SOUTH EAST EUROPE
Jointly for our common future

RAIL4SEE
Rail Hub Cities for South East Europe

PROGRAMME CO-FUNDED BY EUROPEAN REGIONAL DEVELOPMENT FUND

Conference and Project Meetings
Bologna, 15 -16 October 2014.

RAIL INFRASTRUCTURES AND SERVICES: CONNECTING EUROPE FOR CITIES AND PEOPLE

The Challenges ahead of the Bulgarian & South-East European Railways

Krassimir Anguelov -
Expert, for **"Bulgarian State Railways – Passengers" (BDZ)**

BDZ

RAIL INFRASTRUCTURES AND SERVICES: CONNECTING EUROPE FOR CITIES AND PEOPLE

The Challenges ahead of the Bulgarian & South-East European Railways

CONTENTS:

1. Passengers TRAFFIC in/between Rail4SEE-Countries.
2. The DEMAND Site of the Rail4SEE-Puzzle. The Modal Choice Factors & Logistic Approach.
3. The SUPPLY Site of the Rail4SEE-Puzzle.
4. The Railway INFRASTUCTURE' Relative Isolation of the Bulgarian & SEE-Railways:
   Transborder MISSING Links and NON-Competitive Parameters.
5. The Railway INFRASTRUCTURE' Relative Isolation of the Bulgarian & SEE-Railways: ELECTRIFICATION.
6. The Railway SERVICES' Relative Isolation of the Bulgarian & SEE-Railways:
   The TRAINS on the Transborders & Adjoining/Neighbouring Lines Sections.
7. The Railway SERVICES' Relative Isolation of the Bulgarian & SEE-Railways:
   The LONGER Transborder Travel & Waiting Times. SCHENGEN Requirements.
8. The Infrastructure AND the Railway Services' Relative Isolation of the Bulgarian & SEE-Railways:
   The Railway Traffic DURING the Infrastructure Projects Implementation.
9. The INTERMODAL' Relative Isolation of the Bulgarian & SEE-Railways: The LONGER Access, Transfer & Waiting Times.
10 The Railway Services' INTEGRATION Attempts of the Bulgarian & SEE-Railways:
   The New International Trains. The Service's EFFICIENCY Cases.
12. Main Challenges ahead of the Bulgarian & South-East(ern) European Railways. INTEGRATION.

1. PASSENGERS TRAFFIC IN/BETWEEN Rail4SEE-COUNTRIES.

Bulgarian State Railways (BDZ) - Railway PASSENGERS TRAFFIC

Indicators	1989	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Ratio 2011/1989
Passengers - Thousands	98950	50029	41817	33719	35206	34149	33748	34113	33283	33758	31360	30102	29308	59%
incl. - Domestic	97961	49794	41570	33442	35061	34056	33572	33904	32978	33302	30929	29671	28920	58%
- International	990	235	248	277	145	93	176	208	305	456	431	431	388	165%
Passengers.KM - Millions	7601	3472	2990	2598	2517	2404	2389	2422	2423	2335	2144	2100	2068	60%
incl. - Domestic	7449	3416	2928	2528	2478	2374	2345	2366	2342	2264	2089	2054	2032	59%
- International	152	56	61	69	39	30	44	56	81	71	55	55	36	63%

Rail4SEE-Countries: Tourists Travels & Railway International Passengers. Railway's Market Share.

R4S Country -	R4S Country	Tourists Travelss				Ratio Tourists Tr.	Rail Passengers				Ratio Tourists Tr.	Railway's Market Share		
		1989	2000	2005	2010	2010/1989	1989	2005	2010	2011	2011/12005	1989	20005	2010
Bulgaria -	ITALY & v.v.	82436	131630	210945	401062	487%		9340	23651	6738	72%		4,43%	5,90%
Bulgaria -	SLOVAKIA & v.v.	N.A.	175088	147541	191230	109%		2312	67	1212	52%		1,57%	0,04%
Bulgaria -	ROMANIA &v.v.	618704	1977352	974840	**3653940**	591%		37356	11078	**19585**	52%		3,83%	0,30%
Bulgaria -	HUNGARY & v.v.	1290128	141636	167413	282078	22%		3161	4440	3257	103%		1,89%	1,57%
Bulgaria	SLOVENIA	n.A.	N.A.	N.A.	48906			1370	1117	1677	122%			2,28%
Bulgaria	CROATIA	*N.A.*	*N.A.*	*N.A.*	*N.A.*			9392	379	4589	49%			
Bulgaria	AUSTRIA	138524	145786	321274	**481798**	348%		2542	14262	**15056**	592%		0,79%	2,96%
Bulgaria	GREECE	494606	1373132	1319346	**4242600**	858%	49898	20846	89605	**18588**	89%		1,58%	2,11%
Bulgaria	Rail4SEE Country	3332617	3944624	5712871	9301614	279%	86319	86319	144599	70702	**82%**		1,51%	1,55%

SEE railway network passengers flows (SEETAC project)

Consistent with the Traffic volumes, modes, trends and potential, for the Hub of SOFIA

the Main (Backbone) Raill4SEE - Axis is:

Greece (Thessaloniki) – Bulgaria (Sofia) – Romania – Hungary (Budapest) – Austria (Vienna) / Slovakia (Bratislava). (EU-SEE Axis, future SEE "Internal Schengen Axis")

The other main SEE-Axes are: Turkey (Istanbul) – Bulgaria – Romania / Serbia / Macedonia.

2. THE DEMAND SITE OF THE Rail4SEE-Puzzle. THE MODAL CHOICE FACTORS & LOGISTIC APPROACH.

The Main Characteristics of the Travel's Demand: Price/Costs, Travel Time and Quality (the Passenger Knows his Pocket, Time and Convenience).

The logistic view: **the Choices of the Transport Modes** (routes, etc.)**, based on the Customer Assessment of the Values in the "door to door" Chains** (incl. costs, times, qualities, accommodations during the Journeys n SEE|.

Which are the basic CAUSES (MOTIVES) to choose HOW (WHICH MODE) to travel ?	**Costs (price)**	
	Travel Time (main transport node)	
	Access Waiting & Transfer Times	
	Frequency (number of services)	
	Conveniences in the Vehicles	
	Conveniences in the Terminals	
	Regularity, Reliability	
	Safety, Security	
	Environment friendly	
	Other - what?	

What is your expectation, in what extent over the door –door access, waitng and transfer times will have the development of the following:

Facrors:	High	Medium	Low	HNo
ICT				
Timetable harmonization				
Integrated ticketing				

Do you have **POSSIBILITY TO USE INDIVIDUAL** (PERSONAL) **TRANSPORT?**	
YES, I have possibility to use OWN vehicle(car, van)..	
YES, I have possibility to use KIN's/FRIEND's vehicle.	
NO, I have not any possibility to use INDIVIFUAL TRANSPORT.	

The International R**ailways** Journeys **in SEE: relatively Expensive, Slow, with Fragmented Qualities** (Low Levels, Lacks, Non-integration/Isolations, esp. in logistics sense).

The Data are actualizing by means of Marketing Surveys, incl. interviews.

3. THE SUPPLY SITE OF THE Rail4SEE-Puzzle.

FREQUENCY of the DIRECT Transport Services between SOFIA and other Rail4SEE-Hubs Numbers of PAIRS Services PER WEEK. 2013				
	TRAINS	PLANES	BUSES	CARS*
Bologna	0	2	30	
Bratislava	0	/0/	50	
Bucharest	14	14	40	
Budapest	0	14	80	
Ljubliana	0	0*	35	
Thessaloniki	0	0	65	1500*
Trieste	0	/2/	35	
Venice	0	/2/	35	
Vienna	0	35	50	
Zagreb	0	0*	35	

The International Railways Services have to "answer" to the Customers' Expectations and Complex Assessments of the Values, incl.Prices/Costs, Travel Times/ Frequencies and a lot of Quality Elements in "door-door" Chain. What is more, in many cases (f.e. no-long stay in the final destination) the value's assessment for out- and backward journeys include Accommodations.

On some routes (services) the **International Railways Journeys in SEE are relatively EXPENSIVE,** especially on long-distances, compared with the low-cost flights or some bus-lines prices. To keep higher (tariff-oriented versus flexible) prices **for slow and low-quality railway services with the aim to cover the costs, is neither realistic, not judicious.**

The International Railway Journeys in SEE, esp. in its south-east part, are relatively SLOW. The main reasons for the (s)low commercial speeds of the international trains in a "door-door" sense:

-**Infrastructure Parameters,**

-**Longer Times for Border Crossings** (Schengen Borders!),

-**Lower Train Frequencies,**

-**Lack of direct trains – long waiting times to change the trains** (for a better reliability of the interchange),

-**Lack of consolidated information (ICT) for the INTERmodal** (but in some **INTRA**modal cases too) **links/services of the origin/final destinations and intermediate points.**

The Data are actualizing by means of Marketing Surveys, incl. interviews.

4. The Railway Infrastructure' Relative Isolation of the Bulgarian & SEE-Railways: Transborder Missing Links and Non-Competitive Parameters.

The Main Bottlenecks of the Railway Infrastructure:

-the Missing Transborder Lines,

-the Non-Competitive Parameters of the Existing Transborders and/or Adjoining/Neighbouring Railway Lines.

The Main Missing Transborder Section of the Railway Line Sofia – Skopie:
Gyueshevo (Bulgaria) – Kriva Palanka (Macedonia, FYROM) - Tabanovtsi/Kumanovo.

The Non-Competitive Parameters of the Existing Transborders and/or Adjoining/Neighbouring Railway Lines: slow design and real speeds, high gradients, single track lines, station tracks, platforms and intermodal facilities.

But the **good examples**: the new transborder line **Vidin (Bulgaria) – Golenti (Romania)** and the reconstructing adjoining and transborder lines **Plovdiv-Svilengrad- Kapi Kule (Turkey)**.

The Railway Track Acceess Charges:
The Differences and the non-fairbalanced policies in sense of the Intermodality & Traffic Segments
(Passengers – Freight, International – Domestic).

BDZ

5. The Railway Infrastructure' Relative Isolation of the Bulgarian & SEE-Railways: Electrification.

The Lack of Electrification of the Transborders and/or Adjoining/Neighbouring Railway Lines Sections (in red color).

The SEE-Railways Electrification Paradox: Interoperable (25 kV/50 Hz), but not-linked Lines Sections/ Networks.

BDZ

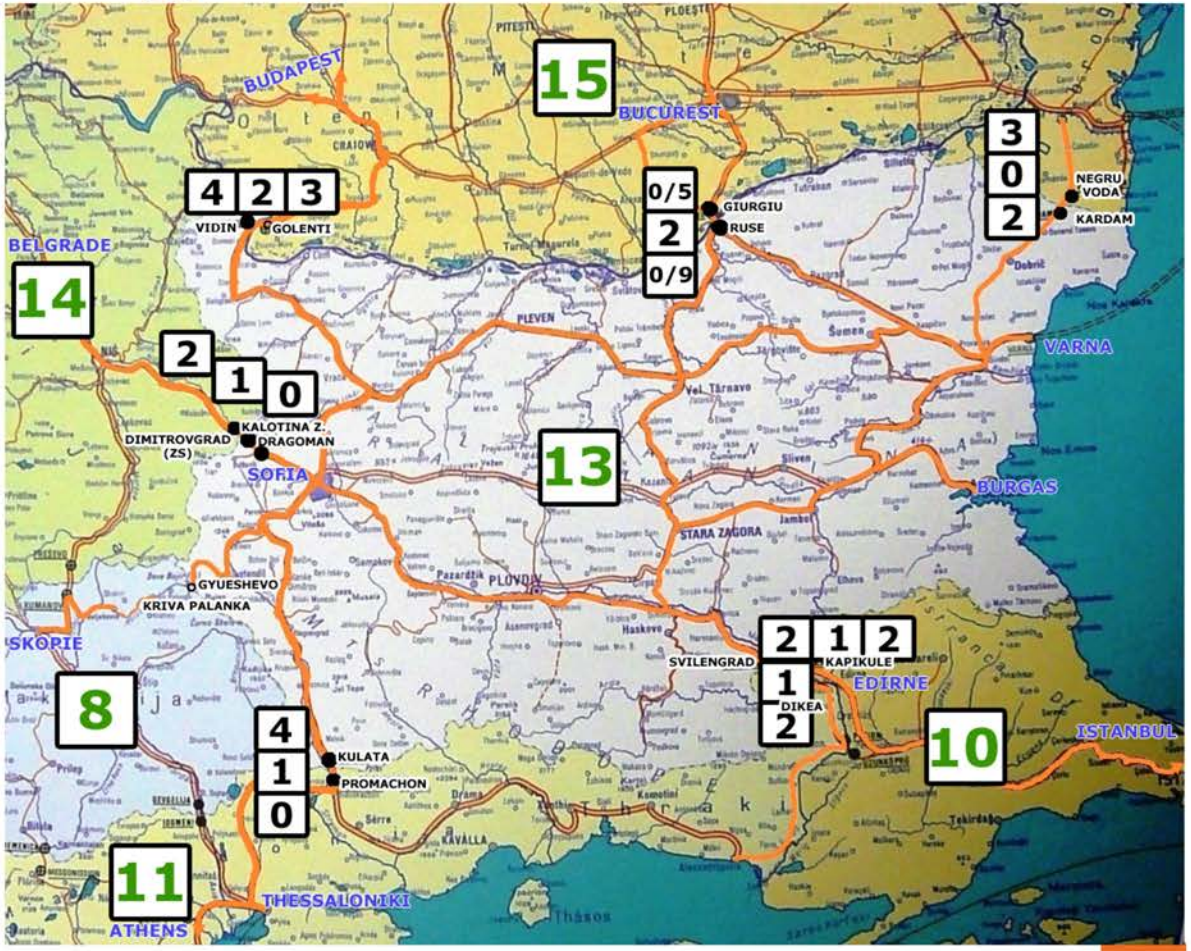
6. The Railway Services' Relative Isolation of the Bulgarian & SEE-Railways: The Trains on the Transborders & Adjoining/Neighbouring Lines Sections.

Lack of Frequency and Quality of the International and Domestic Trains on the Transborders & Adjoining/ Neighbouring Lines Sections.

Average Number of the Passengers Train's Pairs per Day of the:

-International Trains on the Transborder Sections *(in the middle cell),*

-Domestic Trains on the Both Adjoining/Neighbouring Sections *(in the neighbouring cells),* ***in Comparison with the Average Number of all Domestic Trains in the Countries*** *(green color).*



BDZ

7. The Railway Services' Relative Isolation of the Bulgarian & SEE-Railways: The Longer Transborder Travel & Waiting Times. Schengen Requirements.

The Border Stations:

number – 2 (3) on the both sides of the Border, locations, infra-& superstructures parameters & facilities.

Schengen Requirements.

The Long(er) Transborder Travel & Waiting Times.

Average Waiting/Travel Times (min.) of the Passengers Trains on the Transborder Stations/Sections:

-Total Time (Waiting+Travel) on the Transborder Section *(in the middle cell),*

-In the Adjoining Border Stations *-(in the neighbouring cells),*

in Comparison with the Best Practices in Europe *(green color).*

BDZ

8. The Infrastructure and the Railway Services' Relative Isolation of the Bulgarian & SEE-Railways: The Railway Traffic during the Infrastructure Projects Implementation.

The Negative Impacts on the Railway Traffic due to the Complete or Partial Traffic-Interruptions (x) and Deviations (>) of the Trains ("windows") from the Reconstructed/Upgraded or Renewed Sections, especially in Continuous and Widespread Repairs to a Single Track Railway Line Without Alternative.

Non-effective Capital Savings of Investments in the Railway infrastructure projects due to the Traffic INTERUPTIONS and DEVIATIONS DURING Realization of the Project.

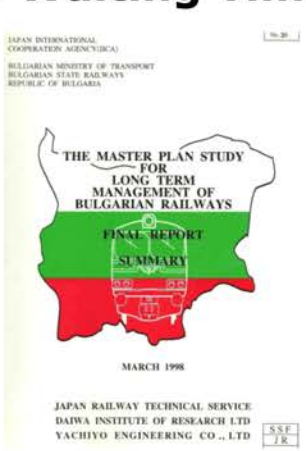
BDZ

9. The Imtermodal' Relative Isolation of the Bulgarian & SEE-Railways: Longer Access, Transfer & Waiting Times.

The Strong Domination of the Intermodal Competition instead the Intermodal COOPERATION.

Access to the Railway Passengers Terminals (Stations, Halts) With Long(er) Access, Transfer and Waiting Times.

The Case for a Better Access to the Railway and Higher Investment's Efficiency: the Postponed Construction of the Sofia – Plovdiv High Speed Line and the Investment's Transfer toward the Extension of Sofia Metro. Models of the Increasing of the Passengers Speeds in the Japan Study on Long-term Management of Bulgarian Railways (2020) – JICA, 1998 (2000).


JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
BULGARIAN MINISTRY OF TRANSPORT
BULGARIAN STATE RAILWAYS
REPUBLIC OF BULGARIA

THE MASTER PLAN STUDY FOR LONG TERM MANAGEMENT OF BULGARIAN RAILWAYS

FINAL REPORT

SUMMARY

MARCH 1998

JAPAN RAILWAY TECHNICAL SERVICE
DAIWA INSTITUTE OF RESEARCH LTD
YACHIYO ENGINEERING CO., LTD

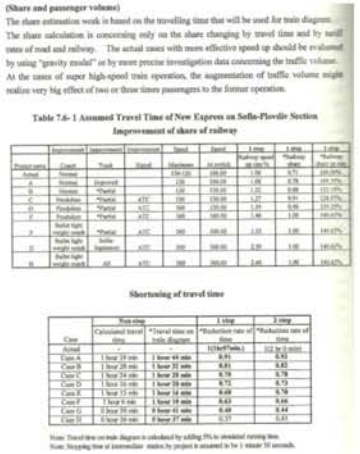

(Share and passenger volume)

Table 7.6-1 Assumed Travel Time of New Express on Sofia-Plovdiv Section
Improvement of share of railway

Shortening of travel time

The Case for a Bad Access to the Railway: the Lack of the ROAD/STREET Access to the New Halt (Kochevo – Karadjovo) **on the Reconstructed Railway Line Plovdiv – Parvomaj - Svilengrad**. (1998 - 200)

BDZ

10. The Railway Services' Integrations Attempts of the Bulgarian & SEE-Railways: The New International Trains. The Service Efficiency Cases.

1. The New International Trains:

1.1. Sofia – Thessaloniki,

1.2. Crajova – Vidin; Sofia – Vidin – Crajova – Budapest.

2. The International Railway Traffic on the Critical Minimum,

The Low Frequencies of the International Trains –

Complicated Harmonization of Timetables: The Service Efficiency Cases.

2.1. Lack of Direct Trains and Wagons. Case "Effectiveness – Quality"

(Trains Consolidation's Case 1).

2..2. Offering and operation of railway services simultaneously to more and various market segments. Cases "efficiency of the service - adequate to the demand quality":

-**"Merging/consolidation" of international trains from different directions.**

- (Train's Consodation's Case 2").

- Covering of various traffic segments ("Consolidations Train's Case 3").

- Supercase ("Consolidations trains Cases 1+2+3").

BDZ

11. Main CHALLENGES ahead of the Bulgarian & South-East(ern) European Railways. INTEGRATION.

For the Increasing of the Railways' Market Shares: INTEGRATED Development of the **demand and supply factors/sites of the Rail4SEE-Puuzzle Pieces Building and Setting.**

Rellatively LOW Passengers REVENUE UNITS in BULGARIA and SEE:
LOW LEVELS of COVERING of the FIXED COSTS , incl. capital.

In principle, to operate FINANCIALLY VIABLE border crossing service, Railway Operators need a "MULTILATERAL PUBLIC SERVICE" CONTRACT, offered in a harmonized procedure from the competent authorities in the respective countries. The development of the PSO-Contract for International Railway Service is a Key GOVERNANCE Issue.

The similar Factor is the Railway Track Access Charge:
fair & balanced policies in sense of Intermodality and Traffic Segments (Passengers – Freight, International – Domestic).

The Main Challenge ahead of the Bulgarian & SEE Railways -
the INTEGRATION of the Region and its Railways:
OPERATIONAL and TRANSPORT GOVERNANCE,
i.e. POLICIES' COORDINATION AND IMPLEMENTATION.

BDZ

THANK FOR YOUR KIND ATTENTION!

Krassimir Anguelov
expert, for "Bulgarian State Railways" (BDZ)
Phone: + 359877984114
E-mail: krassiangel@hotmail.com

BDZ

The SEE & Bulgarian Railway Map