

SETA South East Transport Axis

UN ECE WORKING PARTY 5 ON TRANSPORT TRENDS AND ECONOMICS

11.09.2013, GENEVA, CH

SETA South East Transport Axis

Project objectives & results

SETA- Corridor: Railway Network and Project Area



Current situation

- Landlocked countries (CZ, SK, AT, HU) need efficient rail transport connection for further economic growth
- Road freight traffic increasing constantly
- Railway connection along SETA corridor shortest in time (Vienna-Zagreb: 6 hours)
- Ports of Rijeka, Koper and Trieste are the only ports in the north Adriatic able to accommodate ships with PANAMAX size
- Shortest shipping distance from far east (7 days shorter than Rotterdam, 9 days shorter than Hamburg)

SETA partnership



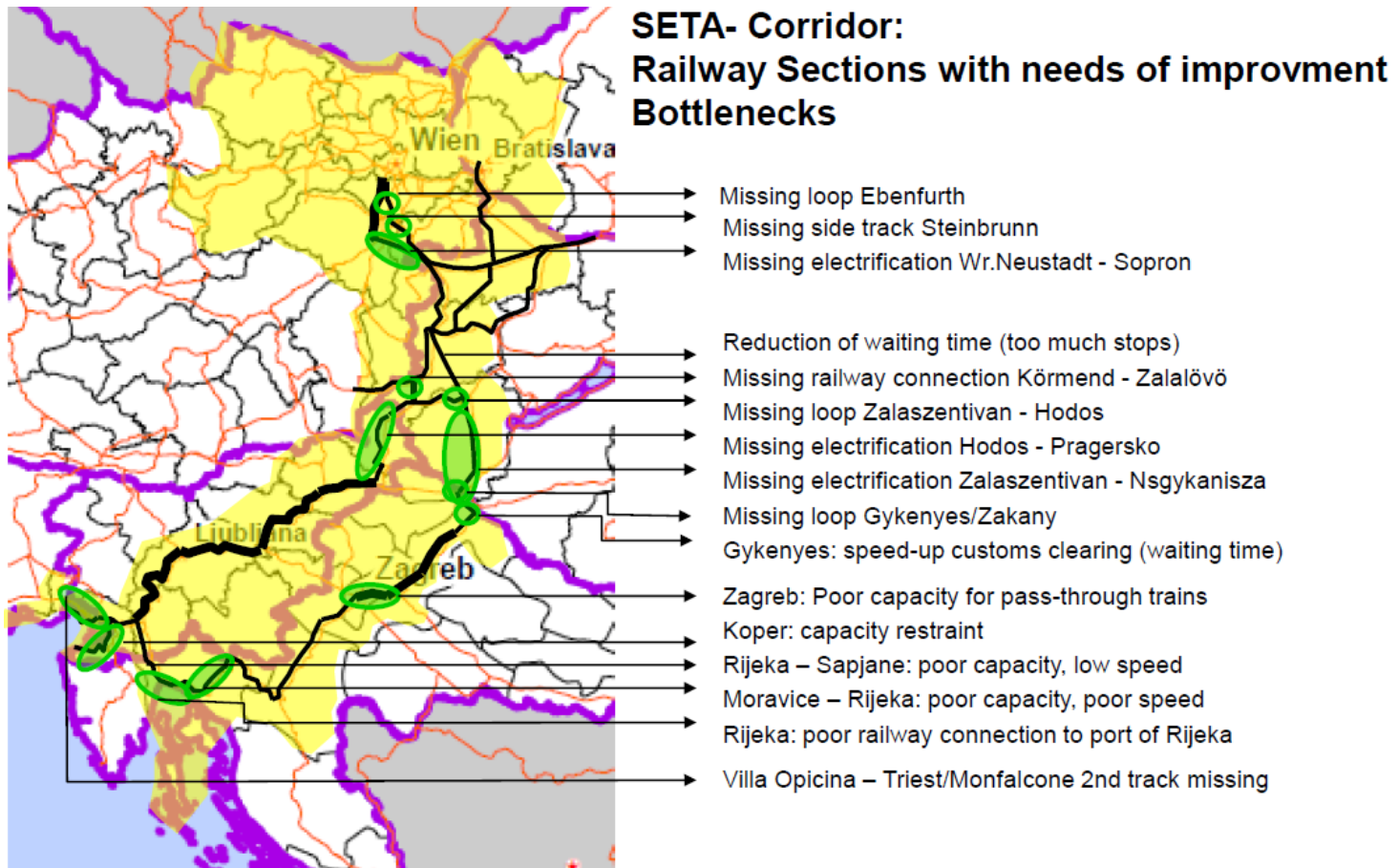
Objective

Improve the accessibility and logistic work flows in South East Europe by

- the improvement of organisational framework conditions and
- the development and implementation of short/medium term infrastructure investment measures.

➔ Competitive rail connections (freight & passenger transport) in the short-term!

Corridor analysis



Development measures - Organisation

- reducing the waiting time in the stations;
 - improved efficient customs control at the borders
 - minimize changes of locomotives (diesel vs. electric)
 - better coordination with other trains passing the station
- reducing the number of stops;
 - clear differentiation between regional and international trains
 - better coordination between regional and international trains will provide good quality of service for all customers
- use modern rolling stock;
 - two system locomotives reduce changes on non-electrified sections
 - modern wagons increase comfort for customers
 - modern wagons reduce noise emissions

SETA demonstration train Zagreb to Vienna – more than 1 hour faster...



... without any infrastructure investments!

In times of huge infrastructure investments dominating the discussion in the news, SETA provides an alternative approach in improving rail transport connections.

On September 28th, 2012 the new electro-diesel train from the Croatian railways run the 371km long route in 5 hours instead of 6 hours 15 minutes.

It's all about organisation!

The reduction of travel time has been achieved by overcoming the identified organizational bottlenecks like long waiting times, large number of stops, inefficient police and custom control, etc.

With the support of the railway companies, the responsible authorities it was possible to demonstrate the feasibility of the solutions developed in the project SETA.

The SETA demonstration train – more than 1 hour faster...



SETA demonstration train Monfalcone – Divaca – Rijeka

Objective:

- save travel time (from 6,01 to 4,52 hours with combined means to 4,15 hours without changing train);
- establish a complete railway connection between the two port cities of Monfalcone and Rijeka (with possible future extensions to Trieste and Koper) by overcoming infrastructural bottlenecks at the Italian-Slovenian border-crossing and at the Slovenian-Croatian border-crossing.



Based on this Memorandum is also the **commitment** on mutual sharing of experience and information between the city administrations, in order to achieve harmony in initiatives and potential projects to be activated in respective territories.

Furthermore the cities of Monfalcone, Koper-Capodistria and Rijeka express their interest to support the project SETA within their own possibilities and competences and to make use of the project outputs even beyond project lifetime.

Rijeka, 11th May 2013

Municipality of Koper
Boris Štindl
Podžupan



Municipality of Monfalcone
Silvia Altren
Podžupan



City of Rijeka
Vojko Obradović
Mayer



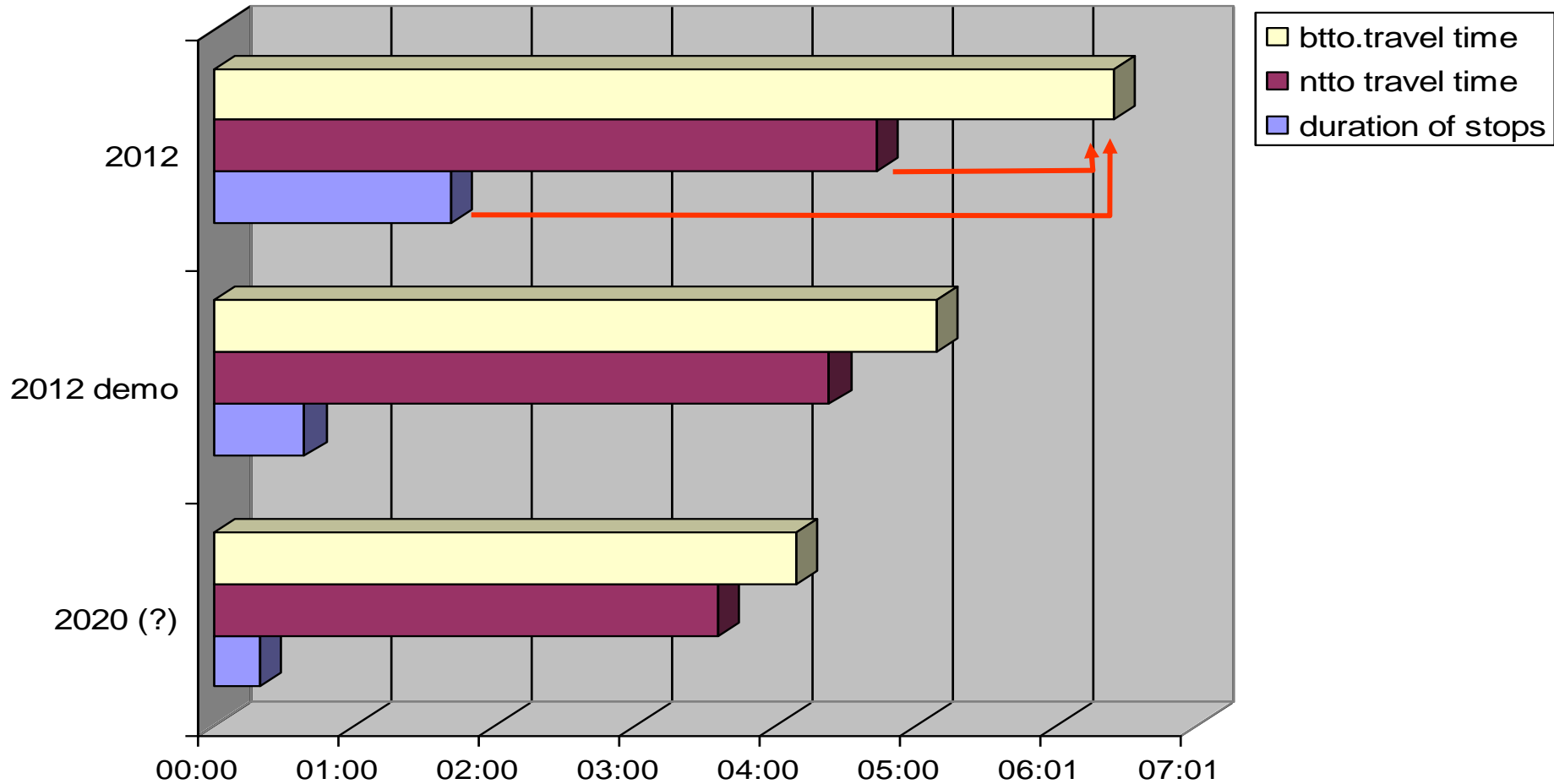
Jointly for our common future

Development measures – infrastructure

1. Infrastructural measures included in national/regional/business development plans
2. Additional small scale infrastructure measures
 - Electrification of missing sections to avoid locomotive changes and improve speed and energy efficiency.
 - Modernisation of already existing but poorly maintained sections
 - Construction of minor missing links like loop lines, additional side tracks, extension of tracks in stations, etc.



Competitive rail connections in the short-term



Consolidated economic evaluation

Financial analysis

Economic
analysis

Short and midterm

Long term

Environmental and social analysis

Instruments:

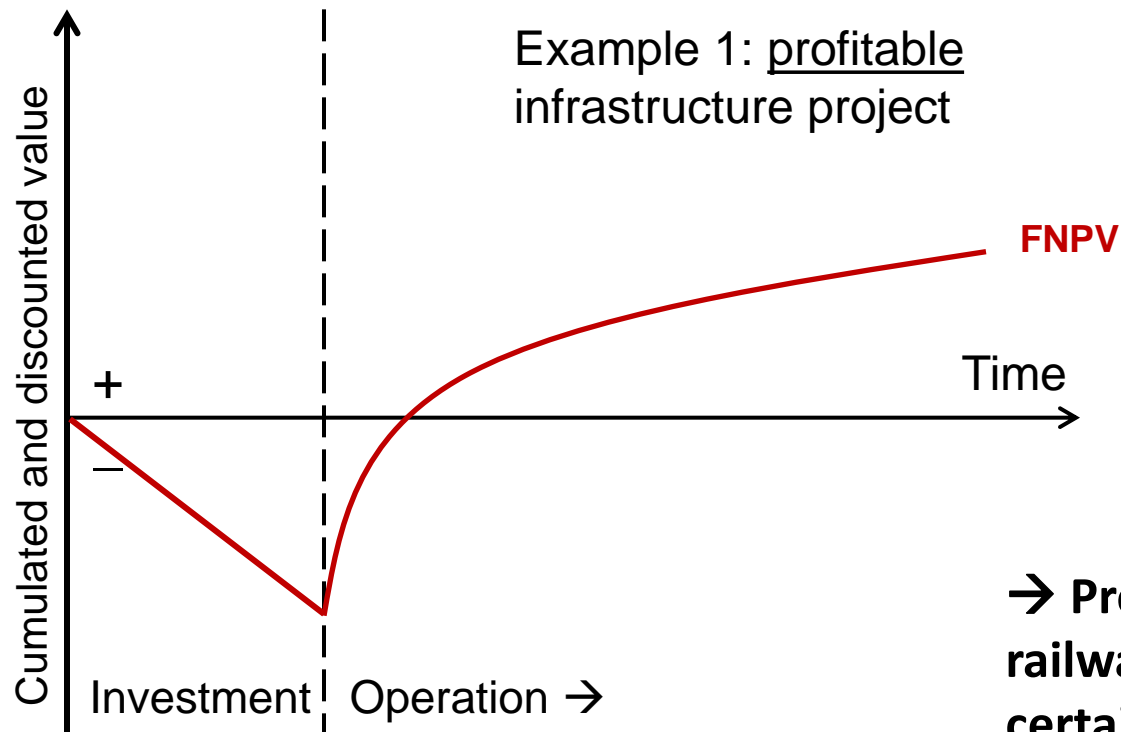
Multiregional Input-
Output Tables

Accessibility-
Dependent Regional
Econometric Model

IHS-ESA Model

Financial analysis

And: why public investment in transport infrastructure?



Example 1: profitable infrastructure project

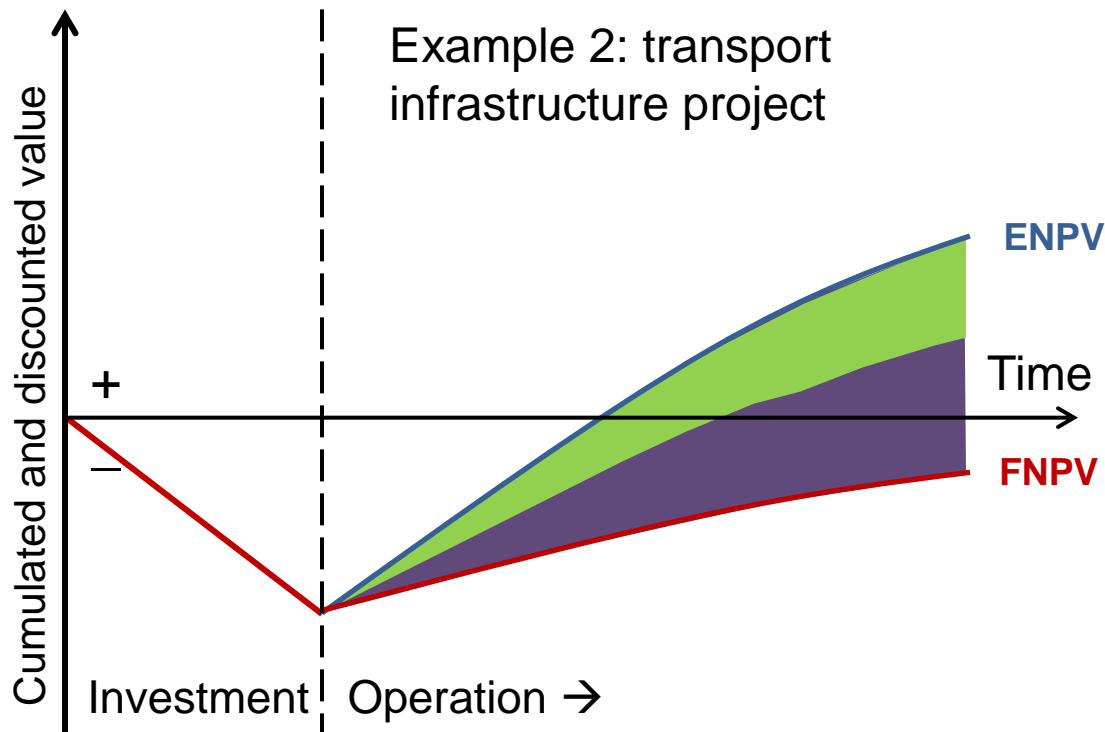
FNPV: Financial Net Present Value

Evaluates cash inflows and outflows over different points in time

→ Project is profitable for railway operator after a certain time

Financial analysis

And: why public investment in transport infrastructure?



ENPV: Economic Net Present Value

Point of view of the society
Uses opportunity costs of goods

- Includes social and environmental externalities
- Includes economic short and long term externalities

→ **Project is not profitable for railway operator, but for society as a whole**

Economic analysis: Short and Midterm effects

Multiregional Input-Output tables

Example: electrification of train path

Output: economic effects

- Direct
- Indirect
- Induced

	Sector 1	.....	Sector n	Final Use	Total Use
Sector 1	z_{11}	.....	z_{1n}	Y_1	Σ_1
\vdots	\vdots	\vdots	\vdots	\vdots
Sector n	z_{n1}	.....	z_{nn}	Y_n	Σ_n
Sum					
Imports	m_{11}	.....	m_{1n}		
Value Added	W_1	.....	W_n		
Output	X_1	.....	X_n		

National Input-Output Table

Multiregional Input-Output Table

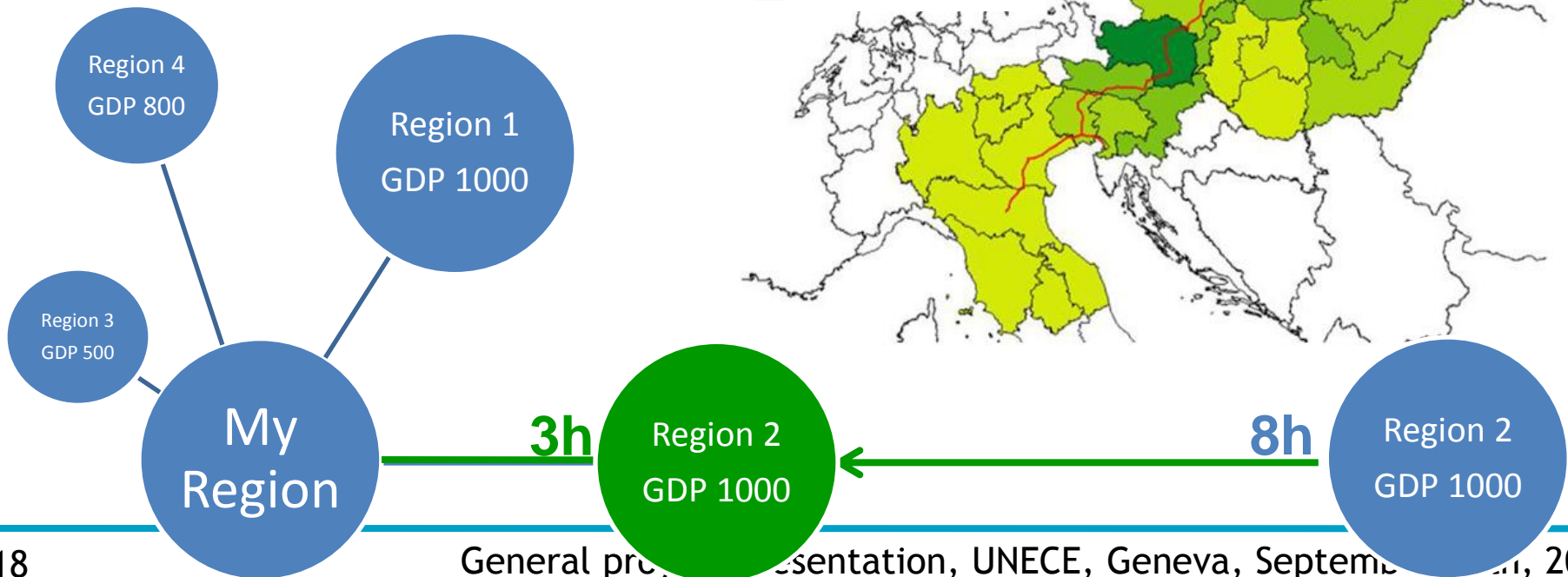
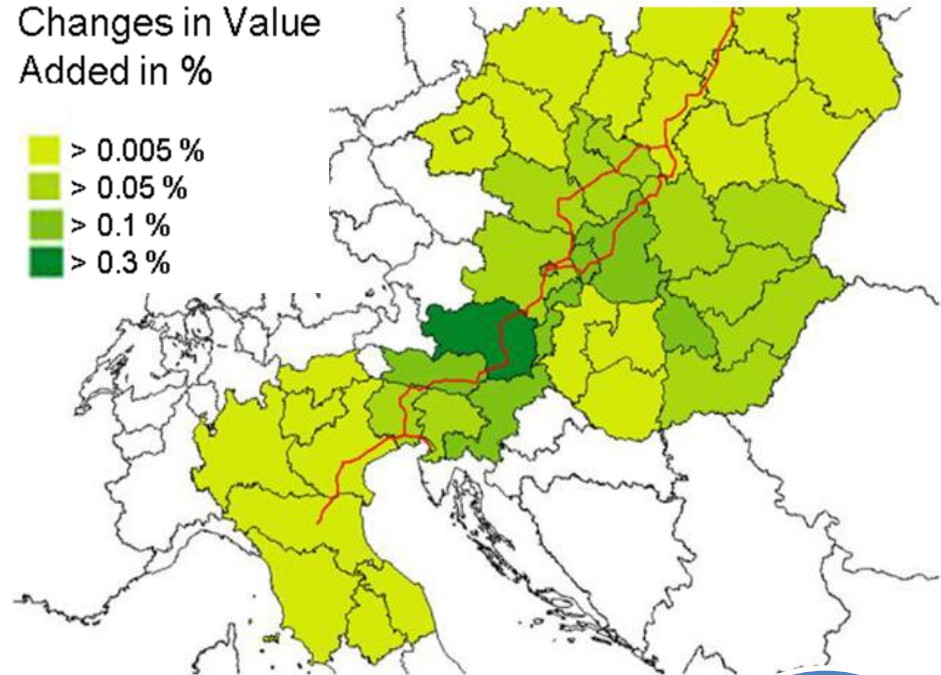
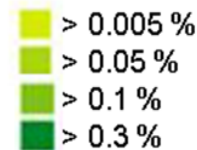
		Region 1			...	Region 9							
		Sector 1	.....	Sector n	Sector 1	.....	Sector n	Sector 1	.....	Sector n	Sum	Final Use	Total Use
Region 1	Sector 1	z_{11}	.....	z_{1n}	z_{11}	.....	z_{1n}	z_{11}	.....	z_{1n}		Y_1	Σ_1
	\vdots	\vdots	\vdots	\vdots	\vdots	\vdots	\vdots		\vdots	\vdots
	Sector n	z_{n1}	.....	z_{nn}	z_{n1}	.....	z_{nn}	z_{n1}	.....	z_{nn}		Y_n	Σ_n
...	Sector 1	z_{11}	.....	z_{1n}	z_{11}	.....	z_{1n}	z_{11}	.....	z_{1n}		Y_1	Σ_1
	\vdots	\vdots	\vdots	\vdots	\vdots	\vdots	\vdots		\vdots	\vdots
	Sector n	z_{n1}	.....	z_{nn}	z_{n1}	.....	z_{nn}	z_{n1}	.....	z_{nn}		Y_n	Σ_n
Region 9	Sector 1	z_{11}	.....	z_{1n}	z_{11}	.....	z_{1n}	z_{11}	.....	z_{1n}		Y_1	Σ_1
	\vdots	\vdots	\vdots	\vdots	\vdots	\vdots	\vdots		\vdots	\vdots
	Sector n	z_{n1}	.....	z_{nn}	z_{n1}	.....	z_{nn}	z_{n1}	.....	z_{nn}		Y_n	Σ_n
Sum													
Imports		m_{11}	.....	m_{1n}	m_{11}	.....	m_{1n}	m_{11}	.....	m_{1n}			
Value Added		W_1	.....	W_n	W_1	.....	W_n	W_1	.....	W_n			
Output		X_1	.....	X_n	X_1	.....	X_n	X_1	.....	X_n			

Economic analysis: long term effects

Accessibility-dependent regional econometric model

Changes in distance and economic weight induce changes in **Value Added**

Changes in Value Added in %



Environmental and Social Analysis

IHS-ESA model

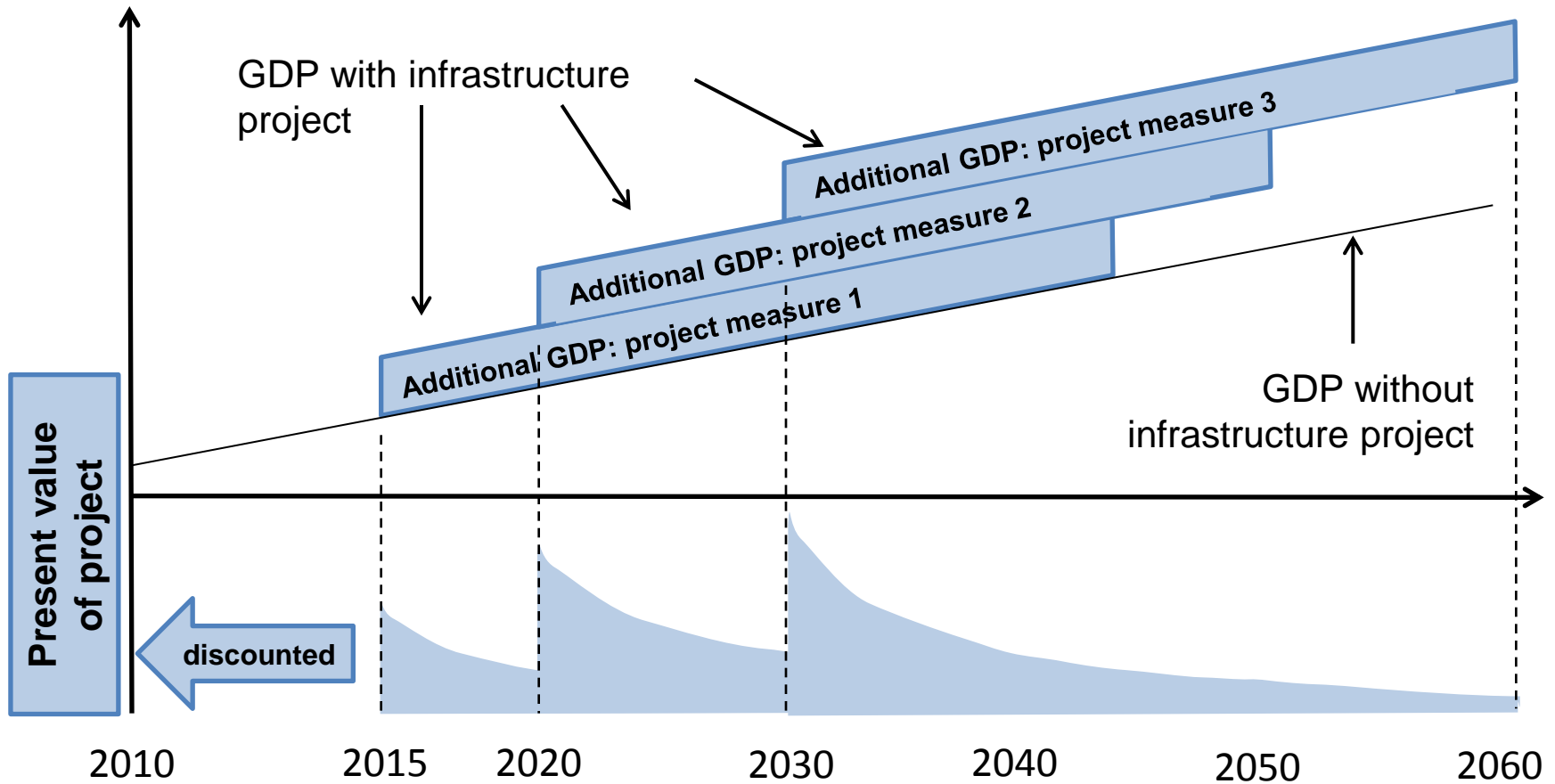
Not all effects of transport infrastructure projects have a market value.

We therefore evaluate changes of the following externalities by monetizing their costs to society in accordance with EU and international guidelines:

- Accident rate
- Air pollution
- Noise
- Global warming

Consolidated Economic Evaluation

Social discounting



Consolidated Economic Evaluation

Supports policy making

A consolidated economic evaluation facilitates identification of the best project or scenario:



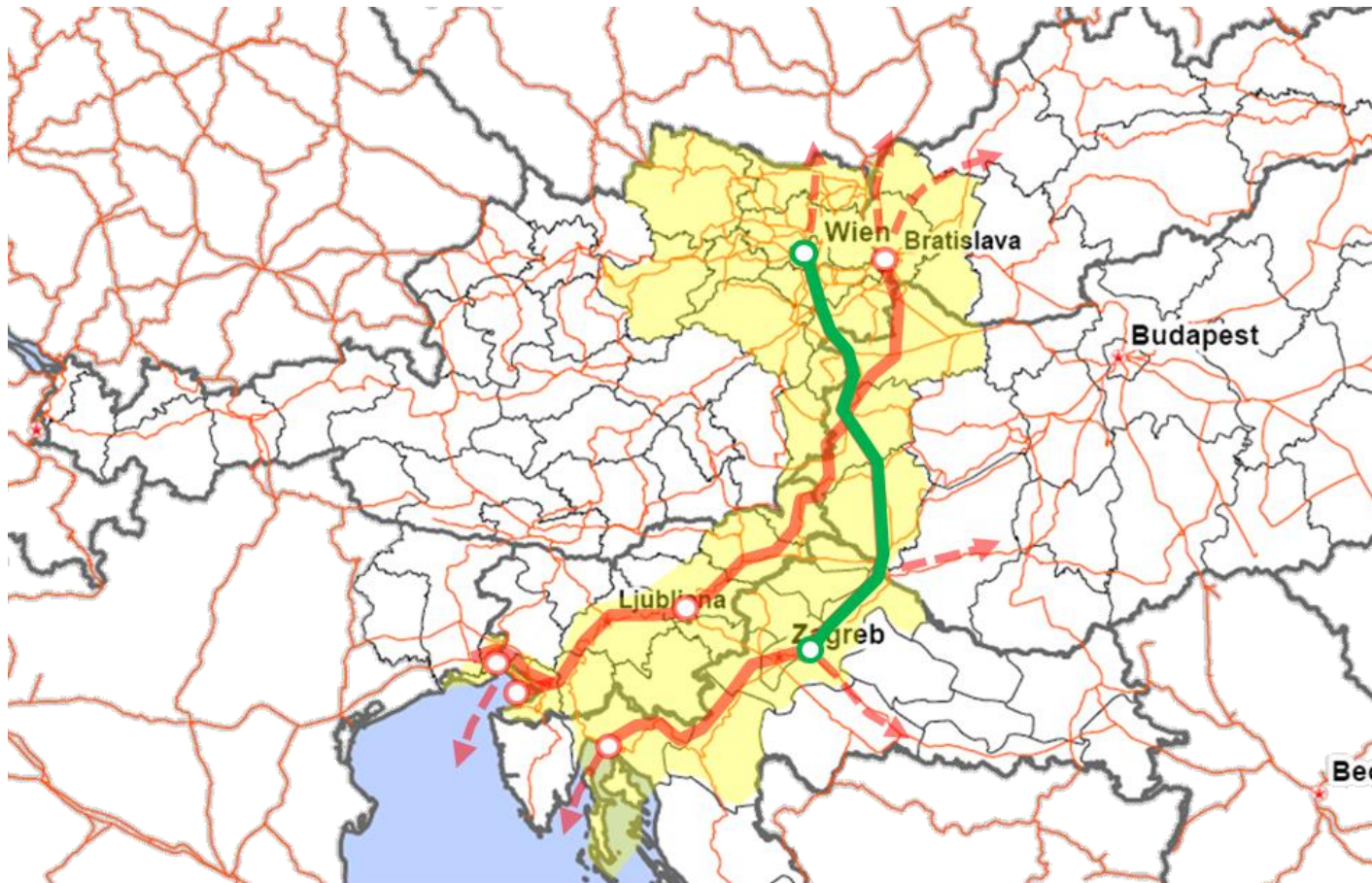
SETA Corridor Development Plan

Coordinated transnational approach to accelerate and secure the implementation of the measures

With signing this MoU, the signatories agree to:

- Accelerate the implementation of the already planned development measures
- Integrate the additionally necessary measures defined in the project SETA into the regional/national development & business plans
- Support the implementation of the already planned and necessary additional measures even beyond the lifetime of the SETA project

Addendum to SETA Corridor Development Plan



Conclusion

Optimization and small scale investments

- improving railway connections for people and goods does not always need billions of Euros
- Process optimization and small scale investments may cause additional effort for transnational coordination, but generate huge value for money.

Benefits for people and businesses in the regions

- Businesses benefit from more and better connections between Zagreb-Vienna/Bratislava and further on to the Adriatic ports.
- Better quality of location boost economic development in the regions

Contact details

Project & programme

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Jointly for our common future

