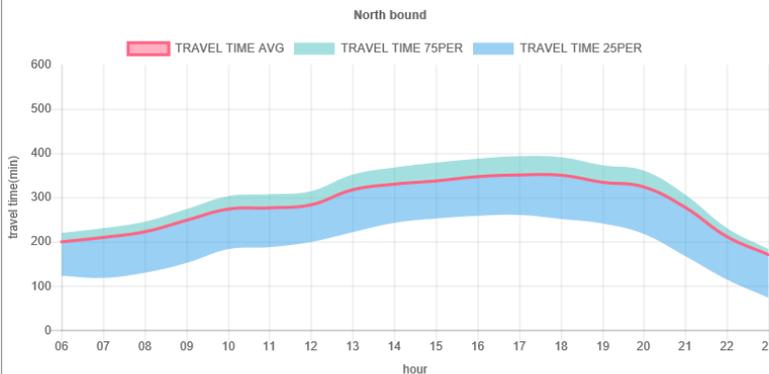
X-axis :

hour week month

Query

Statistics :

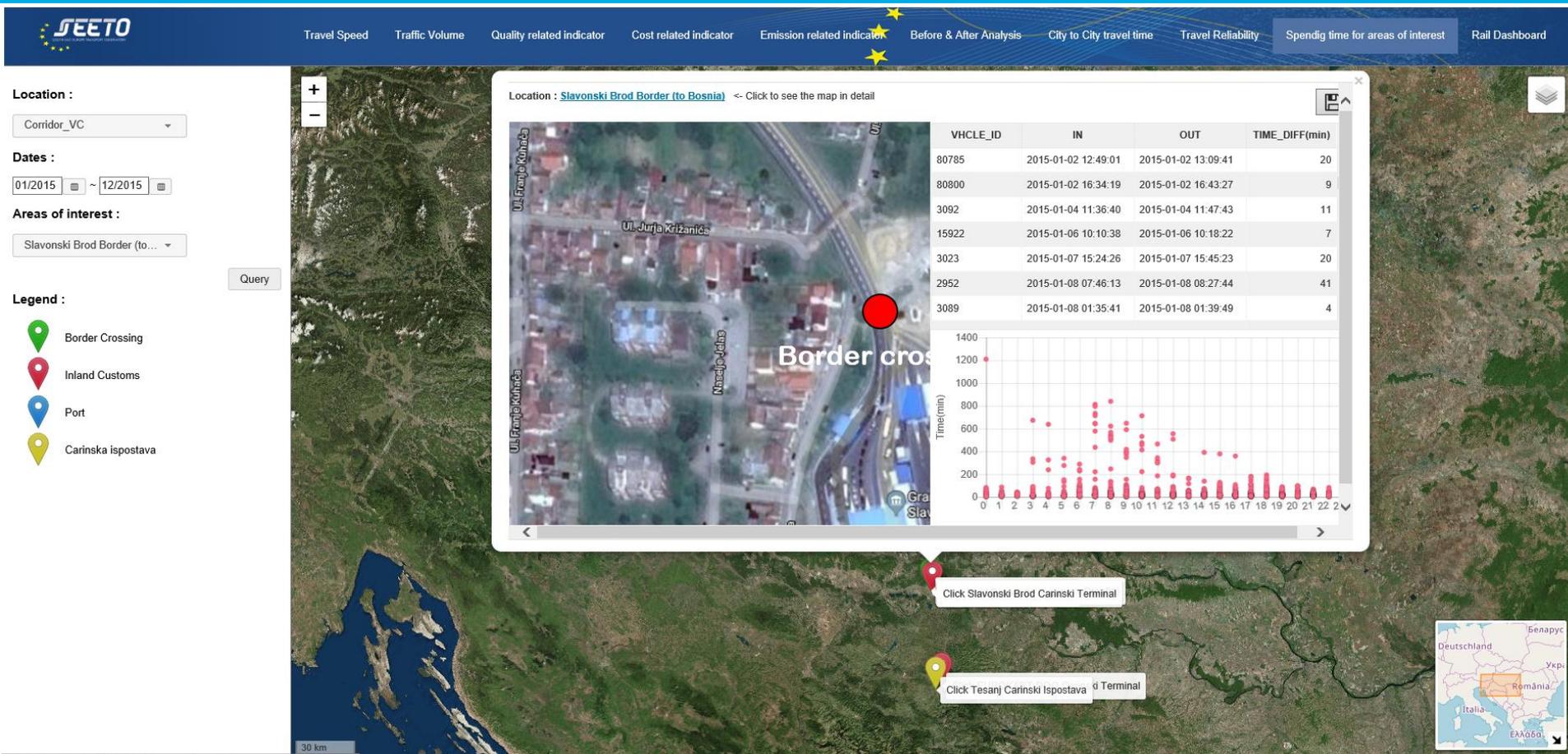
AVG 75%TILE 25%TILE



City to City Travel Time (min)

FROM \ TO	Port Ploce	Mostar	Sarajevo	Zenica	Doboj	Slavonski Brod
Port Ploce	0	81.05	185.72	228.53	292.6	356.36
Mostar	71.4	0	110.03	152.83	216.9	280.67
Sarajevo	177.45	106.05	0	42.8	106.88	170.64
Zenica	220.48	149.08	43.03	0	64.07	127.84
Doboj	287.06	215.66	109.61	66.58	0	63.77
Slavonski Brod	352.77	281.37	175.32	132.29	65.71	0

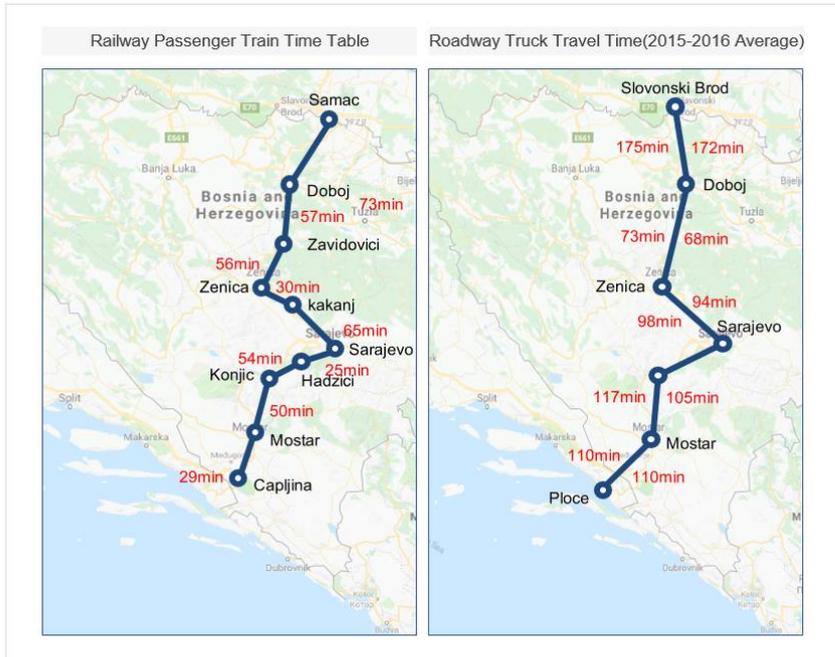
Time spent at specific points of interest (Border Crossing)



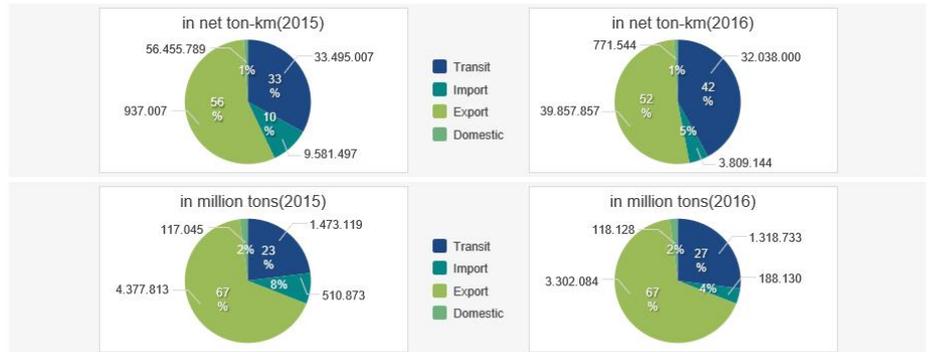
Railway Dashboard



• Comparison between Railway Passenger Train Time Table and Roadway Truck Travel Time



• Volumes of Freight Trains for Corridor Vc



• Overview of the Types of Accidents When Performing Rail Transport

		Year		
		2014	2015	2016
ŽRS	Collision of trains	1	-	-
	Fire on the means of transport	-	-	-
	Derailments	1	4	1
	Accidents at road crossings	13	-	4
	A train ride on a pedestrian	1	1	1
	Suicides	-	-	-
	Other	-	9	2

CPMM SUSTAINABILITY CHALLENGES

Vision and plan for scaling up CPMM throughout the WB6 and all corridors is delivered.

- i. Institutional Capacity for System utilization,
- ii. Stakeholder collaboration and Data collection,
- iii. System ownership and
- iv. System financing

Discussions started 2017 with SEETO/TCT, EU DG Move and DG Near as well as within current active World Bank projects on Trade and Transport Facilitation.

Thank you

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