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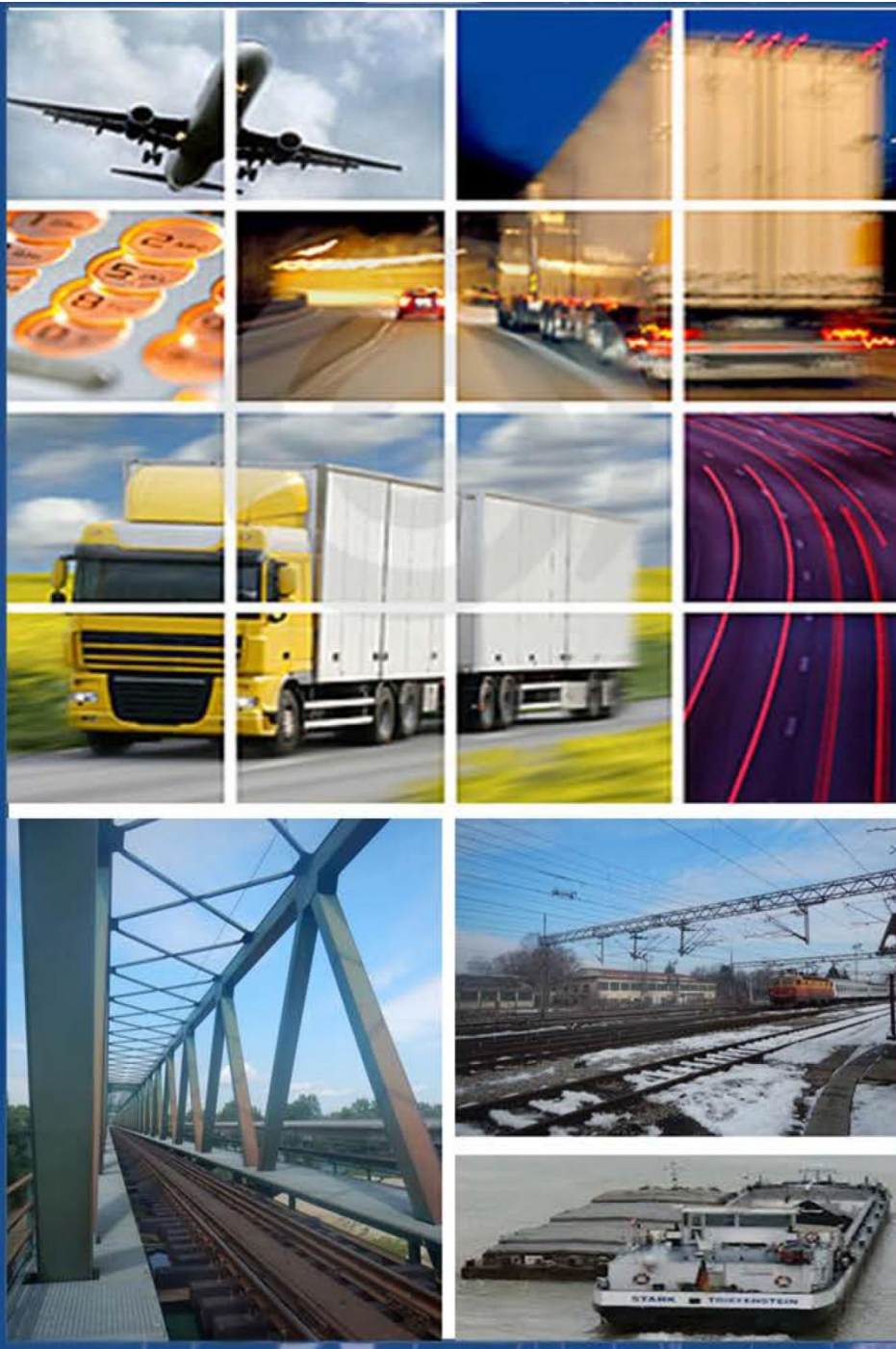
TRANSPORT DEVELOPMENT STRATEGY OF THE REPUBLIC OF CROATIA (2014 – 2030)



October 2014

ANNEX I: DATA ANALYSIS

Programme: Transport Operational Programme 2007.-2013
Partner Country: Republic of Croatia
Contracting Auth.: Central Finance and Contracting Agency
Project Recipient: Ministry of Maritime Affairs, Transport and Infrastructure
Project Reference No: IPA2007/HR/16/IPO/002-021302

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Republic of Croatia
MINISTRY OF MARITIME AFFAIRS, TRANSPORT AND INFRASTRUCTURE

idom

otp Hungaro-Projekt

The content of the publication is the sole responsibility of Ministry of maritime Affair, transport and Infrastructure

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LIST OF ABBREVIATIONS

AADT	Average Annual Daily Traffic
ASDT	Average Summer Daily Traffic
ATM	Air Traffic Management
CBS	Croatian Bureau of Statistics
CTN	CROATIA AIRLINES
DWT	Deadweight tonnage
EASA	European Aviation Safety Agency
EC	European Commission
EU	European Union
GDP	Gross Domestic Product
GT	Gross tonnage
HC	Hrvatske ceste d.o.o.
HŽI	HŽ Infrastruktura d.o.o.
MARPOL	International Convention for the Prevention of Pollution from Ships
MMATI	Ministry of Maritime Affairs, Transport and Infrastructure
MRCC	Maritime Rescue Coordination Centre
N/A	Not available
NTM	National Traffic Model
OG	Official Gazette
Pax	Passengers
pkm	Passenger kilometres
PT	Public Transport
RIS	River Information Services
RoC	Republic of Croatia
rtkm	rail train kilometres
RWY	Runway
SAR	Search and rescue
SB	State Border
SDF	Strategic Development Framework
SWOT	Strengths, Weaknesses, Opportunities and Threats
SUMP	Sustainable urban mobility plan
TAC	Track Access Charges
TDS	Transport Development Strategy
TEN-T	Trans-European Transport Networks
TEU	Twenty-foot equivalent units
TOP	Transport Operational Programme
TWY	Taxiway
UIC	International Union of Railways
VTS	Vessel Traffic Monitoring and Information System Service
WB	World Bank

DATA ANALYSIS

The development of the TDS showed that the systematic and continuous data collection necessary for transport planning and citizen mobility analysis must be improved in the Republic of Croatia. Certain data in different transport sectors are missing or there is a clear problem related to the reliability, quality and, especially, to the regency of data. As one of the main objectives of the TDS is transparent decision-making, it of course implies the appropriate decision-making information.

For this purpose, one of the activities after preparing the TDS at this stage of development is a deep data gap analysis based on the availability and quality of the data, which will result in the development of the "Data generation plan". Parallel with the development of the NTM, the "Data generation plan" will be the basis for the next stage of the TDS development in 2016.

Analysis performed per sectors presented in this Annex 1 is based on the currently available transport data.

1. RAIL SECTOR

1.1. Data Analysis

In the analysis of the rail sector, the following documentation was used:

- Results of the independent railway sub sector analysis,
- WB document "Croatia Railway Policy Note" (March 20, 2013),
- National Program of the Railway Infrastructure adopted by the Croatian Parliament, September 2007,
- Statistics provided by HŽI d.o.o. for 2011,
- Statistics provided by HŽ Cargo d.o.o. for 2011,
- Statistics and financial information provided by HŽ putnički prijevoz d.o.o. for 2013,
- HŽI Network statement for 2014.

The Subsector analysis is also based on the following strategic documents valid on the territory of the Republic of Croatia:

- Transport Development Strategy of the Republic of Croatia (OG no. 139/99),
- Spatial Planning Strategy of the Republic of Croatia adopted by Croatian Parliament on 27 June 1997
- Decision on Amendments to the Physical Planning Strategy of the Republic of Croatia (OG no. 75/13)
- Strategy for the Sustainable Development of the Republic of Croatia (OG no. 30/09),
- Regional Development Strategy, 2011-2013, June 2010,
- Physical Planning Programme for the Republic of Croatia (OG no. 50/99, 84/13),
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2013-2015,
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2014-2016.

Legal framework consisting of applicable legislation for the rail sector:

- Railway Act (OG no. 94/13 and 148/13),
- Decision of the Classification of the Railway Lines of the Government of the Republic of Croatia (OG No. 03/14),
- Railway Safety and Interoperability Act (OG no. 82/13),
- Regulation of Railway Market Act Agency for railways services regulation Act (OG no. 71/14),
- Act on transport contracts in railway traffic (OG no. 87/ 96),

- Act on benefits in domestic passenger traffic (OG no. 97/ 00 and 101/00).

REVIEW OF THE DATA

The WB paper "Croatia railway policy note", (June 2013). Based on data obtained from the former HŽ holding d.o.o., HŽI d.o.o. , HŽ Cargo d.o.o. and HŽ putnički prijevoz d.o.o. between 2005 and 2012 and the sector diagnosis undertaken by the World Bank, an overall view of the current situation of the railway sector in Croatia, especially after joining EU, is obtained.

The paper also gives recommendations to support different stakeholders for the future in their effort to improve Croatia´s rail system.

National Program of the Railway Infrastructure adopted by the Croatian Parliament, (September 2007). This document defines the priorities of development, construction, modernization and maintenance of the functionality of the railway infrastructure system in Croatia. The main contents of the document are:

- Strategic goals of the development of the railway infrastructure,
- Organization of the railway infrastructure subsystem,
- Evaluation of the current state and guidelines of the investment into the railway infrastructure and
- the investments into railway infrastructure.

Statistics of HŽ Infrastruktura d.o.o. for 2012 provides a detailed description of the existing rail network, concerning length of railway lines and tracks and other fixed assets. The information is made available by types of lines (international, regional and local) and by counties. Certain information regarding traction rolling stock is also available in this report as well as the data about the staff.

The document also provides:

- Types of lines (M, R, L) and also by counties, (capacity of the different railway lines),
- Volume of traffic per lines (both freight and passengers),
- Ratio of realized traffic versus capacity,
- Financial view of HŽI in the last two years (2011-2012),
- Consumption of electricity and fuel,
- Review of disruptive events, which allow to estimate a number of safety indicators and
- International statistics regarding railway network features.

Statistics from HŽ Cargo d.o.o. (2011) provides data regarding rolling stock, including locomotives, together with traffic data. In addition, it also provides global data of freight transport classified per type of good.

Regarding international transport, it provides information of transport with other countries. In the field of connection with ports, it gives number of wagons and tonnes carried to and from main Croatian ports. Freight transport is also presented by lines and main corridors. The same information is also provided for regions.

HŽ putnički prijevoz d.o.o. (HŽPP) (2013) delivered a set of data concerning different aspects of the sector, including the "*HŽPP company report for period I-VI 2013*". This document includes data regarding realized transport and financial data of the company that has been used in this report.

HŽI network statement (2014) is issued by HŽ Infrastruktura d.o.o. The adopted structure of the Network Statement enables network statements of various infrastructure managers from various countries to be harmonized and to contain approximately the same information.

The document includes:

- Access conditions to the railway infrastructure,
- Description of railway infrastructure operated by HŽ Infrastruktura d.o.o.,
- Conditions for allocation of the infrastructure capacity,
- Services provided by HŽ Infrastruktura d.o.o. and
- Calculation method for infrastructure charges and services provided by HŽ Infrastruktura d.o.o.

1.2. Sector Description

1.2.1. General figures related to railway networks in Europe

In order to have a first view of the Croatian railway network, the table 1 presents the ratio of the total length of lines versus the population, and the total area of Croatia and also some relevant neighbouring countries.

GEOGRAPHY	km2	Population	km rail lines	km rail/km2	population/ km rail
Austria	83.870	8.451.860	5.450	0,06	1.551
Belgium	30.528	11.161.642	3.582	0,12	3.116
Bulgaria	110.910	7.284.552	4.072	0,04	1.789
Croatia	56.542	4.262.140	2.604	0,05	1.637
Czech Republic	78.866	10.516.125	9.572	0,12	1.099
Denmark	43.094	5.602.628	2.132	0,05	2.628
Estonia	45.226	1.324.814	918	0,02	1.443
Finland	338.145	5.426.674	5.944	0,02	913
Germany	357.021	80.523.746	41.846	0,12	1.924
Greece	131.940	11.062.508	2.552	0,02	4.335
Hungary	93.030	9.908.798	7.163	0,08	1.383
Ireland	70.280	4.591.087	1.894	0,03	2.424
Italy	301.230	59.685.227	28.567	0,09	2.089
Latvia	64.589	2.023.825	1.865	0,03	1.085
Lithuania	65.200	2.971.905	1.768	0,03	1.681
Netherlands	41.526	16.779.575	3.013	0,07	5.569
Norway	385.156	5.051.275	4.154	0,01	1.216
Poland	312.685	38.533.299	20.113	0,06	1.916
Portugal	92.391	10.487.289	2.794	0,03	3.754
Romania	237.500	20.057.458	10.777	0,05	1.861
Slovakia	48.845	5.410.836	3.624	0,07	1.493
Slovenia	20.273	2.058.821	1.209	0,06	1.703
Spain	504.782	46.704.308	15.932	0,03	2.931
Sweden	449.964	9.555.893	11.206	0,02	853
Switzerland	41.290	8.039.060	5.124	0,12	1.569
Turkey	783.562	75.627.384	9.642	0,01	7.844
United Kingdom	244.820	63.887.988	31.619	0,13	2.021

1 Table Ratios of railway lines per Km_2 and population in Europe, Source: Eurostat

1.2.2. Croatian rail network

Based on the Decision of the Classification of the Railway Lines of the Government of the Republic of Croatia (OG no. 03/14) and to the purpose of determining the manner of governing and management of the railway infrastructure and planning its development, the railways in the Republic of Croatia are classified as follows:

- Lines for international transport (M),
- Lines for regional transport (R) and
- Lines for local transport (L).

Pursuant to Decision on the classification of the railways (OG no. 3/2014), the **breakdown of the complete Croatian rail network** is as follows:

Track class	Length of the Network (km)				
	Single track	Double track	Total	Total length of tracks between stations	Total length of tracks in operation
International (M)	1.205,630	253,874	1.459,504	1.713,378	1.713,378
Regional (R)	626,373	0,000	626,373	626,373	563,149
Local (L)	518,474	0,000	518,474	518,474	351,215
Total	**2.350,477**	**253,874**	**2.604,351**	**2.858,225**	**2.627,742**

2 Table Length of the railway network, Source: HŽI statistics for 2014

The evolution of the total length of the railway network based on the Decision on the classification of the railways (OG no. 3/2014) is presented below:

Type of line	Length of the railways network (km) in 2013					Length of the railways network (km) in 2014				
	Single track	Double track	Total length of lines	Total length of tracks	Total length of tracks in operation	Single track	Double track	Total length of lines	Total length of tracks	Total length of tracks in operation
Lines of importance for International traffic (M)	1.209,260	251,275	1.460,535	1.711,810	1.711,810	1.205,630	253,874	1.459,504	1.713,378	1.713,378
Lines of importance for Regional traffic (R)	600,296	0,000	600,296	600,296	541,329	626,373	0,000	626,373	626,373	563,149
Lines of importance for Local traffic (L)	658,854	2,599	661,453	664,052	391,053	518,474	0,000	518,474	518,474	351,215
Total HŽ Infrastruktura d.o.o.	**2.468,410**	**253,874**	**2.722,284**	**2.976,158**	**2.644,192**	**2.350,477**	**253,874**	**2.604,351**	**2.858,225**	**2.627,742**

3 Table Evolution of the total length of the railway network based on the Decision on the classification of the railways (OG no. 3/2014), Source: HŽ Infrastruktura d.o.o. 2014

Considering **Regional approach**, the track distribution per county is the following:

County	Total length of constructed railways (km)							
	Lines for International transport (M)			Lines for Regional transport (R)	for local transport (L)	M + R + L		
	Single track	Double track	Total	Single track	Single track	Single track	Double track	Total
I ZAGREBAČKA	100,949	16,401	117,350	16,773	16,696	134,418	16,401	150,819
II KRAPINSKO-ZAGORSKA	0,000	0,000	0,000	72,385	31,832	104,217	0,000	104,217
III SISAČKO-MOSLAVAČKA	141,327	14,779	156,106	21,575	17,422	180,324	14,779	195,103
IV KARLOVAČKA	133,371	0,000	133,371	0,000	28,799	162,170	0,000	162,170
V VARAŽDINSKA	0,000	0,000	0,000	59,638	32,147	91,785	0,000	91,785
VI KOPRIVNIČKO-KRIŽEVAČKA	48,411	0,000	48,411	50,131	34,638	133,180	0,000	133,180
VII BJELOVARSKO-BILOGORSKA	0,000	0,000	0,000	0,000	72,385	72,385	0,000	72,385
VIII PRIMORSKO-GORANSKA	158,296	0,000	158,296	0,000	2,037	160,333	0,000	160,333
IX LIČKO-SENJSKA	106,856	0,000	106,856	0,000	0,000	106,856	0,000	106,856
X VIROVITIČKO-PODRAVSKA	0,000	0,000	0,000	82,603	10,393	92,996	0,000	92,996
XI POŽEŠKO-SLAVONSKA	0,000	0,000	0,000	0,000	93,308	93,308	0,000	93,308
XII BRODSKO-POSAVSKA	22,045	104,344	126,389	0,000	7,718	29,763	104,344	134,107
XIII ZADARSKA	94,275	0,000	94,275	16,440	0,000	110,715	0,000	110,715
XIV OSJEČKO-BARANJSKA	82,135	9,000	91,135	104,363	48,972	235,470	9,000	244,470
XV ŠIBENSKO-KNINSKA	145,580	0,000	145,580	26,190	3,714	175,484	0,000	175,484
XVI VUKOVARSKO-SRIJEMSKA	18,712	57,282	75,994	59,605	43,482	121,799	57,282	179,081
XVII SPLITSKO-DALMATINSKA	42,016	3,613	45,629	0,000	0,000	42,016	3,613	45,629
XVIII ISTARSKA	0,000	0,000	0,000	91,140	52,996	144,136	0,000	144,136
XIX DUBROVAČKO-NERETVANSKA	22,740	0,000	22,740	0,000	0,000	22,740	0,000	22,740
XX MEĐIMURSKA	42,355	0,000	42,355	9,092	17,942	69,389	0,000	69,389
XXI GRAD ZAGREB	46,562	48,455	95,017	0,000	0,000	46,562	48,455	95,017
Tracks outside the RoC managed by HŽI	0,000	0,000	0,000	16,438	3,993	20,431	0,000	20,431
Tracks within the RoC managed by other operators	0,000	0,000	0,000	16,470	0,000	16,470	0,000	16,470

4 Table Length of railway lines per county, Source: HŽ Infrastruktura d.o.o. 2014

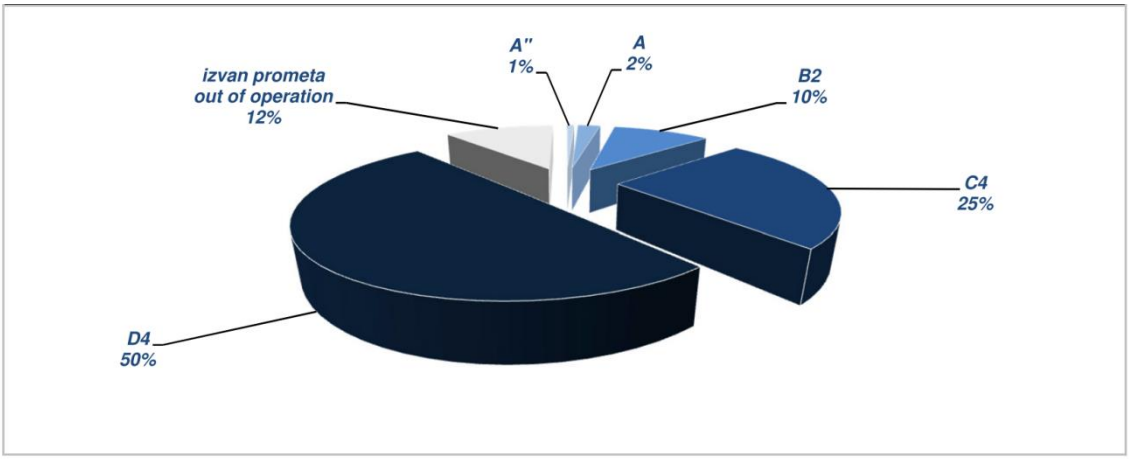
1.2.3. Present condition of the infrastructure

Railway electrification. According to HŽI statistics, the breakdown of electrified lines is as follows:

Track class	Electrified length
International (M)	877,568
Regional (R)	84,600
Local (L)	22,573
Total	**984,741**

5 Table Railway electrified lines, Source: HŽI statistics for 2012

The **load capacity** of the total lines can be seen in the following graph as a % distribution.



1 Figure Axle load capacity, Source: HŽI statistics for 2012

Updated data for 2013-2014 is presented below:

Type of line	Total length of tracks in operation	Total length of lines according to axle load capacity										
		Types of axle load according to (UIC 700)										
		A' 12,0 t/o 3,5 t/m'	A'' 14,0 t/o 4,0 t/m'	A 16,0 t/o 5,0 t/m'	B2 18,0 t/o 6,4 t/m'	C2 20,0 t/o 6,4 t/m'	C3 20,0 t/o 7,2 t/m'	C4 20,0 t/o 8,0 t/m'	D2 22,5 t/o 6,4 t/m'	D3 22,5 t/o 7,2 t/m'	D4 22,5 t/o 8,0 t/m'	Out of operation
M	1.711,810	0,000	0,000	0,000	128,920	0,000	0,000	386,312	0,000	0,000	1.196,578	0,000
R	600,296	0,000	0,000	0,000	89,459	0,000	0,000	191,996	0,000	0,000	259,874	58,967
L	664,052	0,000	23,194	63,788	59,787	0,000	0,000	206,754	0,000	0,000	37,530	272,999
Total	**2.976,158**	**0,000**	**23,194**	**63,788**	**278,166**	**0,000**	**0,000**	**785,062**	**0,000**	**0,000**	**1.493,982**	**331,966**

6 Table Railway tracks length to axle load, Source: HŽI statistics for 2013 – 2014

The maximum **allowable speeds** of the different types of railway lines based on HŽI´s data for 2013/2014 is presented below:

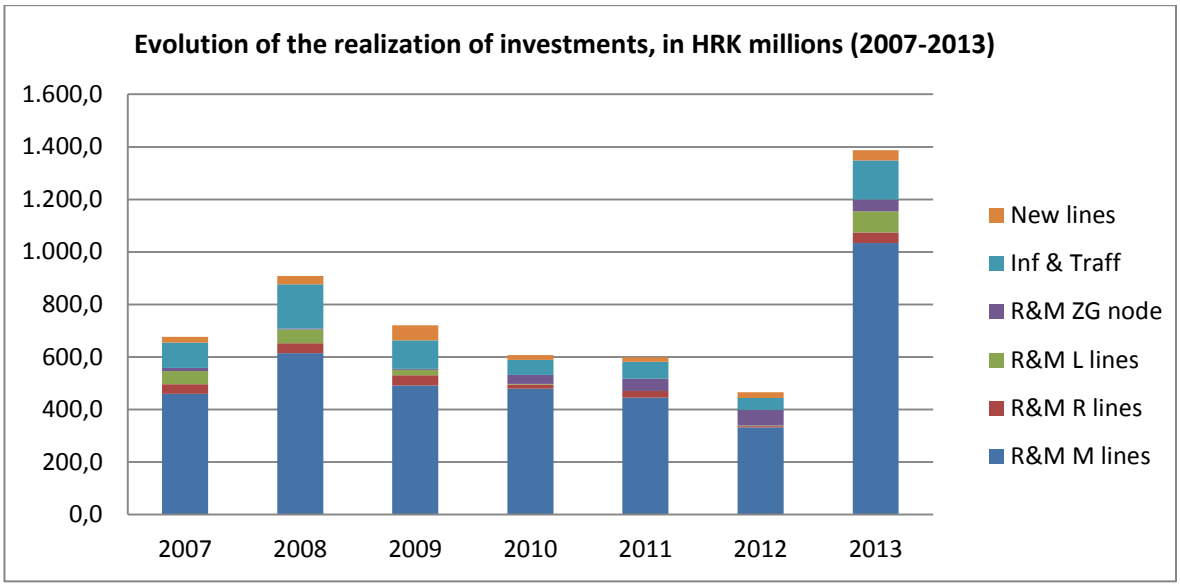
Type of line	Total length of tracks in operation	Length of railway lines according to maximum allowed speed (km)								
		Maximum allowed speed by groups (Railways infrastructure) (km/h)								
		Up to 20	from 21 to 40	from 41 to 60	from 61 to 80	from 81 to 100	from 101 to 120	from 121 to 140	from 141 to 160	Out of operation
M	1.711,810	30,072	94,968	384,538	255,415	483,601	151,674	164,232	147,310	0,000
R	600,296	16,346	55,328	123,970	301,195	44,490	0,000	0,000	0,000	58,967
L	664,052	32,530	71,321	214,068	69,592	3,542	0,000	0,000	0,000	272,999
Total	**2.976,158**	**78,948**	**221,617**	**722,576**	**626,202**	**531,633**	**151,674**	**164,232**	**147,310**	**331,966**

7 Table Railway tracks length to maximum permissible speed, Source: HŽI statistics for 2013-2014

Investment in the last years in railway infrastructure in Croatia is detailed below:

Number	Description	Planned 2013. (in thousands HRK)	Accomplished 2013. (in thousands HRK)
1.	**Program for reconstruction and modernization of lines for international transport**	**1.253.934**	**1.034.091**
1.1.	Reconstruction and modernization of lines on Corridor Vb	410.100	351.275
1.2.	Reconstruction and modernization of lines on Corridor Vb1	154.879	88.268
1.3.	Reconstruction and modernization of lines on Corridor Vc	51.100	32.203
1.4.	Reconstruction and modernization of lines on Corridor X	637.855	562.345
2.	**Program for Reconstruction and modernization of lines for regional transport**	**44.780**	**39.427**
3.	**Program for Reconstruction and modernization of lines for local transport**	**110.280**	**81.640**
4.	**Program for Reconstruction and modernization of the Zagreb railway node**	**55.653**	**44.073**
5.	**Program of activities aimed at development of infrastructure and traffic on the network as a whole**	**271.161**	**149.730**
6.	**Construction of new lines and tracks**	**115.468**	**38.776**
	Total railways infrastructure	**1.851.276**	**1.387.737**

8 Table Evolution of the realization of investments (2013), Source: HŽI statistics 2014



2 Figure Evolution of the realization of investments (2007-2013), Source: HŽI statistics 2007 – 2013

The following table shows the **capacity** per lines.

№	LINE	Daily number of trains	Capacity of the line (trains per day)	% Utilization of the capacity of the line	Daily number of passenger trains	Average mass of freight trains (t)	Carrying capacity of the line (gross tonnes/year)
	LINES FOR INTERNATIONAL TRANSPORT						
	M101: SB. - Savski Marof - Zagreb GK.						
1	ZAGREB ZAP.KOL. - PODSUSED TV.	98	**115**	85,22	67	1580	27681600
2	PODSUSED TV. - ZAGREB ZAP.KOL.	104	**133**	78,20	74	1560	33594600
	M102: Zagreb GK. - Dugo Selo						
3	SESVETE - DUGO SELO	129	**163**	79,14	85	1500	42705000
4	DUGO SELO - SESVETE	125	**175**	71,43	84	1510	50154650
	M103: Dugo Selo - Novska						
5	NOVSKA - LIPOVLJANI	93	**100**	93,00	46	1430	28185300
	M104: Novska - Vinkovci - Tovarnik - SB						
	Novska - Strizivojna Vrpolje						
6	NOVSKA - OKUČANI	44	**96**	45,83	19	1680	47216400
7	OKUČANI - NOVSKA	40	**97**	41,24	20	1660	46654300
	Strizivojna Vrpolje - Vinkovci						
8	STRIZIVOJNA VRPOLJE - STARI MIKANOVCI	49	**161**	30,43	21	1720	87892000
9	STARI MIKANOVCI - STRIZIVOJNA VRPOLJE	46	**163**	28,22	22	1620	83373300
	Vinkovci - Tovarnik - SB						
10	JANKOVCI - VINKOVCI	30	**137**	21,90	11	1570	72204300
11	VINKOVCI - JANKOVCI	31	**105**	29,52	10	1530	53052750
	M201: SB. - Botovo - Koprivnica - Dugo Selo						
	Botovo - Koprivnica						
12	KOPRIVNICA - DRNJE	52	**89**	58,43	13	1740	48267600
	Koprivnica - Dugo Selo						

13	KRIŽEVCI - LEPAVINA	60	**68**	88,24	30	1760	24411200
	M202: Zagreb GK. - Karlovac - Rijeka						
	Zagreb GK. - Karlovac						
14	JASTREBARSKO - DRAGANIĆI	68	**79**	86,08	41	1600	22192000
	Karlovac - Oštarije						
15	GENERALSKI STOL - GORNJE DUBRAVE	72	**72**	100,00	37	1530	19545750
	Oštarije - Moravice						
16	VRBOVSKO - MORAVICE	51	**88**	57,95	24	1470	34339200
	Moravice - Lokve						
17	BROD MORAVICE - SKRAD	45	**57**	78,95	18	1340	19074900
	Lokve - Škrljevo						
18	LOKVE - FUŽINE	66	**68**	97,06	30	1100	15257000
	Škrljevo - Rijeka						
19	ŠKRLJEVO - SUŠAK PEĆINE	77	**72**	106,94	35	980	13234900
	M203: Rijeka - Šapjane - SB.						
20	ŠAPJANE - JURDANI	21	**37**	56,76	9	1230	12570600
	M301: SB - Beli Manastir - Osijek						
21	B. MANASTIR - DARDA	29	***38***	76,32	22	1790	10453600
	M302:Osijek - Đakovo - Strizivojna Vrpolje						
22	VLADISLAVCI - ĐAKOVO	19	***26***	73,08	15	1380	5540700
	M303: Strizivojna Vrpolje - Slav. Šamac - SB.						
23	KOPANICA BERAVCI - SLAVONSKI ŠAMAC	14	**63**	22,22	6	1760	36616800
	M304: SB. - Metković - Ploče						
24	METKOVIĆ - OPUZEN	29	**85**	34,12	15	2540	64897000
	M501: SB. - Čakovec - Kotoriba –SB.						
25	DONJI KRALJEVEC - KOTORIBA	45	**49**	91,84	33	1750	10220000
	M502: Zagreb GK. - Sisak - Novska						
	Zagreb GK. - Sisak						
26	TUROPOLJE - VELIKA GORICA	61	**71**	85,92	39	1650	19272000
	Sisak - Sunja						
27	SUNJA - SISAK CAPRAG	36	***29***	124,14	21	1650	4818000
	Sunja - Novska						
28	HRV. DUBICA - SUNJA	13	***18***	72,22	9	1780	5847300
	M601: Vinkovci - Vukovar - Borovo naselje - Vukovar						
29	VUKOVAR BOROVO NASELJE - VINKOVCI	20	***23***	86,96	12	1800	7227000
	M604: Oštarije - Knin - Split						
	Oštarije - Vrhovine						
30	LIČKA JESENICA - RUDOPOLJE	30	***25***	120,00	12	1270	6026150
	Vrhovine - Gračac						
31	VRHOVINE - LIČKO LEŠĆE	26	***32***	81,25	8	1320	11563200
	Gračac - Knin						
32	ZRMANJA - PLAVNO	26	***24***	108,33	8	1280	7475200
	Knin - Perković						
33	UNEŠIĆ - PERKOVIĆ	36	**43**	83,72	20	1250	10493750
	Perković - Split						
34	PRIMORSKI DOLAC - LABIN DALMATINSKI	34	**42**	80,95	20	1010	8110300
	M606: Knin - Zadar						
35	KISTANJE - BENKOVAC	13	**17**	76,47	7	1500	5475000

	M607: Perković - Šibenik						
36	PERKOVIĆ - RAŽINE	27	**26**	103,85	19	1280	3270400
	LINES FOR REGIONAL TRANSPORT						
	R101: SB. - Buzet - Pula						
	Buzet - Lupoglav						
37	BUZET - LUPOGLAV	11	**33**	33,33	9	680	5956800
	Lupoglav - Pula						
38	KANFANAR - VODNJAN	20	**31**	64,52	16	780	4270500
	R102: Sunja - Volinja - SB.						
39	VOLINJA - MAJUR	30	***32***	93,75	15	1500	9307500
	R104: Vukovar Borovo naselje - Erdut (SB.)						
40	DALJ - VUKOVAR BOROVO NASELJE		-				
	R105: Vinkovci - Drenovci (SB.)						
41	VINKOVCI - PRIVLAKA	22	***36***	61,11	13	1750	14691250
	R106: Karlovac - Kamanje - SB.						
42	MAHIČNO - OZALJ	19	**35**	54,29	19	550	3212000
	R201: Zaprešić - Varaždin - Čakovec						
	Zaprešić - Zabok						
43	NOVI DVORI - LUKA	38	**54**	70,37	35	1980	13731300
	Zabok - Varaždin						
44	BUDINŠĆINA - NOVI MAROF	34	**34**	100,00	32	810	591300
	Varaždin - Čakovec						
45	VARAŽDIN - ČAKOVEC	61	**63**	96,83	56	1950	4982250
	R202: Varaždin - Koprivnica - Osijek - Dalj						
	Varaždin - Koprivnica						
46	JALŽABET - VARAŽDIN	34	**54**	62,96	27	1450	14289750
	Koprivnica - Virovitica						
47	ŠPIŠIĆ BUKOVICA - PITOMAČA	36	**49**	73,47	25	1510	13227600
	Virovitica - Našice						
48	ČAČINCI - SLATINA	26	**39**	66,67	16	1610	13515950
	Našice - Osijek						
49	KOŠKA - NAŠICE	31	**42**	73,81	23	1490	10333150
	Osijek - Dalj						
50	DALJ - OSIJEK DONJI GRAD	14	***15***	93,33	10	1980	3613500
	LINES FOR LOCAL TRANSPORT						
	L102: Savski Marof - Kumrovec - SB.						
51	---	-	-	-	-	-	-
	L103: Zabok - Đurmanec - SB.						
52	SVETI KRIŽ ZAČRETJE - KRAPINA	36	**53**	67,92	34	500	3467500
	L201: Varaždin - Golubovec						
53	LEPOGLAVA - GOLUBOVEC	24	***31***	77,42	18	1220	5788900
	L202: Hum-Lug odv. - Gornja Stubica						
54	ZABOK - GORNJA STUBICA	27	***30***	90,00	25	500	912500
	L203: Križevci - Bjelovar - Kloštar						
55	KRIŽEVCI - BJELOVAR	24	**25**	96,00	20	480	876000
	L204: Banova Jaruga - Pčelić odv.						
56	LIPIK - SIRAČ	10	*19*	52,63	8	780	3131700
	L205: Nova Kapela Batrina - Našice						
	Nova Kapela Batrina - Pleternica						
57	NOVA KAPELA BATRINA - PLETERNICA	21	**34**	61,76	17	1220	7570100
	Pleternica - Našice						
58	ČAGLIN - NAŠICE	-	-	-	-	-	-

	L206: Pleternica - Velika						
59	POŽEGA - VELIKA	16	**17**	94,12	12	1210	2208250
	L208: Vinkovci - Osijek						
60	VINKOVCI - OSIJEK	24	**20**	120,00	17	2000	2190000
	L209: Vinkovci - Županja						
61	VINKOVCI - ŽUPANJA	18	**20**	90,00	14	2000	4380000

9 Table Line capacity, Source: HŽI, 2014

The following table shows the **movements of passengers** per line at those sections where there is an existing capacity data.

LINE	Length of section (km)	Movements of passenger trains per sections					
		train km	gross ton km	net ton km	nº trains	gross ton of trains	net ton trains
Sesvete-Dugo selo	10.154	596.324	107.348.770	16.623.820	58.728	10.572.067	1.637.170
Zapresic-Zagreb ZK	13.008	589.661	104.830.068	17.838.064	45.331	8.058.892	1.371.315
Banova Jaruga-Novska	17279	289.216	56.918.720	6.372.943	16.738	3.294.098	368.826
Strizibojna Vrpolje-Jamina	27.059	411.866	79.040.592	8.758.682	15.221	2.921.046	323.688
Velika Gorica-Sisak	35.419	383.555	63.406.754	11.182.805	10.828	1.789.938	315.684
Novska-Nova Kapela Batrina	56.617	816.126	161.946.397	17.777.337	14.415	2.860.385	313.993
Koprivnica-Krizevci	29.776	342.887	68.974.560	7.175.550	11.516	2.316.448	240.984
Zapresic-Zabok	23.860	252.921	40.261.222	5.478.216	10.600	1.687.394	229.598
Delta-Karlovac	46.985	618.080	92.583.493	10.415.894	13.155	1.970.490	221.686
Sisak Caprag-Sunja	18.219	126.003	20.556.450	3.637.656	6.916	1.128.297	199.663
Budinscina-Varazdin	31.990	332.915	51.743.365	6.318.022	10.410	1.617.941	197.555
Karlovac-Ostarije	49.903	574.552	85.296.499	9.418.881	11.513	1.709.246	188.744
Cakovec-Kotoriba	30.036	274.875	39.332.115	6.168.266	9.151	1.309.412	172.058
Klostar-Virovitica	29.656	242.916	36.776.556	5.078.144	8.195	1.240.773	171.332
Zabok-Durmanec	21.057	204.985	17.690.254	3.572.989	9.735	840.113	169.682
Nasice-Bizovac	28.962	232.217	35.908.293	4.890.792	8.018	1.239.842	168.869
Ogulin-Moravice	29.746	243.063	36.879.192	4.203.810	8.171	1.239.803	141.324
Beli Manastir-Osijek	27.260	222.534	18.596.339	3.485.754	8.163	682.184	127.871
Hum Lug-Gornja Stubica	10.625	78.859	6.938.459	1.354.705	7.422	653.031	127.502
Varazdin-Koprivnica	41.989	310.353	36.203.996	5.298.078	7.391	862.226	126.178
Krizevci-Bjelovar	32.380	213.611	19.561.664	3.999.936	6.597	604.128	123.531
Vinkovci-Tovarnik	32.368	237.050	37.966.624	3.990.432	7.322	1.172.714	123.257
Pcelic-Nasice	60.138	351.978	59.975.760	7.205.720	5.870	1.000.296	120.179
Nova Kapela-Pleternica	18.195	109.134	9.773.568	1.982.448	5.998	537.157	108.956
Pleternika-Velika	25.238	146.832	12.612.276	2.558.145	5.818	499.734	101.361
Osijek-Strizivojna-Vrpolje	48.171	277.556	28.538.102	4.684.320	5.762	592.433	97.244
Gaj-Volinja	18.063	67.032	10.390.194	1.600.614	3.711	575.220	88.613
Moravice-Lokve	37.653	222.841	28.334.038	2.899.542	5.918	752.504	77.007
Krivaja-Novska	43.180	119.897	21.365.969	3.298.100	2.777	494.869	76.389
Perkovic-Solin	41.764	286.252	31.219.037	3.174.091	6.854	747.511	76.001
Skrljevo-Susak Pecine	9.015	49.150	6.355.539	662.508	5.452	704.996	73.490
Lokve-Skrljevo	40.389	220.175	27.954.768	2.906.640	5.451	692.138	71.966
Knin-Perkovic	53.710	294.040	28.969.195	3.055.191	5.475	539.363	56.883
Botovo-Koprivnica	11.868	41.932	5.489.784	633.804	3.534	462.570	53.404
Varazdin-Golubovec	33.815	188.260	12.624.878	1.765.212	5.568	373.418	52.211
Vinkovci-Osijek	33.782	149.914	11.729.762	1.743.826	4.416	345.521	51.368
Osijek-Dalj	23.423	71.673	5.962.193	1.193.278	3.060	254.544	50.945
Krpelj-Vrhovine	62.442	256.932	29.155.317	2.834.033	4.115	466.918	45.387
Perkovic-Razine	17.848	103.626	4.913.334	731.574	5.806	275.288	40.989
Lupoglav-Pula	72.853	358.995	20.397.106	2.925.497	4.928	279.976	40.156
S. Vrpolje-Slavonski Samac	19.945	52.455	5.030.680	780.640	2.630	252.228	39.140
Karlovac-Bubnjarci	28.712	141.537	7.075.955	1.050.875	4.930	246.446	36.601
Vrhovine-Gracac	90.998	227.226	35.451.302	3.211.069	2.497	389.583	35.287
Gracac-Knin	64.062	159.950	24.919.872	2.257.536	2.497	388.996	35.240
Rijeka-Sapjane	27.570	59.606	8.756.244	897.764	2.162	317.600	32.563
Vinkovci-Zupanja	27.705	124.977	5.936.476	884.156	4.511	214.275	31.913
Metkovic-Ploce	21.854	85.690	6.459.882	668.822	3.921	295.593	30.640
Vinkovci-Vukovar Borovo Naselje	15.463	74.571	4.711.077	471.304	4.823	304.668	30.479
Vinkovci-Gubja	49.336	161.191	7.504.073	1.100.113	3.267	152.101	22.298
Buzet -Lupoglav	13.358	29.788	1.810.588	226.720	2.230	135.543	16.973
Knin-Bibinje	90.634	210.594	9.842.461	1.461.131	2.324	108.596	16.121

10 Table Movements of passengers per line, Source: HŽI statistics for 2013

Evolution of passenger trains by corridors, in train-km in thousands (2007-2012):

Corridors	2007	2008	2011	2012
Corridor X, total	**6.425**	**6.828**	**7.136**	**6.908**
M101 DG – Savski Marof – Zagreb GK	982	1.154	903	829
M102 Zagreb GK – Dugo Selo	1.164	1.372	1.392	1.315
M103 Dugo Selo – Novska	1.325	1.387	1.437	1.407
M104 Zagreb GK – Sisak – Novska	557	606	850	852
M105 Novska – Tovarnik – DG	2.396	2.307	2.553	2.502
Corridor Vb, total	**2.963**	**3.391**	**3.038**	**3.077**
M201 DG – Botovo – Dugo Selo	877	1.022	949	950
M202 Zagreb GK – Rijeka	1.998	2.249	2.027	2.068
M203 Rijeka-Šapjane-DG	89	120	62	59
Corridor Vc, total	**582**	**748**	**702**	**653**
M301 DG – Beli Manastir – Osijek	170	250	228	232
M302 Osijek – Strizivojna Vrpolje	269	313	283	278
M303 Strizivojna Vrpolje – S. Šamac – DG	81	91	97	56
M304 DG – Metković – Ploče	63	93	94	87

11 Table Evolution of passenger trains by corridors, in train-km in thousands, Source: HŽI statistics 2007-2012

Comparison of the total annual passenger transport with **other European countries**:

Country	2007	2008	2009	2010	2011	2012
Bulgaria	33.242	33.724	31.348	30.079	29.287	26.508
Czech Republic	184.184	177.257	164.813	164.642	167.789	172.580
Denmark	174.940	179.750	184.225	185.947	194.428	201.899
Estonia	5.442	5.285	4.894	4.799	4.758	4.411
Ireland	45.511	44.647	38.812	38.226	37.375	36.918
Croatia	62.973	70.800	73.402	69.421	49.852	27.576
Latvia	27.380	26.702	21.504	20.804	20.447	19.707
Lithuania	4.478	4.447	3.819	3.795	4.127	4.251
Hungary	149.551	144.900	142.690	140.398	145.561	147.688
Poland	265.995	272.859	264.177	241.976	239.054	266.011
Portugal	156.712	158.455	153.794	152.997	149.189	132.212
Romania	88.263	78.252	70.332	64.272	60.971	57.530
Slovenia	15.716	16.257	15.971	15.782	15.317	15.086
Slovakia	46.984	48.655	46.597	46.509	47.453	44.609

12 Table Railway transport - Total annual passenger transport (1 000 pax), Source: Eurostat

Total annual national passenger transport in thousand pax:

COUNTRY	2005	2006	2007	2008	2009	2010	2011	2012
Bulgaria	33.905	33.905	32.978	33.302	30.929	29.671	28.920	26.174
Czech Republic	178.543	181.016	182.194	174.902	162.933	162.414	165.384	169.771
Denmark	153.135	155.124	154.221	157.617	161.322	163.186	170.783	177.707
Estonia	5.019	5.158	5.292	5.124	4.798	4.701	4.674	4.314
Ireland	36.880	42.468	44.661	43.834	38.165	37.507	36.644	36.112
Croatia	39.104	45.432	62.367	70.170	72.846	68.898	49.330	27.068
Latvia	25.569	27.024	27.042	26.401	21.256	20.518	20.160	19.409
Lithuania	5.758	5.134	4.095	4.081	3.525	3.482	3.748	3.781
Austria	184.460	187.902	191.552	199.308	197.483	201.343	200.900	217.960
Poland	249.250	252.530	263.544	271.071	262.811	240.330	237.068	247.343
Portugal	151.175	150.164	156.511	158.300	153.665	152.870	149.060	132.082
Romania	91.025	92.702	85.284	74.851	65.105	57.228	59.945	56.218
Slovenia	14.917	15.275	15.232	15.753	15.434	15.294	14.838	14.622
Slovakia	47.911	45.566	43.990	45.591	43.761	43.725	44.591	41.454
Finland	63.226	63.466	66.286	69.505	67.205	68.604	67.933	68.836
Sweden	142.354	150.378	158.621	167.525	167.397	168.390	175.781	181.395
Norway	51.712	53.783	54.621	56.788	55.674	56.726	58.943	60.434
Turkey	76.163	77.232	81.052	78.931	79.852	83.914	85.571	70.160

13 Table Railway transport - Total annual national passenger transport (1000 pax), Source: Eurostat

Total annual international passenger transport:

COUNTRY	2007	2008	2009	2010	2011	2012
Bulgaria	264	422	419	408	367	335
Czech Republic	1.990	2.355	1.880	2.228	2.405	2.809
Estonia	150	161	96	98	84	97
Ireland	850	813	647	719	731	806
Spain	698	771	676	712	500	449
Croatia	606	630	555	523	522	508
Latvia	338	301	248	287	287	298
Lithuania	383	366	294	313	379	470
Hungary	1.867	2.162	2.084	2.077	2.544	2.815
Austria	6.179	6.253	6.193	6.315	6.421	7.170
Poland	2.451	1.788	1.367	1.646	1.986	2.002
Portugal	201	155	129	127	129	130
Romania	469	492	433	442	210	201
Slovenia	484	504	537	488	478	464
Slovakia	2.994	3.064	2.837	2.784	2.862	3.154
Finland	399	432	350	346	443	495

14 Table Railway transport - Total annual international passenger transport (1000 pax), Source: Eurostat

The following table shows the **movements of freight trains** per line at those sections where there is an existing capacity data.

LINE	Length	movements of freight trains by line sections					
		train km	gross tn km	net tn km	nº trains	gross tn trains	met ton trains
Zapresic-Zagreb ZK	13.008	54.754	47.672.347	22.825.219	4.209	3.664.848	1.754.706
Sesvete-Dugo selo	10.154	96.351	104.678.380	51.583.230	9.489	10.309.078	508.090
Banova Jaruga-Novska	17.279	65.708	63.134.124	29.159.691	3.803	3.653.807	1.687.580
Velika Gorica-Sisak	35.419	103.327	107.555.751	58.378.830	2.917	3.036.240	1.648.002
Sisak Caprag-Sunja	18.219	33.049	34.494.804	20.611.422	1.814	1.893.342	1.131.315
Novska-Nova Kapela Batrina	56.617	213.257	211.622.874	96.991.337	3.767	3.737.797	1.713.113
Strizibojna Vrpolje-Jamina	27.059	129.136	126.742.864	63.194.332	4.772	4.683.945	2.335.427
Vinkovci-Tovarnik	32.368	98.647	88.300.256	39.307.360	3.047	2.727.421	1.214.127
Botovo-Koprivnica	11.868	66.161	75.536.276	37.753.792	5.575	6.364.701	3.181.142
Koprivnica-Krizevci	29.776	160.287	182.759.128	91.460.013	5.383	6.137.800	3.071.602
Delta-Karlovac	46.985	228.895	243.764.664	125.691.367	4.872	5.188.138	2.675.138
Karlovac-Ostarije	49.903	239.544	258.707.817	134.378.257	4.800	5.184.214	2.692.789
Ogulin-Moravice	29.746	98.860	101.187.948	52.010.550	3.323	4.198.562	1.748.489
Moravice-Lokve	37.653	165.562	132.286.102	65.191.568	4.397	3.401.733	1.731.378
Lokve-Skrljevo	40.389	223.028	143.297.008	71.149.936	5.522	3.513.295	1.761.617
Skrljevo-Susak Pecine	9.015	36.421	20.855.295	9.394.344	4.040	3.547.922	1.042.079
Beli Manastir-Osijek	27.260	39.733	29.976.855	15.756.292	1.458	1.099.665	578.000
Osijek-Strizivojna-Vrpolje	48.171	4.052	1.336.853	560.280	84	27.752	11.631
S. Vrpolje-Slavonski Samac	19.945	19.895	23.329.410	14.144.690	998	1.169.687	709.185
Metkovic-Ploce	21.854	53.542	61.980.776	32.056.948	2.450	2.836.130	1.466.869
Cakovec-Kotoriba	30.036	31.059	27.267.030	14.646.660	1.034	907.751	487.604
Rijeka-Sapjane	27.570	37.625	25.714.148	11.353.784	1.365	932.686	411.817
Vinkovci-Vukovar Borovo Naselje	15.463	15.324	10.347.750	5.187.810	991	669.194	335.498
Krpelj-Vrhovine	62.442	127.010	114.506.883	55.966.791	2.034	1.833.812	896.300
Vrhovine-Gracac	90.998	177.930	161.062.249	78.832.236	1.955	1.769.954	866.307
Gracac-Knin	64.062	114.383	110.240.816	54.594.432	1.786	1.720.846	852.212
Knin-Perkovic	53.710	118.433	92.219.702	46.711.620	2.205	1.716.993	869.701
Perkovic-Solin	41.764	62.918	43.213.441	20.695.134	1.507	1.034.706	495.526
Knin-Bibinje	90.634	60.794	46.555.399	25.150.073	671	513.664	277.490
Perkovic-Razine	17.848	18.259	14.127.714	7.830.036	1.023	791.557	438.707
Buzet -Lupoglav	13.358	3.406	874.666	357.032	255	65.479	26.728
Lupoglav-Pula	72.853	18.723	3.648.613	1.603.810	257	50.082	22.014
Gaj-Volinja	18.063	31.357	34.330.860	20.548.116	1.736	1.900.618	1.137.580
Vinkovci-Gubja	49.336	39.358	21.585.108	10.832.310	798	437.512	219.562
Zapresic-Zabok	23.860	13.817	6.008.809	2.217.498	579	251.836	92.938
Budinscina-Varazdin	31.990	19.412	3.029.489	1.133.925	607	94.728	35.456
Varazdin-Cakovec	10.896	7.694	2.870.186	1.109.053	708	264.119	102.057
Varazdin-Koprivnica	41.989	29.140	20.545.434	9.905.112	694	489.305	235.898
Klostar-Virovitica	29.656	39.541	41.336.370	21.219.600	1.334	1.394.567	715.887
Pcelic-Nasice	60.138	71.131	56.369.754	25.404.230	1.186	940.154	423.700
Nasice-Bizovac	28.962	34.957	23.302.834	10.847.769	1.207	804.600	374.552
Osijek-Dalj	23.423	4.495	3.298.931	1.770.057	192	140.842	75.569
Zabok-Durmanec	21.057	2.746	727.748	270.053	130	34.561	12.825
Karlovac-Bubnjarci	28.712	1.911	328.569	124.458	67	11.444	4.335
Varazdin-Golubovec	33.815	10.998	2.116.848	238.623	325	62.612	7.058
Krizevci-Bjelovar	32.380	11.430	2.484.512	621.920	353	76.730	19.207
Nova Kapela-Pleternica	18.195	3.948	1.902.150	648.504	217	104.542	35.642
Pleternika-Velika	25.238	4.911	1.717.928	472.095	195	68.069	18.706
Vinkovci-Osijek	33.782	39.108	39.678.850	21.110.260	1.152	1.168.813	621.841
Vinkovci-Zupanja	27.705	9.946	4.551.008	1.918.672	359	164.267	69.254

15 Table Movements of freight trains per line, Source: HŽI statistics for 2013

Evolution of freight trains by corridors, in net tonne-km in millions (2007-2012):

Corridors	2007	2008	2010	2011	2012
Corridor X, total	**946**	**946**	**721**	**761**	**688**
M101 DG – Savski Marof – Zagreb GK	63	64	59	51	41
M102 Zagreb GK – Dugo Selo	76	75	84	84	61
M103 Dugo Selo – Novska	261	271	181	196	165
M104 Zagreb GK – Sisak – Novska	74	80	81	83	99
M105 Novska – Tovarnik – DG	472	456	318	347	322
Corridor Vb, total	**1.103**	**1.047**	**756**	**717**	**731**
M201 DG – Botovo – Dugo Selo	308	283	203	194	245
M202 Zagreb GK – Rijeka	778	748	538	509	475
M203 Rijeka-Šapjane-DG	18	17	15	14	11
Corridor Vc, total	**111**	**115**	**71**	**74**	**69**
M301 DG – Beli Manastir – Osijek	14	11	13	12	18
M302 Osijek – Strizivojna Vrpolje	39	25	5	1	1
M303 Strizivojna Vrpolje – S. Šamac – DG	23	16	8	11	16
M304 DG – Metković – Ploče	35	63	45	50	34

16 Table Evolution of freight trains by corridors, in net tonne-km in millions, Source: HŽI statistics 2007-2012

Comparison of the total annual freight transport with **other European countries**:

COUNTRY	2007	2008	2009	2010	2011	2012
Bulgaria	21.905	19.716	13.284	12.939	14.152	12.470
Czech Republic	99.777	95.073	76.715	82.900	87.096	82.968
Estonia	68.538	52.752	45.954	46.705	48.378	44.725
Greece	4.943	4.253	3.377	3.982	2.702	2.272
Spain	29.918	26.906	21.292	21.986	25.014	26.160
Croatia	15.764	14.851	11.651	12.203	11.794	11.088
Italy	105.314	95.810	76.336	84.435	91.811	88.505
Latvia	52.164	56.061	53.679	49.164	59.385	60.601
Lithuania	53.503	54.970	42.669	48.061	52.330	49.377
Netherlands	40.700	40.569	33.594	35.536	39.174	37.925
Austria	115.526	121.579	98.887	107.670	107.587	103.920
Romania	68.772	66.711	50.595	52.932	60.723	55.755
Slovenia	17.575	17.271	13.774	16.234	17.024	15.828
Slovakia	51.813	47.910	37.603	44.327	43.711	42.599

17 Table Railway transport - Total annual freight transport (1 000 T), Source: Eurostat

Total annual national freight transport:

COUNTRY	2006	2007	2008	2009	2010	2011	2012
Bulgaria	16.263	15.887	14.159	9.663	9.252	10.016	8.953
Czech Republic	45.861	46.959	44.148	36.859	37.078	40.203	37.054
Estonia	19.323	36.239	30.337	23.156	20.993	22.854	22.147
Greece	564	572	578	601	254	92	207
Spain	25.391	25.505	23.208	18.290	18.662	21.128	22.369
Croatia	2.959	2.586	2.617	2.406	1.996	2.167	2.049
Latvia	2.404	2.000	1.687	1.299	1.263	1.193	1.429
Austria	30.505	33.220	39.012	34.988	37.442	34.834	31.084
Slovenia	3.620	3.619	3.998	3.301	3.520	3.320	3.347
Slovakia	7.489	7.509	7.069	5.577	6.409	7.009	6.356

18 Table Railway transport - Total annual national freight transport (1 000 T), Source: Eurostat

Total annual international freight transport:

COUNTRY	2006	2007	2008	2009	2010	2011	2012
Bulgaria	4.389	4.751	4.244	2.575	2.445	2.693	2.386
Czech Republic	43.981	44.899	43.104	33.857	38.538	38.792	37.797
Estonia	41.961	32.299	22.416	22.798	25.712	25.524	22.578
Greece	2.347	4.344	3.671	2.774	3.722	2.373	2.055
Croatia	8.313	8.940	8.443	6.457	6.803	6.730	6.292
Latvia	41.486	45.132	49.768	49.314	44.179	53.370	54.614
Lithuania	16.681	21.344	21.490	17.230	19.600	24.090	22.323
Austria	56.042	55.133	54.988	43.932	49.692	52.658	52.206
Poland	59.140	59.966	56.697	41.606	50.525	55.027	49.850
Romania	14.463	14.495	11.188	4.790	6.582	8.257	7.723
Slovenia	10.122	10.206	9.940	8.084	9.797	10.947	10.296
Slovakia	31.355	31.442	28.608	23.967	28.308	26.232	24.987

19 Table Railway transport - Total annual international freight transport (1 000 T.), Source: Eurostat

Share of transport between passengers and freight is presented below.

type of track	type of traffic	LINE	train km		gross tn kilometer		net tonne kilometer		nº trains		gross tonne trains		net tonne trains	
			pass	freight	pass	freight	pass	freight	pass	freight	pass	freight	pass	freight
D	M	**M101 State boder-Savski Marof-Zagreb GK**												
		Zaprešić-Zagreb ZK	91,50%	8,50%	68,74%	31,26%	43,87%	56,13%	91,50%	8,50%	68,74%	31,26%	43,87%	56,13%
D	M	**M102 Zagreb GK-Dugo Selo**												
		Sesvete-Dugo selo	86,09%	13,91%	50,63%	49,37%	24,37%	75,63%	86,09%	13,91%	50,63%	49,37%	76,32%	23,68%
S	M	**M103 Dugo Selo-Novska**												
		Banova Jaruga-Novska	81,49%	18,51%	47,41%	52,59%	17,94%	82,06%	81,49%	18,51%	47,41%	52,59%	17,94%	82,06%
D	M	**M104 Novska-Tovarnik-State border**												
		Novska-Nova Kapela Batrina	79,28%	20,72%	43,35%	56,65%	15,49%	84,51%	79,28%	20,72%	43,35%	56,65%	15,49%	84,51%
		Strizivojna Vrpolje-Jamina	76,13%	23,87%	38,41%	61,59%	12,17%	87,83%	76,13%	23,87%	38,41%	61,59%	12,17%	87,83%
		Vinkovci-Tovarnik	70,61%	29,39%	30,07%	69,93%	9,22%	90,78%	70,61%	29,39%	30,07%	69,93%	9,22%	90,78%
S	M	**M201 State border-Botovo-Dugo Selo**												
		Botovo-Koprivnica	38,79%	61,21%	6,78%	93,22%	1,65%	98,35%	38,80%	61,20%	6,78%	93,22%	1,65%	98,35%
		Koprivnica-Križevci	68,14%	31,86%	27,40%	72,60%	7,27%	92,73%	68,15%	31,85%	27,40%	72,60%	7,27%	92,73%
S	M	**M202 Zagreb GK-Rijeka**												
		Delta-Karlovac	72,97%	27,03%	27,53%	72,47%	7,65%	92,35%	72,97%	27,03%	27,53%	72,47%	7,65%	92,35%
		Karlovac-Oštarije	70,58%	29,42%	24,80%	75,20%	6,55%	93,45%	70,58%	29,42%	24,80%	75,20%	6,55%	93,45%
		Ogulin-Moravice	71,09%	28,91%	26,71%	73,29%	7,48%	92,52%	71,09%	28,91%	22,80%	77,20%	7,48%	92,52%
		Moravice-Lokve	57,37%	42,63%	17,64%	82,36%	4,26%	95,74%	57,37%	42,63%	18,11%	81,89%	4,26%	95,74%
		Lokve-Škrljevo	49,68%	50,32%	16,32%	83,68%	3,92%	96,08%	49,68%	50,32%	16,46%	83,54%	3,92%	96,08%
		Škrljevo-Sušak Pećine	57,44%	42,56%	23,36%	76,64%	6,59%	93,41%	57,44%	42,56%	16,58%	83,42%	6,59%	93,41%
S	M	**M203 Rijeka-Šapjane-State border**												
		Rijeka-Šapjane	61,30%	38,70%	25,40%	74,60%	7,33%	92,67%	61,30%	38,70%	25,40%	74,60%	7,33%	92,67%
S	M	**M301 State border- Beli Manastir-Osijek**												
		Beli Manastir-Osijek	84,85%	15,15%	38,29%	61,71%	18,12%	81,88%	84,85%	15,15%	38,29%	61,71%	18,12%	81,88%
S	M	**M302 Osijek-Strizivojna-Vrpolje**												
		Osijek-Strizivojna-Vrpolje	98,56%	1,44%	95,53%	4,47%	89,32%	10,68%	98,56%	1,44%	95,53%	4,47%	89,32%	10,68%
S	M	**M303 Strizivojna-Vrpolje-Slavonski Šamac-State border**												
		Strizivojna-Vrpolje-Slavonski Šamac	72,50%	27,50%	17,74%	82,26%	5,23%	94,77%	72,49%	27,51%	17,74%	82,26%	5,23%	94,77%
S	M	**M304 State border-Metković-Ploče**												
		Metković-Ploče	61,54%	38,46%	9,44%	90,56%	2,04%	97,96%	61,54%	38,46%	9,44%	90,56%	2,05%	97,95%
S	M	**M501 State border-Čakovec-Kotoriba-State border**												
		Čakovec-Kotoriba	89,85%	10,15%	59,06%	40,94%	29,63%	70,37%	89,85%	10,15%	59,06%	40,94%	26,08%	73,92%
S	M	**M502 Zagreb GK-Sisak-Novska**												
		Velika Gorica-Sisak	78,78%	21,22%	37,09%	62,91%	16,08%	83,92%	78,78%	21,22%	37,09%	62,91%	16,08%	83,92%
		Sisak Caprag-Sunja	79,22%	20,78%	37,34%	62,66%	15,00%	85,00%	79,22%	20,78%	37,34%	62,66%	15,00%	85,00%
		Krivaja-Novska												
S	M	**M601 Vinkovci-Vukovar**												
		Vinkovci-Vukovar Borovo Naselje	82,95%	17,05%	31,28%	68,72%	8,33%	91,67%	82,95%	17,05%	31,28%	68,72%	8,33%	91,67%
S	M	**M604 Oštarije-Knin-Split predgrađe**												
		Krpelj-Vrhovine	66,92%	33,08%	20,29%	79,71%	4,82%	95,18%	66,92%	33,08%	20,29%	79,71%	4,82%	95,18%
		Vrhovine-Gračac	56,08%	43,92%	18,04%	81,96%	3,91%	96,09%	56,09%	43,91%	18,04%	81,96%	3,91%	96,09%
		Gračac-Knin	58,31%	41,69%	18,44%	81,56%	3,97%	96,03%	58,30%	41,70%	18,44%	81,56%	3,97%	96,03%
		Knin-Perković	71,29%	28,71%	23,90%	76,10%	6,14%	93,86%	71,29%	28,71%	23,90%	76,10%	6,14%	93,86%
		Perković-Šolin	81,98%	18,02%	41,94%	58,06%	13,30%	86,70%	81,98%	18,02%	41,94%	58,06%	13,30%	86,70%
S	M	**M606 Knin-Zadar**												
		Knin-Bibinje	77,60%	22,40%	17,45%	82,55%	5,49%	94,51%	77,60%	22,40%	17,45%	82,55%	5,49%	94,51%
S	M	**M607 Perković-Šibenik**												
		Perković-Ražine	85,02%	14,98%	25,80%	74,20%	8,54%	91,46%	85,02%	14,98%	25,80%	74,20%	8,54%	91,46%
S	M	**R101 State Border-Buzet-Pula**												
		Buzet -Lupoglav	89,74%	10,26%	67,43%	32,57%	38,84%	61,16%	89,74%	10,26%	67,43%	32,57%	38,84%	61,16%
		Lupoglav-Pula	95,04%	4,96%	84,83%	15,17%	64,59%	35,41%	95,04%	4,96%	84,83%	15,17%	64,59%	35,41%
S	M	**R102 Sunja-Volinja-State border**												
		Gaj-Volinja	68,13%	31,87%	23,23%	76,77%	7,23%	92,77%	68,13%	31,87%	23,23%	76,77%	7,23%	92,77%
S	M	**R105 Vinkovci-Drenovci-State border**												
		Vinkovci-Gubja	80,37%	19,63%	25,80%	74,20%	9,22%	90,78%	80,37%	19,63%	25,80%	74,20%	9,22%	90,78%
S	M	**R106 Zabok-Đurmanec-State border**												
		Zabok-Đurmanec	98,68%	1,32%	96,05%	3,95%	92,97%	7,03%	98,68%	1,32%	96,05%	3,95%	92,97%	7,03%
S	M	**R201 Zaprešić-Čakovec**												
		Zaprešić-Zabok	94,82%	5,18%	87,01%	12,99%	71,19%	28,81%	94,82%	5,18%	87,01%	12,99%	71,19%	28,81%
		Budinščina-Varaždin	94,49%	5,51%	94,47%	5,53%	84,78%	15,22%	94,49%	5,51%	94,47%	5,53%	84,78%	15,22%
		Varaždin-Čakovec	0,00%	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%	100,00%
S	M	**R202 Varaždin-Dalj**												
		Varaždin-Koprivnica	91,42%	8,58%	63,80%	36,20%	34,85%	65,15%	91,42%	8,58%	63,80%	36,20%	34,85%	65,15%
		Kloštar-Virovitica	86,00%	14,00%	47,08%	52,92%	19,31%	80,69%	86,00%	14,00%	47,08%	52,92%	19,31%	80,69%
		Pčelić-Našice	83,19%	16,81%	51,55%	48,45%	22,10%	77,90%	83,19%	16,81%	51,55%	48,45%	22,10%	77,90%
		Našice-Bizovac	86,92%	13,08%	60,64%	39,36%	31,08%	68,92%	86,92%	13,08%	60,64%	39,36%	31,08%	68,92%
		Osijek-Dalj	94,10%	5,90%	64,38%	35,62%	40,27%	59,73%	94,10%	5,90%	64,38%	35,62%	40,27%	59,73%
S	M	**L103 Karlovac-Kamanje-State border**												
		Karlovac-Bubnjarci	98,67%	1,33%	95,56%	4,44%	89,41%	10,59%	98,66%	1,34%	95,56%	4,44%	89,41%	10,59%
S	M	**L201 Varaždin - Golubovec**												
		Varaždin-Golubovec	94,48%	5,52%	85,64%	14,36%	88,09%	11,91%	94,48%	5,52%	85,64%	14,36%	88,09%	11,91%
S	M	**L202 Hum Lug-Gornja Stubica**												
		Hum Lug-Gornja Stubica	99,92%	0,08%	99,98%	0,02%	100,00%	0,00%	99,92%	0,08%	99,98%	0,02%	100,00%	0,00%
S	M	**L203 Križevci-Bjelovar-Kloštar**												
		Križevci-Bjelovar	94,92%	5,08%	88,73%	11,27%	86,54%	13,46%	94,92%	5,08%	88,73%	11,27%	86,54%	13,46%
S	M	**L205 Nova Kapela-Našice**												
		Nova Kapela-Pleternica	96,51%	3,49%	83,71%	16,29%	75,35%	24,65%	96,51%	3,49%	83,71%	16,29%	75,35%	24,65%
S	M	**L206 Pleternica-Velika**												
		Pleternica-Velika	96,76%	3,24%	88,01%	11,99%	84,42%	15,58%	96,76%	3,24%	88,01%	11,99%	84,42%	15,58%
S	M	**L208 Vinkovci-Osijek**												
		Vinkovci-Osijek	79,31%	20,69%	22,82%	77,18%	7,63%	92,37%	79,31%	20,69%	22,82%	77,18%	7,63%	92,37%
S	M	**L209 Vinkovci-Županja**												
		Vinkovci-Županja	92,63%	7,37%	56,61%	43,39%	31,55%	68,45%	92,63%	7,37%	56,61%	43,39%	31,54%	68,46%

20 Table Share of transport between passengers and freight, Source. HŽI statistics for 2012

Modal split of passenger transport % in total inland passenger-km:

GEOGRAPHY	2005	2006	2007	2008	2009	2010	2011
EU (28 countries)	6,8	7	7	7,2	7,1	7,2	7,1
Belgium	6,3	6,6	6,7	7,3	7,3	7,4	7,3
Bulgaria	4,8	4,7	4,4	4	3,7	3,6	3,5
Czech Republic	7,3	7,5	7,3	7,1	6,8	7,5	7,6
Denmark	8,3	8,1	8,3	8,4	8,3	8,7	9
Germany	7,5	7,8	7,8	8,1	7,9	8	8,1
Estonia	1,7	2	2,2	2,1	2	2	2
Ireland	3,4	3,5	3,5	3,4	2,9	3,1	3
Greece	1,7	1,6	1,6	1,3	1,2	1,1	0,8
Spain	5,1	5,2	5	5,5	5,4	5,4	5,5
France	9,1	9,4	9,6	10,1	10,3	10,2	10,3
Croatia	4,3	4,4	5	5,4	5,6	5,6	4,9
Italy	6	5,6	5,4	5,6	5,6	5,6	5,1
Latvia	5,4	5,4	4,9	5,2	4,8	4,8	5,1
Lithuania	1,1	1	0,9	1	0,9	0,7	0,8
Luxembourg	3,6	3,9	4,1	4,3	4,3	4,5	4,4
Hungary	13,1	12,9	13,1	11,8	12,3	11,8	11,7
Netherlands	8,3	9,5	9,2	9,2	9,1	9,1	8,7
Austria	9,8	10	10,1	11,1	11,1	11	11
Poland	7,3	6,9	6,8	6,2	5,5	5,2	5
Portugal	3,8	3,9	3,9	4,1	4,2	4,2	4,3
Romania	9,9	9,6	8,6	7,6	6,5	5,9	5,5
Slovenia	2,7	2,7	2,6	2,7	2,6	2,5	2,3
Slovakia	5,9	5,9	6	6,4	6,6	6,7	7
Finland	4,8	4,8	5	5,4	5,1	5,2	5
Sweden	7,7	8,3	8,7	9,4	9,5	9,4	9,5
United Kingdom	5,8	6,2	6,5	6,9	6,8	7,5	7,5
Norway	4,5	4,6	4,6	4,8	4,7	4,8	4,5
Switzerland	16,3	16,5	17	17,3	17,4	17,6	17,6
Macedonia	1,7	1,8	1,9	2,3	2,3	2,2	1,9
Turkey	2,6	2,6	2,7	2,4	2,5	2,4	2,5

21 Table Modal split of passenger transport % in total inland passenger-km, Source: Eurostat

Evolution of **commercial speed**, in km/h (2010-2012)

Type of traffic	**2010**	**2011**	**2012**	**2013 (till 20.10)**
Passengers	47,17	46,54	45,83	44,37
Freight	24,46	21,44	21,30	21,42

22 Table Evolution of commercial speed, in km/h, Source: HŽI

Evolution of **safety indicators** (2006-2012)

Indicator	2006	2007	2008	2009	2010	2011	2012
Total realization of millions of rtkm on HŽ Infrastruktura d.o.o. network	4.964,9	5.481,9	5.390,8	4.705,9	4.474,2	4.007,0	3.525,0
Total number of fatalities per billion of rtkm	7,3	4,9	2,4	10,6	6,0	6,5	4,0
Total number of casualties per billion of rtkm	9,1	4,6	8,3	13,8	6,3	5,0	10,2
The number of dead passengers per billion of pkm	0,0	1,9	0,0	6,0	0,6	0,0	0,0
The number of injured passengers per billion of pkm	2,9	1,9	2,8	8,7	2,9	2,0	4,5

23 Table Safety indicators, Source: HŽI

2. ROAD SECTOR

2.1. Data Analysis

Data collection for the purpose of the preparation of the TDS started in January 2013. Apart from information collected by the Ministry of Maritime Affairs, Transport and Infrastructure and the relevant stakeholders` previously conducted sector analysis, for the drafting of the subsector analysis all available relevant data were used as well as data from previous studies and various road-related projects.

The Subsector analysis is based on the following strategic documents valid on the territory of the Republic of Croatia:

- Transport Development Strategy of the Republic of Croatia (OG no. 139/99),
- Spatial Planning Strategy of the Republic of Croatia adopted by Croatian Parliament on 27 June 1997
- Decision on Amendments to the Physical Planning Strategy of the Republic of Croatia (OG no. 75/13)
- Regional Development Strategy, 2011-2013, June 2010,
- National Road Safety Programme of the Republic of Croatia 2011-2020, (OG no. 59/11),
- Physical Planning Programme for the Republic of Croatia (OG no. 50/99, 84/13),
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2013-2015,
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2014-2016,
- National Road Safety Programme of the Republic of Croatia 2011-2020 (OG no. 59/11)
- Program of Constructing and Maintaining State Road Network for the period 2009 – 2012, (OG no. 147/09);
- Program of Constructing and Maintaining State Road Network for the period 2013 – 2016, (OG no. 1/2014).

Legal framework consisting of applicable legislation for the road sector:

1. Roads Act (OG no. 84/11, 22/13, 54/13 and 148 /13),
2. The Government of the Republic of Croatia has adopted a Regulation on Classification of Public Roads (OG no. 34/12),
3. Decision on Classification of Public Roads (OG no. 44/12, 130/12 66/13 and 13/14).

The Transport Development Strategy must be in line with EU strategies defined in the following documents:

1. White Paper on Transport, European Commission, 2011 (*White Paper on Transport*),
2. Sustainable future for transport, European Commission, 2009 (*Sustainable future for transport*) and
3. Green paper - Towards a new culture of urban mobility, European Commission, 2007 (*Green paper - Towards a new culture of urban mobility*).

Moreover, the TDS takes into account the following directives, regulations and decisions by the European Parliament:

1. Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road,
2. Regulation (EC) No 1371/2007 on rail passengers' rights and obligations,
3. Directive 2010/40/EU on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport,
4. Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment,
5. Directive 2009/28/EC on the promotion of the use of energy from renewable sources,
6. Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles,
7. Directive 2003/30/EC on the action plan of urban mobility (2009).
8. COM (2013) 913,2013 – Together towards competitive and resource-efficient urban mobility, Brussels, 17 December 2013
9. COM (2013) 913,2013 – Concept for Sustainable urban mobility plans (SUMP), Brussels, 17 December 2013

For the purpose of drafting the TDS, systematically acquired statistical data have been obtained from the following sources:

- The Croatian Bureau of Statistics (2013),
- Hrvatske autoceste d.o.o. (Croatian Motorways),
- Hrvatske ceste d.o.o. (Croatian Roads) and
- Autocesta Rijeka-Zagreb d.o.o. (Motorway Rijeka-Zagreb).

Relevant data obtained from competent Ministries were also used:

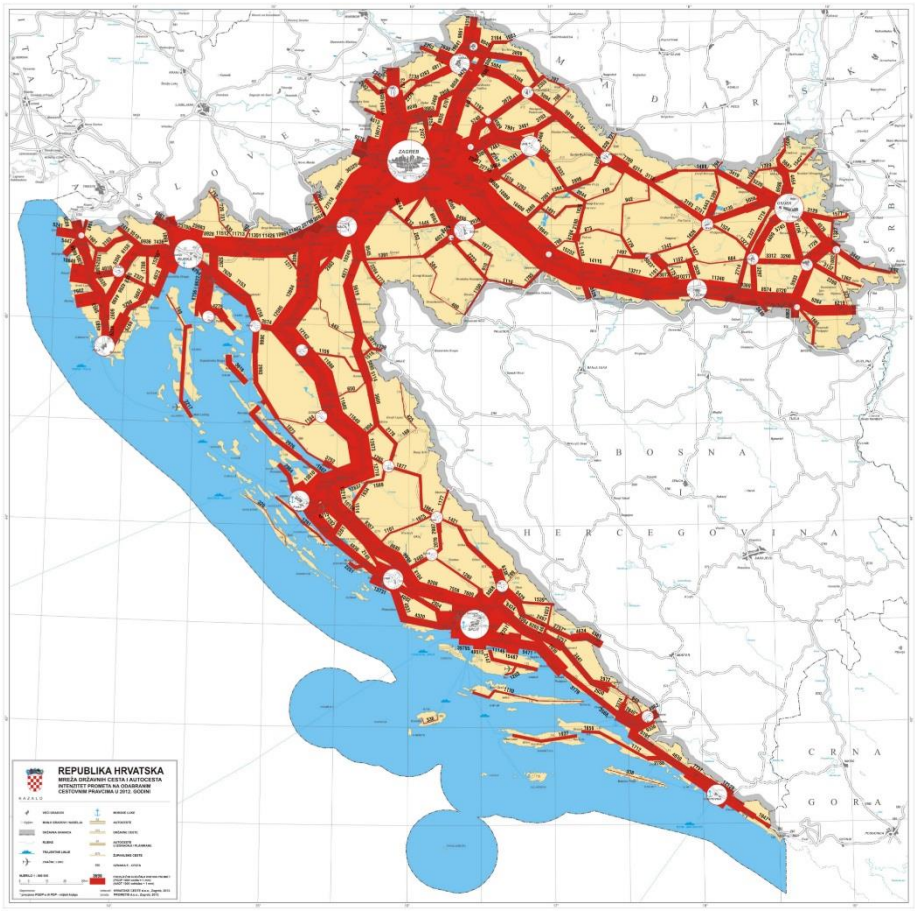
- Ministry of Maritime Affairs, Transport and Infrastructure,
- Ministry of Construction and Physical Planning,
- Ministry of the Interior,
- Ministry of Tourism and
- Ministry of Environmental and Nature Protection.

In addition to these official data, the analysis is also based on information gathered from the physical planning documentation valid at national, county and city level, as well as from existing studies and projects.

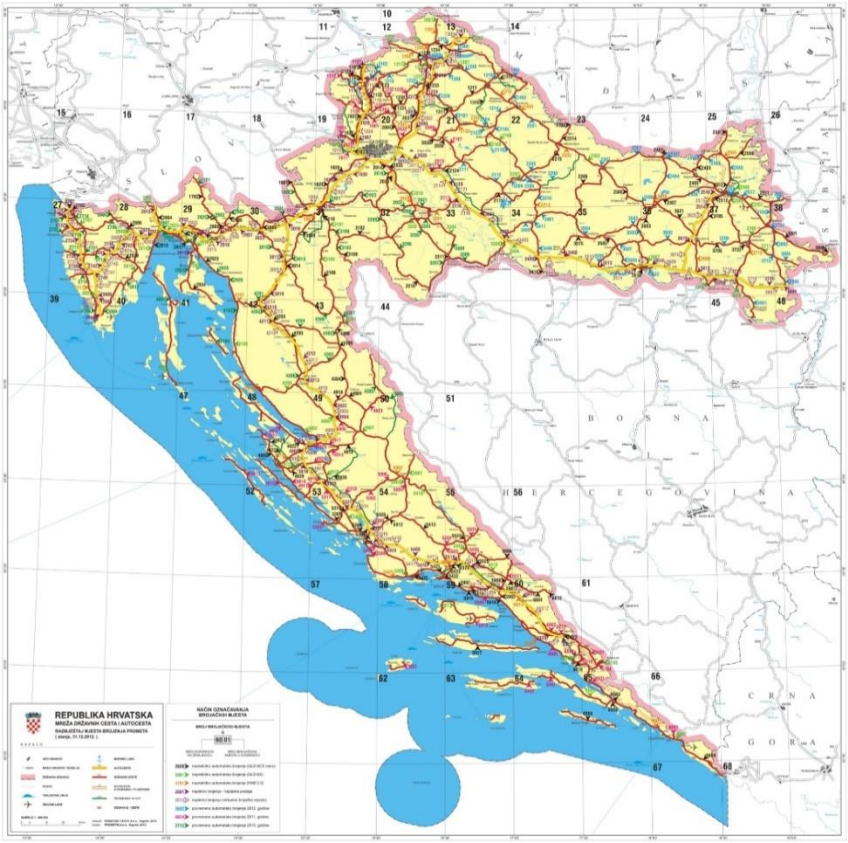
2.2. Sector Description

2.2.1. Data on traffic volume

Traffic counting is carried out periodically on the road network in the Republic of Croatia, with relevant data published in the publication **"Traffic Counting on the Roadways of Croatia in 2012, Hrvatske ceste d.o.o.".**



3 Figure Traffic counting on the Roadways of Croatia in 2012, Source: Traffic counting on the Roadways of Croatia in 2012, Hrvatske ceste d.o.o.



4 Figure Traffic counting on the Roadways of Croatia in 2012, Source: Traffic counting on the Roadways of Croatia in 2012, Hrvatske ceste d.o.o.

MOTORWAY	AADT			ASDT		
	2011	2012	ANNUAL CHANGE (%)	2011	2012	ANNUAL CHANGE (%)
A1: Zagreb-Vrgorac	12.652	12.016	-5,0	29.269	27.941	-4,5
A2: Macelj-Zagreb	11.039	11.696	6,0	20.574	21.514	4,6
A3: Bragana – Zagreb (Ivanja Reka)	14.413	13.985	-3,0	20.306	20.279	-0,1
A4: Goričan – Zagreb	7.294	6.657	-8,7	13.263	12.285	-7,4
A5: Osijek – Sredanci	2.534	2.379	-6,1	2.926	2.751	-6,0
A6: Bosiljevo 2 – Rijeka	11.767	11.055	-6,1	20.032	19.107	-4,6
A7: Rupa - Sv. Kuzam	14.212	13.626	-4,1	23.813	22.548	-5,3
A8: Kanfanar – Matulji	7.795	7.436	-4,6	9.595	9.147	-4,7
A9: Umag – Pula	5.462	5.395	-1,2	12.060	12.287	1,9
Total	**11.654**	**11.182**	**-4,1**	**21.490**	**20.832**	**-3,1**

Total: comparable sample of 1.064 km of motorways for AADT and 1.146 km for ASDT.

24 Table Motorways Traffic in the Years 2011 and 2012, Source: Traffic counting on the Roadways of Croatia in 2012, Hrvatske ceste d.o.o.

STATE ROAD	AADT			ASDT		
	2011	2012	ANNUAL CHANGE (%)	2011	2012	ANNUAL CHANGE (%)
1	4.404	4.337	-1,5	6.583	6.768	2,8
2	6.144	5.987	-2,6	6.279	6.286	0,1
3	6.014	5.805	-3,5	6.461	6.440	-0,3
5	1.684	1.567	-6,9	1.936	1.814	-6,3
7	5.526	4.960	-10,2	5.912	5.370	-9,2
8	5.623	5.489	-2,4	10.016	9.921	-0,9
Total	**3.558**	**3.433**	**-3,5**	**5.130**	**5.052**	**-1,5**
For each of the selected roads comparable sections for 2011 and 2012 were taken into consideration, calculations were done for vehicle-kilometre (vkm) Total: comparable sample of 1.356 km of State roads for AADT, and 1.364 km for ASDT						

25 Table State Roads Traffic in the Years 2011 and 2012, Source: Traffic counting on the Roadways of Croatia in 2012, Hrvatske ceste d.o.o.

2.2.2. International road corridors

5 Figure The Pan European Network, Source: European Commission

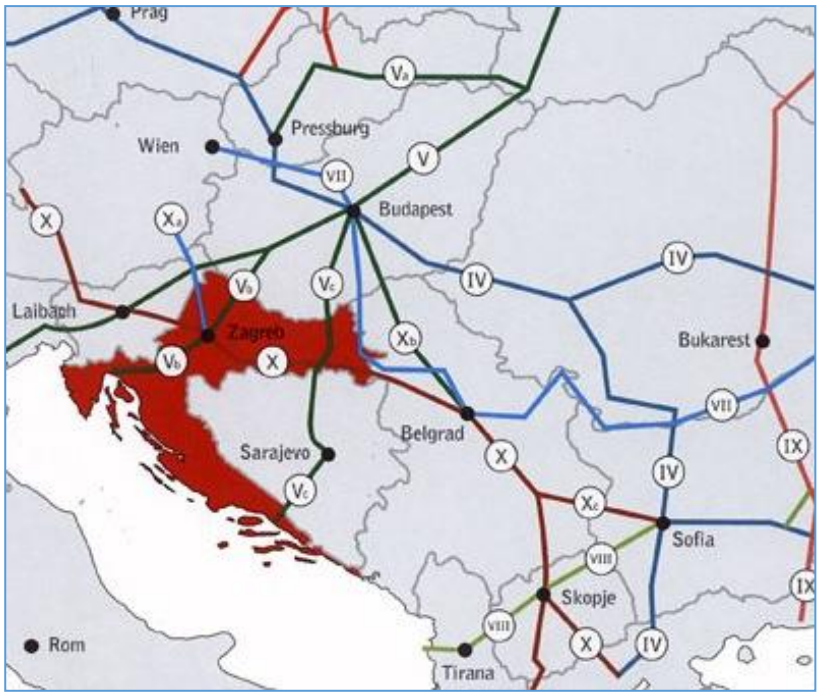
With their passing through Croatia, international Pan-European transport corridors Vb, Vc, X and Xa, open Croatia bi-directionally to major European networks. As Republic of Croatia is a EU Member State since 1 July 2013, they now form a part of the TEN-T network as follows: Vb (TEN-T Mediterranean corridor), Vc (TEN-T comprehensive network), X (TEN-T core network) and Xa (TEN-T comprehensive network).

Zagreb, as mentioned above, is situated at the crossing of Pan-European corridors X (TEN-T core network), Xa (TEN-T comprehensive network), and Vb (TEN-T Mediterranean corridor). Corridor Vc connects Ploče with Budapest and farther East-Europe, and in addition, TEN-T Rhine-Danube (Pan-European corridor VII) also passes through the country, enabling cargo to the port of Vukovar.

The following Croatian infrastructure elements belong to the above mentioned network:

- A2 Motorway part of TEN-T comprehensive network (Pan-European Corridor Xa),
- A4, A1 (Zagreb-node Bosiljevo 2), A6 (node Bosiljevo 2-Rijeka) Motorways part of TEN-T Mediterranean corridor (Pan-European corridor Vb),
- A5, A10 Motorways part of TEN-T comprehensive network (Pan-European corridor Vc),
- A3 Motorway part of TEN-T core network (Pan-European corridor X).

Here is to mention that there is a project with special importance for the country which is a part of the TEN-T core network, namely the Adriatic Ionian Road Transport Corridor. The Corridor connects 7 countries (Italy, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania and Greece, between Trieste and Kalamata). Along the Adriatic coast, it connects the main ports of the sea (Trieste, Koper, Rijeka, Zadar, Šibenik, Split, Ploče, Dubrovnik, Bar, Durresi, Igoumenitsa, Patras, Kalamata) and a number of Pan European corridors (V, Vb, Vc, and VIII).



Corridor Vb: Rijeka – Zagreb - Budapest

Corridor Vc: Ploče – Sarajevo – Osijek - Budapest

Corridor X: Salzburg – Ljubljana – Zagreb – Beograd – Niš – Skopje – Veleš - Thessaloniki

Corridor Xa: Graz – Maribor – Zagreb

6 Figure International road corridors map, Source: HRLog project for establishing Croatia as the regional logistics centre/Road transport

2.2.3. Road classification according to communications task and importance

ROAD CATEGORY	SOCIAL - ECONOMIC MEANING (1.1.1)	TYPE OF TRAFFIC (1.1.2)	VOLUME OF TRAFFIC (1.1.3)	COMMUNICATION TASK (1.1.4)	MEAN TRAVELLING LENGTH (KM)
Motorway	State road	Motor vehicle traffic	> 14000	International and state	> 100
1st cat.	State road	Motor vehicle traffic	> 12000	International and state - regional	50-100
2nd cat.	State road	Motor vehicle traffic vs. mixed traffic	7000-12000	State and county	20-50
3rd cat.	State road; county road	Mixed traffic	3000-7000	Inter-municipal	5-50
4th cat.	County road; local road	Mixed traffic	1000-3000	Municipal	5-20
5th cat.	Local road	Mixed traffic	<1000	Municipal-local	< 5

26 Table Road classification on the basis of the communication task, Source: Ordinance on essential road safety requirements for public roads outside urban areas and their elements regarding road safety (OG no. 110/01)

In accordance with the available information, the length of classified public roads in the territory of the Republic of Croatia is the following:

Year	Total length of classified roads (km)	Motorways (km)	State roads (km)	County roads (km)	Local roads (km)
2013	26964	1416,5	6868	9703	8980

27 Table Length of classified public roads network in the Republic of Croatia

The length of public roads based on the county they belong to:

County	Motorways (km)	State roads (km)	County roads (km)	Local roads (km)
Republic of Croatia	1413	6868	9703	8980
Zagrebačka County	134	263	674	550
Krapinsko-zagorska County	38	275	405	246
Sisačko-moslavačka County	87	385	714	626
Karlovačka County	83	383	489	538
Varaždinska County	45	198	446	475
Koprivničko-križevačka County	0	273	361	508
Bjelovarsko-bilogorska County	0	298	544	505
Primorsko-goranska County	137	518	561	320
Ličko-senjska County	118	527	496	650
Virovitičko-podravska County	0	196	365	319
Požeško-slavonska County	0	219	199	263
Brodsko-posavska County	128	135	448	195
Zadarska County	74	507	563	636
Osječko-baranjska County	72	466	652	485
Šibensko-kninska County	43	328	427	327

Vukovarsko srijemska County	50	256	434	204
Splitsko-dalmatinska County	131	763	827	905
Istarska County	125	354	619	661
Dubrovačko-neretvanska County	81	386	276	339
Međimurska County	22	109	202	227
City of Zagreb	44	28	0	0

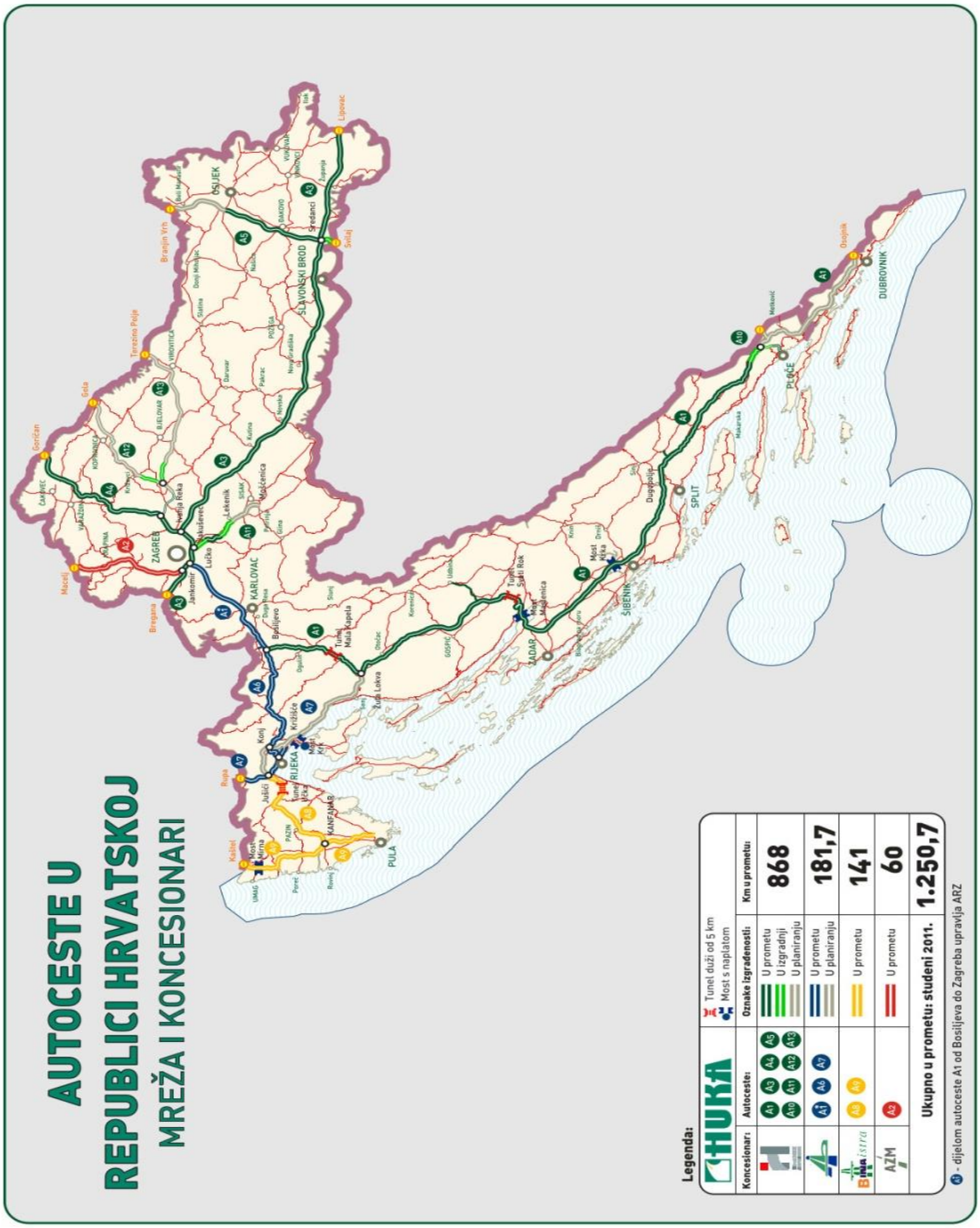
28 Table Length of classified public roads per counties in 2013, Source: MMATI

2.2.4. The motorway network in the Republic of Croatia

The motorway network of the Republic of Croatia covers a total of 1.416,5 km of motorways and they have been defined by the following motorway routes:

CODE	DESCRIPTION	LENGTH (km)
A1	Zagreb (node Lučko, A3) – Karlovac –Bosiljevo – Split – Ploče (A 10) – Karamatići – Opuzen – B&H border) and Bosnia and Herzegovina border– Dubrovnik	550,0
A2	Border crossing Macelj (Slovenian border) – Trakošćan – Krapina – Zagreb (node Jankomir, A3)	61,0
A3	Border crossing Bregana (Slovenian border) – Zagreb – Sl. Brod – Border crossing Bajakovo (Serbian border)	306,0
A4	Border crossing Goričan (Hungarian border) – Varaždin – Zagreb (node Ivanja Reka, A3)	97,0
A5	Border crossing Branjin Vrh (Hungarian border) – Beli Manastir – Osijek – Đakovo – node Sredanci (A3) – Border crossing Svilaj (B&H border)	88,1
A6	Node Bosiljevo 2 (A1) – Delnice – Rijeka (node Orehovica, A7)	81,0
A7	Border crossing Rupa (Slovenian border) – Matulji – Orehovica – Sv. Kuzam – Križišće (D523) including the acces road node Draga – City of Rijeka (port Brajdica) and access road node Križišće – Krk bridge	42,4
A8	Node Kanfanar (A9) – Pazin – Lupoglav – node Matulji (A7)	64,0
A9	Node Umag (D510) – Kanfanar – node Pula (D66)	77,0
A10	Bosnia and Herzegovina border – node Ploče (A1)	8,9
A11	Zagreb (node Jakuševec, A3) – Velika Gorica – Sisak	42,0
	Total km motorways:	**1.416,5**

29 Table List of motorways in Republic of Croatia, Source: Decision on classification of public roads (OG no.66/2013, 13/2014)



7 Figure Motorways in the Republic of Croatia - network and concessionaires, Source: MMATI

2.2.5. Black spots on state roads

Per county and total:

COUNTY	PARTLY REPAIRED	TO BE COMPLETELY REPAIRED	TOTAL SITES FOR REPAIR
Zagrebačka County	3	6	9
Splitsko-dalmatinska County	12	13	25
Primorsko-goranska County	8	4	12
Osječko-baranjska County	4	1	5
Istarska County	3	12	15
Dubrovačko-neretvanska County	1	1	2
Karlovačka County	-	1	1
Sisačko-moslavačka County	1	1	2
Šibensko-kninska County	2	1	3
Vukovarsko-srijemska County	-	1	1
Zadarska County	4	5	9
Bjelovarsko-bilogorska County	2	2	4
Brodsko-posavska County	-	3	3
Koprivničko-križevačka County	3	-	3
Krapinsko-zagorska County	-	6	6
Ličko-senjska County	-	1	1
Međimurska County	-	4	4
Požeško-slavonska County	1	3	4
Varaždinska County	-	1	1
Virovitičko-podravska County	2	1	3
Republic of Croatia	46	67	113

30 Table Black spots on Croatian roads, Source: Hrvatske ceste d.o.o., Maintenance Department, Section for inspection and safety of traffic and facilities, Zagreb June 2013

2.2.6. Financial indicators of investment and maintenance

YEAR	IN MILLION HRK							
	INVESTMENT				MAINTENANCE			
	MOTORWAYS	STATE ROADS	COUNTY ROADS	LOCAL ROADS	MOTORWAYS	STATE ROADS	COUNTY ROADS	LOCAL ROADS
2011	2045	1027	242	150	220	490	534	334

31 Table Financial indicators of investment and maintenance per road category (in mil. HRK), Source: MMATI

2.2.7. Data on registered vehicles in Croatia

YEAR	TOTAL	MOTORCYCLES	CARS (TOTAL)	CARS (NATURAL PERSONS)	VANS	BUSES	GOODS VEHICLES
2011	**1969405**	**62876**	**1518278**	**1353252**	-	**4841**	**154884**

32 Table Registered motor vehicles in Croatia in 2011, Source: Ministry of Interior

YEAR	TOTAL	MOTORCYCLES	CARS (TOTAL)	CARS (NATURAL PERSONS)	VANS	BUSES	GOODS VEHICLES
2011	**0,460**	**0,015**	**0,354**	**0,316**	-	**0,00113**	**0,0361**

33 Table Number of vehicles per capita in Croatia in 2011, Source: Ministry of Interior

Data per county:

COUNTY	NUMBER OF INHABITANTS	NUMBER OF DRIVERS	MOTOR VEHICLES REGISTERED	NUMBER OF VEHICLES PER CAPITA
Zagreb	1110517	580710	534639	0,481
Splitsko-dalmatinska	455242	232940	211987	0,466
Primorsko -goranska	296123	178532	159819	0,540
Osječko-baranjska	304899	149454	118058	0,387
Istarska	208440	132663	127657	0,612
Dubrovačko-neretvanska	122783	66225	59674	0,486
Karlovačka	128749	66989	58071	0,451
Sisačko-moslavačka	172977	85638	69453	0,402
Šibensko-kninska	109320	52854	47262	0,432
Vukovarsko-srijemska	180117	91181	61175	0,340
Zadarska	170398	83154	70444	0,413
Bjelovarsko-bilogorska	119743	60993	55889	0,467
Brodsko-posavska	158559	77392	55308	0,349
Koprivničko-križevačka	115582	59530	56629	0,490
Krapinsko-zagorska	133064	65640	58044	0,436
Ličko-senjska	51022	22679	21297	0,417

COUNTY	NUMBER OF INHABITANTS	NUMBER OF DRIVERS	MOTOR VEHICLES REGISTERED	NUMBER OF VEHICLES PER CAPITA
Međimurska	114414	61623	52845	0,462
Požeško-slavonska	78031	52163	33862	0,434
Varaždinska	176046	89401	81636	0,464
Virovitičko-podravska	84586	41116	35656	0,422
Republic of Croatia	**4290612**	**2250877**	**1969405**	**0,459**

34 Table Number of inhabitants, number of drivers, number of motor vehicles and number of motor vehicles per capita per county in 2011, Source: Ministry of Interior

2.2.8. Classified public roads density

COUNTY	MOTORWAYS (KM/KM)	STATE ROADS (KM/KM2)	COUNTY ROADS (KM/KM2)	LOCAL ROADS (KM/KM2)
Republic of Croatia	0,022	0,121	0,194	0,183
Zagrebačka County	0,042	0,080	0,280	0,233
Krapinsko-zagorska County	0,031	0,194	0,362	0,194
Sisačko-moslavačka County	0,014	0,086	0,183	0,146
Karlovačka County	0,023	0,097	0,161	0,189
Varaždinska County	0,036	0,166	0,375	0,380
Koprivničko-križevačka County	0,000	0,121	0,229	0,294
Bjelovarsko-bilogorska County	0,000	0,109	0,214	0,230
Primorsko-goranska County	0,036	0,145	0,167	0,100
Ličko-senjska County	0,022	0,104	0,107	0,146
Virovitičko-podravska County	0,000	0,094	0,183	0,143
Požeško-slavonska County	0,000	0,120	0,128	0,161
Brodsko-posavska County	0,061	0,066	0,235	0,096
Zadarska County	0,020	0,164	0,145	0,187
Osječko-baranjska County	0,010	0,116	0,160	0,133
Šibensko-kninska County	0,014	0,122	0,158	0,139
Vukovarsko-srijemska County	0,020	0,105	0,195	0,094
Splitsko-dalmatinska County	0,027	0,164	0,188	0,207
Istarska County	0,045	0,118	0,247	0,258
Dubrovačko-neretvanska County	0,000	0,223	0,164	0,197
Međimurska County	0,030	0,122	0,366	0,360
City of Zagreb	0,068	0,044	0,494	0,605

35 Table Classified public roads density per county in 2011, Source: MMATI

2.2.9. Road traffic safety

Data on road traffic safety in the Republic of Croatia per year killed and injured persons, vehicle type:

YEAR	DRIVERS	TRAFFIC ACCIDENTS WITH CASUALTIES	KILLED AND INJURED PERSONS							TRAFFIC ACCIDENTS PER VEHICLE TYPE			
			TOTAL	KILLED			INJURED			CARS	GOODS VEHICLES	VANS	MOTORCYCLES
				TOTAL	*ADULTS*	*CHILDREN*	*TOTAL*	*ADULTS*	*CHILDREN*				
2002.	1920321	17071	24550	627	620	7	23923	23388	535	1244252	131673	9788	28188
2003.	1964406	18592	26854	701	687	14	26153	25577	576	1293421	141182	9985	33925
2004.	2011950	17140	24879	608	598	10	24271	23747	524	1337523	147651	10155	39315
2005.	2052056	15679	22370	597	589	8	21773	21306	467	1384699	152663	10244	44196
2006.	2085336	16706	23750	614	609	5	23136	22653	483	1435781	159147	10551	49788
2007.	2131678	18029	25711	619	612	7	25092	24590	502	1491127	165742	10961	56401
2008.	2179514	16283	23059	664	654	10	22395	21945	450	1535280	170704	9597	63357
2009.	2208621	15730	22471	548	538	10	21923	21499	424	1526507	164761	6042	63691
2010.	2233963	13272	18759	426	420	6	18333	18044	289	1511045	157731	4402	62210
2011.	2250877	13228	18483	418	412	6	18065	17779	286	1514847	154884	3431	62876

36 Table Road Traffic Safety 2002-2011, Source: Ministry of Interior

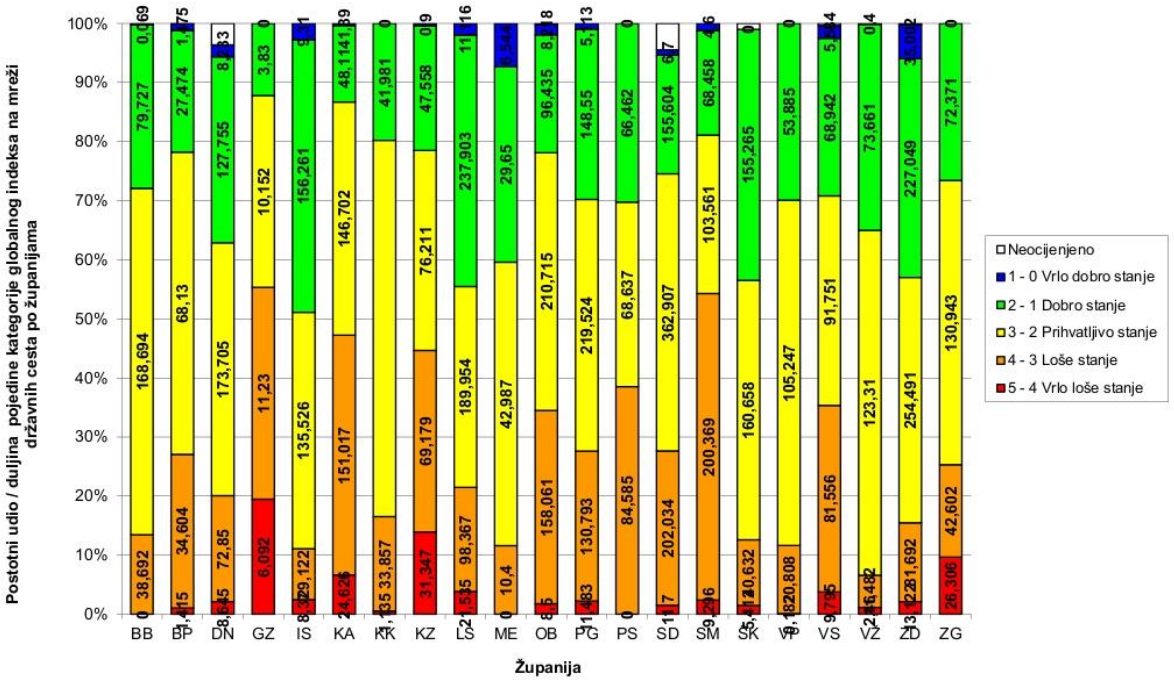
Sažetak osnovnih prometnih pokazatelja na autocestama u 2013. g.

2013.	A1				A3				A4				A5				A11				HAC			
	PMDP	Uk.br. nesreća	Smrtno stradali	Ozlijeđeni	PMDP	Uk.br. nesreća	Smrtno stradali	Ozlijeđeni	PMDP	Uk.br. nesreća	Smrtno stradali	Ozlijeđeni	PMDP	Uk.br. nesreća	Smrtno stradali	Ozlijeđeni	PMDP	Uk.br. nesreća	Smrtno stradali	Ozlijeđeni	PMDP	Uk.br. nesreća	Smrtno stradali	Ozlijeđeni
Siječanj	3.926	45		5	13.127	59	2	4	6.782	14		2	1.893	2		0	1.114	0		11	7.347	120	2	22
Veljača	4.010	46		1	12.175	64	1	9	7.397	23		8	1.975	1		0	1.209	0		18	7.124	134	1	36
Ožujak	4.983	31	1	6	14.416	73		15	8.006	22		3	2.204	3		0	1.356	2		0	8.450	131	1	24
Travanj	6.619	36		3	16.281	53	1	11	8.930	15		0	2.463	2		0	1.691	0		0	9.989	106	1	14
Svibanj	8.233	46	1	11	17.125	79		6	9.506	11		2	2.520	3		1	1.849	0		0	11.103	139	1	20
Lipanj	13.005	44		6	16.742	57	4	20	11.050	16		5	2.521	2		0	1.810	0		0	13.345	119	4	31
Srpanj	23.128	77	1	36	22.174	78	1	30	15.463	12		2	2.887	4		4	1.749	0		0	20.460	171	2	72
Kolovoz	28.846	109	1	24	26.819	87	3	40	17.206	9		1	3.009	6		0	1.572	0		0	24.947	211	4	65
Rujan																								
Listopad																								
Studeni																								
Prosinac																								
SVEUKUPNO	11.702	434	4	92	17.428	550	12	135	10.586	122	0	23	2.439	23	0	5	1.546	2	0	29	12.926	1.131	16	284

37 Table Road Traffic Safety 2013, Source: MMATI

Legend: *PMDP – Average monthly daily traffic*
Uk. broj nesreća – Total number of accidents
Smrtno stradali – Killed persons
Ozlijeđeni – Injured persons

Tablica 12. Globalni indek stanja kolnika državnih cesta 31.12. 2011.



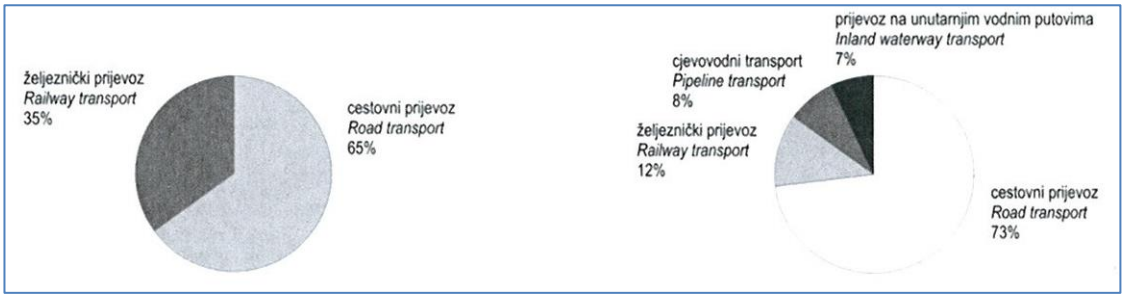
8 Figure Global index of pavement conditions on state roads 31/12/2011, Source: MMATI

Legend: Percentage/length of a category of the global index on the state roads network per county/
0 – not rated
1-0– very good
2-1 – good
3-2 – acceptable
4-3 – poor
5-4 – very poor

vozilo-kilometri, mil.
Vehicle-kilometres, mln

	2008.	2009.	2010.	2011.	2012.	
Ukupno	21 861	21 308	20 971	20 609	20 317	*Total*
Osobnim vozilima	19 456	18 965	18 590	18 250	17 995	*Passenger cars*
Autobusima	306	299	310	300	300	*Buses and motor coaches*
Motociklima i mopedima	153	150	154	189	189	*Motorcycles and mopeds*
Teretnim vozilima	1 946	1 894	1 917	1 870	1 833	*Goods vehicles*

9 Figure Road traffic on national territory by type of vehicle, Source: Statistical reports, ISSN 1846-2421, Transport and Communication, 2012, Zagreb 2013



10 Figure Structure of inland passenger transport by type of transport, 2012, and structure of inland goods transport by type of transport, 2012, Source: Statistical reports, ISSN 1846-2421, Transport and Communication, 2012, Zagreb 2013

Godine starosti *Age*	Ukupno *Total*			Spol *Sex*					
				muškarci *Men*			žene *Women*		
	2010.	2011.	2012.	2010.	2011.	2012.	2010.	2011.	2012.
Ukupno *Total*	2 233 963	2 250 877	2 267 892	1 361 328	1 365 253	1 369 665	872 635	885 624	898 227
Do 18 *Up to 18*	13 511	12 256	11 024	9 431	8 465	7 544	4 080	3 791	3 480
19 – 24	207 349	197 065	186 225	121 073	115 663	110 130	86 276	81 402	76 095
25 – 34	505 589	501 424	495 360	276 682	273 749	269 756	228 907	227 675	225 604
35 – 44	492 633	493 007	496 480	277 092	275 221	275 153	215 541	217 786	221 327
45 – 54	474 727	477 335	480 263	288 438	287 062	286 246	186 289	190 273	194 017
55 – 64	363 139	380 134	393 634	240 301	248 719	254 965	122 838	131 415	138 669
65 godina i više *65 and over*	177 015	189 656	204 906	148 311	156 374	165 871	28 704	33 282	39 035

Izvor: Ministarstvo unutarnjih poslova
Source: Ministry of the Interior

11 Figure Drivers of road motor vehicles, by sex and age

	2008.	2009.	2010.	2011.	2012.	
Mopedi	120 457	120 792	114 563	112 166	98 975	*Mopeds*
Motocikli	63 357	63 691	62 210	62 876	58 006	*Motorcycles*
Četverocikli	1 600	1 916	1 835	1 906	1 796	*Quadricycles*
Osobna vozila	1 535 280	1 532 549	1 515 449	1 518 278	1 445 220	*Passenger cars*
Kombinirana vozila	9 597[1)]	...	...	...	...	*Light vans*
Autobusi	5 099	5 071	4 877	4 841	4 655	*Buses*
Teretna vozila[2)]	170 704	164 761	157 731	154 884	141 567	*Goods vehicles[2)]*
Traktori	108 369	108 825	105 573	107 074	106 436	*Tractors*
Radni strojevi	7 473	7 605	7 349	7 380	7 086	*Work engines*
Priključna vozila	36 227	35 257	33 574	33 434	31 221	*Trailers*

1) Vidi Izvore i metode prikupljanja podataka, obuhvat i definicije.
2) U teretna vozila uključena su i radna vozila.
1) See Sources and methods of data collection, coverage and definitions
2) Work vehicles are included in the category Goods vehicles.

Izvor: Ministarstvo unutarnjih poslova
Source: Ministry of the Interior

12 Figure Registered road motor vehicles and trailers, by type of vehicles

3. AVIATION SECTOR

3.1. Data Analysis

Main available data consist in the following:

- Project templates/studies/investment fiches: Split Airport, Osijek Airport, Mali Lošinj Airport, Pula Airport, Zadar Airport, Brač Airport, Rijeka Airport, Zagreb Airport, Croatia Control (SUR system upgrade for TMA Dubrovnik and TMA Pula),
- Traffic figures, delays, capacity, etc. sourced by every airport,
- Master Plans from airports Dubrovnik, Mali Lošinj, Zadar, Zagreb, Pula and Split,
- Safety Reports and related Action Plans from airports Brač, Dubrovnik, Osijek, Pula, Rijeka, Split, Zadar, Zagreb and Mali Lošinj,
- TEN-T requirements,
- CCAA Information,
- EASA documents about Croatia standardisation,
- OPERATIONAL PROGRAMME TRANSPORT 2007- 2013,
- Beyond Vision 2020 (Towards 2050), ACARE,
- Flightpath 2050 - Europe's Vision for Aviation, EC.

Relevant policy and planning documents related to the development of aviation sector in Croatia are presented below. These documents establish the objectives to be achieved in Croatian aviation sector.

European level:

- White paper: Roadmap for Single European Transport Area-Towards a competitive and sustainable transport system, (EC 2011),
- Message of the European Commission to the European Council, the European Parliament, the Economic - Social Committee and the Committee of the Regions COM (2006) 819 final, 24.01.2007, Action Plan on capacity, efficiency and safety of airports in Europe (*An action plan for airport capacity, efficiency and safety in Europe*),
- Statement by the European Commission Board guidelines financing of airports and airlines starting assistance in the use of regional airports (Community guidelines on financing of airports and start-up aid to airlines departing from regional airports, Official Journal C 312, 09.12.2005),
- Message of the European Commission to the European Council, the European Parliament, the Economic - Social Committee and the Committee of the Regions, COM (2006) 814 final,

22.06.2006, Some Europe remains a moving - Sustainable mobility for our continent Review Commission's White Paper on Transport 2001 year (*Keep Europe moving - Sustainable mobility for our continent, Mid - term Review of the European Commission's 2001 Transport White Paper*),

- Message of the European Commission to the European Council, the European Parliament, the Economic - Social Committee and the Committee of the Regions, COM (2006) 819 final, 24.01.2007, Action Plan on capacity, efficiency and safety of airports in Europe (*An action plan for airport capacity, efficiency and safety in Europe*),
- The decision of the Council of Europe, on 06.10.2006, the cohesive strategic framework (official Journal L 291, 21.10.2006),
- Directive of the Council of Europe, no. 1083/2006 (11.07.2006), the general provisions on the European Regional Development Fund, European Social Fund and the Cohesion Fund and repealing Council Directive Europe, no. 1260/1999,
- Directive of the Council of Europe, no. 1084/2006 (11.07.2006), establishing the Cohesion Fund and repealing Directive of the European Council no. 1164/94,
- Helsinki initiative from 1997 Conference with Ministries of Transport;
- TEN-T (including Green Paper-TEN-T Policy review, integration of TEN-T in the common transport policy),
- Report on the situation in the area of Croatia 2008-2012,
- Cohesion Policy 2014 - 2020: Investing in growth and jobs.

National Level:

- National Strategic Reference Framework (EC 26.08.2013),
- Regional Development Strategy, 2011-2013, June 2010,
- Transport Development Strategy of the Republic of Croatia (OG no. 139/99),
- Strategic Development Framework for 2006 - 2013 (Republic of Croatia, Central Office, Zagreb, 2006),
- Spatial Planning Strategy of the Republic of Croatia adopted by Croatian Parliament on 27 June 1997
- Decision on Amendments to the Physical Planning Strategy of the Republic of Croatia (OG no. 75/13)
- Physical Planning Programme for the Republic of Croatia (OG no. 50/99, 84/13),
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2013-2015,
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2014-2016,
- Strategy for Croatia 2010 - 2013 (EBRD),

- Air Traffic Act (OG no. 69/09, 84 /11, 54/13 and 127/13)
- Airports Act (OG no. 19/98 and 14/11),
- Ordinance on maintaining and checking of the airport and the measures necessary for its safe use (OG no. 65/05),
- Airports ordinance (OG no. 58/14),
- Strategic Development Framework for 2006 - 2013 (SDF),
- Croatian Tourism Development Strategy until 2010 (Republic of Croatia, Ministry of Tourism, 2003),
- Spatial Planning Act (OG no. 153/13).
- Construction act (OG. no. 153/13)

Regional Level:

- Tourism Master Plan of Split - Splitsko-dalmatinska County (2007),
- Regional Operational Programme of Splitsko-dalmatinska County 2007 - 2013 (2006),
- Spatial Plan of Splitsko-dalmatinska County (OG of Splitsko-dalmatinska county no. 1/03, 8/04, 5/05, 5/06, 13/07),
- Regional Operational Program of Primorsko-goranska County 2008–2013,
- Development strategy of Primorsko-goranska County 2011-2013,
- Development Plan Split Airport to 2015.

Local Level:

- Spatial Plan of the City of Kaštela (OG of the City of Kaštela no. 02/06, 02/09, 02/12),
- Master Plan of the City of Kaštela (OG of the City of Kaštela no. 02/06, 02/09, 02/12).

The following documents have been reviewed and considered as inputs in order to analyse the development of aviation sector in Croatia. They are all related to potential projects that are envisaged in aviation sector in general, and particularly in airport infrastructure and air navigation systems. Among them, all "Structural fund project fiches" refer to some of the above-mentioned directives, regulations and decisions aiming to achieve the stated objectives.

Project fiches (Airport /Project title)

- Dubrovnik Airport /Dubrovnik Airport Development,
- Mali Lošinj Airport/Extending the runway, expansion of apron and construction of the terminal building and access roads to the airport of Mali Lošinj,
- Split Airport/Reconstruction and extension of the passenger terminal,
- Zadar Airport/Reconstruction and expansion of operational areas in Zadar Airport,

- Osijek Airport/Modernization of existing and construction of new capacity and equipment procurement,
- Pula Airport/The reconstruction project and installation of light signalling and precision approach system,
- Pula Airport/Expansion of the terminal and related facilities,
- Rijeka Airport/Building a development-operational-multimodal transport infrastructure at Rijeka Airport,
- Rijeka Airport/Renovation, modernization and development of Rijeka Airport/March 2013,
- Zadar Airport/Reconstruction and expansion of operational areas in Zadar Airport,
- Brač Airport/Modernization and upgrading of Brač Airport from 2014 – 2020,
- Croatia Control/SUR system upgrade for TMA Dubrovnik and TMA Pula.

3.2. Sector Description

These are the main traffic figures at airports:

Airport		Zagreb	Dubrovnik	Split	Pula	Zadar	Rijeka	Brač	Osijek	Mali Lošinj
2008	Pax	2.192.453	1.191.474	1.203.778	397.226	157.978	n/a	n/a	n/a	n/a
	Cargo (tons)	10.849	997	1.070	11	3.963	n/a	n/a	n/a	n/a
	Movements	44.542	14.822	17.186	9.406	3.100	n/a	n/a	n/a	n/a
2009	Pax	2.062.242	1.122.355	1.115.099	315.168	215.868	n/a	n/a	n/a	n/a
	Cargo (tons)	10.065	516	813	13	337.919	n/a	n/a	n/a	n/a
	Movements	40.684	14.342	15.568	9.126	3.249	n/a	n/a	n/a	n/a
2010	Pax	2.071.561	1.270.062	1.219.741	330.582	275.272	n/a	n/a	n/a	n/a
	Cargo (tons)	8.156	406	710	9	15.975	n/a	n/a	n/a	n/a
	Movements	39.812	15.539	16.970	6.834	3.328	n/a	n/a	n/a	n/a
2011	Pax	2.319.098	1.349.501	1.300.381	356.073	284.980	79.316	11.367	21.903	1.597
	Cargo (tons)	8.111	420	700	9	19.457	n/a	n/a	n/a	n/a
	Movements	42.360	16.050	17.480	6.984	3.399	n/a	n/a	n/a	n/a
2012	Pax	2.342.309	1.480.470	1.425.749	375.080	371.256	71.558	11.402	2.164	794
	Cargo (tons)	8.133	357	650	11	10.516	n/a	n/a	n/a	n/a
	Movements	39.054	16.216	17.444	7.192	3.968	n/a	n/a	n/a	n/a

38 Table Main figures of traffic, Source: Zagreb, Dubrovnik, Split, Pula and Zadar Airport

Main capacity figures and associated bottlenecks are shown below:

Airport	System					Bottlenecks
	RWY	TWY	Apron (nº stands)	Terminal	Surface access	
Zagreb	30 ops/h	n/a	Main Apron: 22 GA Apron: 21	1500000/y	1400 vehicles/h	Baggage Sorting Area Area of common waiting room for passengers in the international and domestic departure Number of Gates Number of Check-in counters Surface Area intended for commercial facilities
Dubrovnik	15 ops/h	n/a	19	2000 pax/h	n/a	Terminal (check-in, security points, departure waiting area, baggage claim area) TWYs (connection to THR 30), Apron
Split	12 ops/h	n/a	16	2000 pax/h	n/a	TWY Apron Terminal
Pula	400 ops/d	n/a	10	20000 pax/d	n/a	Terminal (Gates)
Zadar	20 ops/h	n/a	Apron 1: 8 C Apron 2: 26 (A,B)	1000 pax/h	n/a	Apron Surface access
Rijeka	n/a	n/a	n/a	n/a	n/a	n/a
Brač	Depends on A/C type	n/a	22 3 C (A,B) 3 B (A) 16 A	400 pax/h	n/a	RWY length TWY Apron Terminal
Osijek	4 ops/h	n/a	4	200 pax/h	n/a	No bottlenecks
Mali Lošinj	n/a	n/a	n/a	n/a	n/a	n/a

39 Table Capacity and bottlenecks at airports, Source: Airport Data

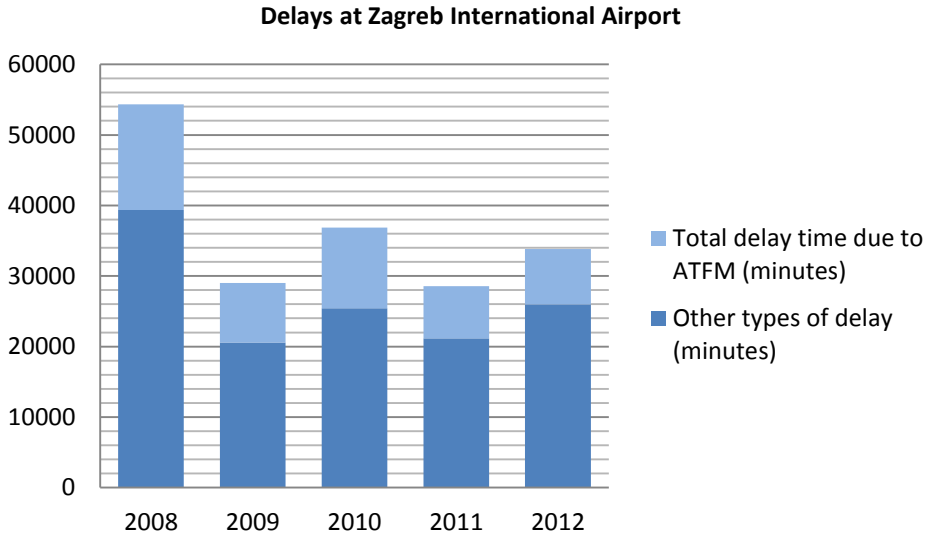
The number of commercial movements at Zagreb International Airport in 2012 is shown below:

CODE	AIRLINE	ATM
CTN	CROATIA AIRLINES	20352
DLH	LUFTHANSA	2315
AUA	AUSTRIAN AIRLINES	1917
AFR	AIRFRANCE	1432
GWY	GERMANWINGS	1035

CODE	AIRLINE	ATM
THY	TURKISH AIRLINES	700
EZY	EASY JET	635
AFL	AEROFLOT	604
QTR	QATAR AIRWAYS	469
TAP	TAP PORTUGAL	332
CSA	CSA CZECH AIRLINES	182
NAX	NORVEGIAN AIR SHUTTLE	104
ELY	EL AL ISRAEL AIRLINES	83
VLG	VUELING	76
MAH	MALEV HUNGARIAN AIRLINES	60
IBE	IBERIA	56
BAW	BRITISH AIRWAYS	44
SRK	SKY WORK AIRLINES	38
-	OTHERS	26
TOTAL		30460

40 Table Commercial movements by airline at Zagreb International Airport in 2012, Source: Zagreb International Airport Data

The data of delays at Zagreb International Airport:



13 Figure Delays at Zagreb International Airport, Source: Zagreb International Airport Data

4. INLAND WATERWAYS SECTOR

4.1. Data analysis

A large quantity of materials and data were used in the development of this Subsector analysis. Most data were obtained from Croatian strategic documents for inland waterways:

- Development Strategy of Inland Waterways Transport in the Republic of Croatia (2008-2018),
- The medium-term development plan for waterways and ports of the inland waters of the Republic of Croatia (for the period 2009-2016).

Other strategic documents also important for the inland waterways sector are:

- Strategy for Sustainable Development of the Republic of Croatia (OG no. 30/2009),
- Strategic Development Framework 2006-2013,
- Transport Development Strategy of the Republic of Croatia (OG no. 139/99),
- Spatial Planning Strategy of the Republic of Croatia adopted by Croatian Parliament on 27 June 1997
- Decision on Amendments to the Physical Planning Strategy of the Republic of Croatia (OG no. 75/13)
- Physical Planning Programme for the Republic of Croatia (OG no. 50/99, 84/13),
- Strategic Plan of the Ministry of Economy 2013-2015,
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2013-2015,
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2014-2016,
- Water Management Strategy 2009 (OG no. 21/08),
- Waste Management Strategy of the Republic of Croatia (OG no. 130/2005).

The Croatian Bureau of Statistics performs the tasks of official statistics in Croatia, including collection and analysis of data about inland waterways transport in co-operation with the Ministry of Maritime Affairs, Transport and Infrastructure.

Statistical data were collected from:

- *Inland waterways transport, Monthly release, Croatian Bureau of Statistics,*
- *The Statistical Report "Transport and communication, 2012" Croatian Bureau of Statistics 2013.*

The Statistical Report "Transport and communication, 2012" contains data on the development and situation of transport equipment, on the activity of business entities engaged in transport and on traffic, postal and courier services and telecommunications.

Each transport activity is shown in a separate chapter. The chapter "Traffic in Inland waterways" includes data on the fleet and employees and data on the inland waterways transport of goods.

Parallel with such official data, the analysis was also based on the data obtained from port authorities, various transport and development studies of specific ports and port master plans.

4.2. Sector Description

4.2.1. Inland Waterways

Generally, inland waterways are divided into navigable or non-navigable. In the last two years, the length of navigable inland waterways was increased from 805 to 1016 km. As the strategic documents that refer to inland waterways were drafted earlier, this information in such documents is older and some data used from such documents will be somewhat different from the actual status.

	2008.	2009	2010	2011	2012
Length of navigable inland waterways, km	804,1	804,1	805,2	1016,8	1016,8

41 Table Length of navigable inland waterways, Source: CBS , The Statistical Report "Transport and communication, 2012"

Classification of the present status of inland waterways has been determined by the Regulation on classification and opening of inland waterways (OG no. 77/11).

Out of the total of 534.7 km of the existing inland waterways that have been included into the European inland waterways network, only 287.4 km comply with the requirements of international navigation standards i.e. minimal international class IV navigability.

River	River section	Length of waterway (km)	Class of waterway
INTERNATIONAL INLAND WATERWAYS			
DANUBE	1295+500 (Ilok) – 1433+000 (Batina)	137,50	Class VIc
SAVA	210+800 (Račinovci) – 313+700 (Sl.Šamac)	102,90	Class IV
	313+700 (Sl.Šamac) – 338+200 (Oprisavci)	24,50	Class III
	338+200 (Oprisavci) – 371+200 (Sl.Brod-city)	33,00	Class IV
	371+200 (Sl.Brod-city) – 594+000 (Sisak-Galdovo)	222,80	Class III
DRAVA	0+000 (mouth of Danube) – 14+000 (Osijek port Nemetin)	14,00	Class IV
	14+000 (Osijek port Nemetin) – 55+450 (Belišće)	41,45	Class III
	55+450 (Belišće) – 70+000 (Hungarian border)	14,55	Class II
KUPA	0+000 (mouth into Sava) – 5+900 (mouth of Odra)	5,90	Class I
UNA	0+000 (mouth into Sava) – 4+000 (Tanac)	4,00	Class II
	4+000 (Tanac) – 15+000 (Hrvatska Dubica)	11,00	Class I

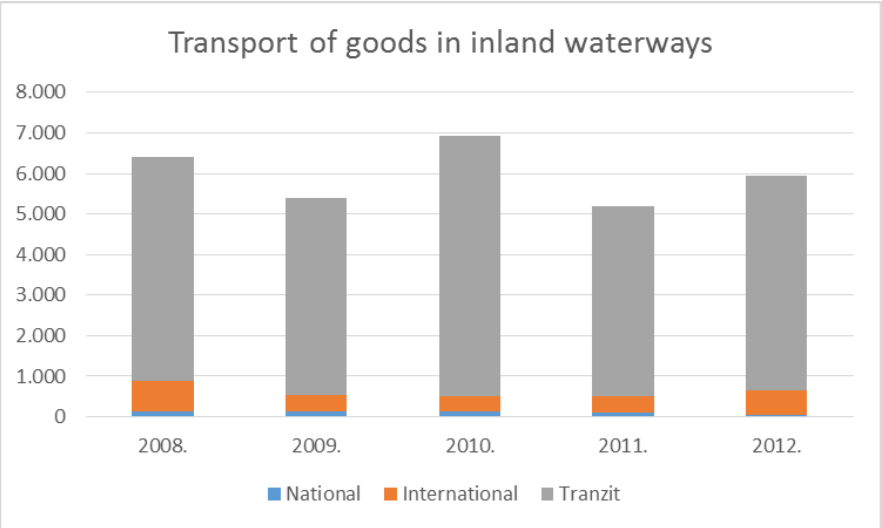
River	River section	Length of waterway (km)	Class of waterway
Total length of international inland waterways		**611,60**	
INTERSTATE INLAND WATERWAYS			
DRAVA	70+000 – 198+600	128,60	Class II
Total length of interstate inland waterways		**128,60**	
NATIONAL INLAND WATERWAYS			
Classified national inland waterways			
SAVA	594+000 (Sisak) – 662+000 (Rugvica)	68,00	Class II
	662+000 (Rugvica) – 715+000 (Bregana – Slovenian border on the right bank)	53,00	Class I
KUPA	5+900 (Mouth of Odra) – 161+500 (Ozalj-dam HE Ozalj)	155,60	Class I
Total length of national classified inland waterways		**276,60**	
TOTAL LENGHT OF CLASSIFIED INLAND WATERWAYS		**1016,80**	

42 Table Classification of inland waterways in Croatia, 2009, Source: Regulation on classification and opening of inland waterways (OG no. 77/2011)

Internal inland waterways are used for transport of passengers and cargo, but the passenger transport is negligible compared to the transport of cargo. Most of the cargo transport is transit, with a small share of international transport and minimum share of national transport.

	TOTAL		NATIONAL		INTERNATIONAL		TRANSIT	
	'000 TONNES	TONNE-KILOMETRES, MLN	'000 TONNES	TONNE-KILOMETRES, MLN	'000 TONNES	TONNE-KILOMETRES, MLN	'000 TONNES	TONNE-KILOMETRES, MLN
2008	6.415	843	141	31	739	48	5.535	764
2009	5.381	727	127	28	406	30	4.848	669
2010	6.928	941	145	29	370	27	6.413	885
2011	5.184	692	91	19	411	27	4.682	646
2012	5.934	772	50	11	596	31	5.288	730

43 Table Transport of goods in inland waterways, Source: CBS, The Statistical Report "Transport and communication, 2012"



14 Figure Transport of goods in inland waterways, Source: CBS, The Statistical Report "Transport and communication, 2012"

4.2.2. Traffic in Ports

Inland waterways ports in Croatia are Vukovar, Osijek, Slavonski Brod and Sisak. All these ports have cargo transport, while the Slavonski Brod port has no passenger transport. Passenger transport is most important in the Vukovar port and is increasing (cruising transport on the Danube) and the port of Sisak has also recorded an increase in local passenger transport.

Cargo transport in ports mostly refers to industry or agriculture located in the wide surroundings of the port.

- Port of Vukovar - Analysis of the trans-shipment of cargo shows that it mostly includes bulk cargo, as well as bagged and liquid cargo.
- Port of Osijek - Analysis of the trans-shipment of cargo shows that bulk cargo accounts for nearly 60% of trans-shipped cargo, agricultural products (wheat, sunflower meal, oil seed rape) for 10%, with bagged and general cargo accounting for the remaining percentage.
- Port of Slavonski Brod – Trans-shipment of crude oil accounts for the greatest cargo transport together with sand, gravel and general cargo.
- Port of Sisak – Trans-shipment of crude oil accounts for the overall cargo transport.

YEAR	PORT OF VUKOVAR	PORT OF OSIJEK	PORT OF SLAVONSKI BROD	PORT OF SISAK
2001	75.000	184.000	210.000	204.432
2002	110.000	197.000	205.000	218.775
2003	153.245	256.414	201.000	160.000
2004	301.304	355.856	198.000	190.528
2005	803.000	478.000	174.000	174.003
2006	925.534	464.105	162.000	156.935
2007	877.746	466.420	180.000	139.899
2008	461.348	310.371	137.000	137.210
2009	156.461	243.099	125.000	120.931
2010	218.505	160.259	124.072	118.466
2011	314.017	121.709	85.033	83.121
2012	450.926	257.937	42.355	42.355
2013	427.026	165.717	42.345	42.345

44 Table Overview of trans-shipped cargo in tons, Source: MMATI

YEAR	PORT OF VUKOVAR	PORT OF OSIJEK	PORT OF SLAVONSKI BROD	PORT OF SISAK
2001	-	-	-	-
2002	400	-	-	-
2003	947	-	-	-
2004	8,642	-	-	-
2005	14.281	-	-	-
2006	17.877	-	-	-
2007	18,692	-	-	-
2008	19,770	0	-	2.751
2009	16,795	475	-	-
2010	18,864	280	-	2.607
2011	24,503	145	-	1.877
2012	28,639	1.726	-	1.663
2013	29,215	1,136	-	2607

45 Table Overview of passenger traffic (Passengers per year), Source: MMATI

4.2.3. Ports infrastructure

VUKOVAR PORT - PORT AREA					
Vukovar Port Infrastructure		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	7	Sloped and vertical quay	850[m']	-
	Intended use and characteristics of berths	2 berth for liquid cargo	Sloped quay	180 [m']	2 Pumping stations (2 Operators)
		1 berth for general cargo and containers	Vertical quay	55 [m']	Mobile crane 63 t bearing capacity (Gottwald HMK 170)
		3 berths for bulk cargo	Sloped quay	375 [m']	2 x portal crane 5/6 t bearing capacity (Ganz)
					1 x portal crane 16/25 t bearing capacity (Ganz)
		1 berth for bulk cargo - cereals	Vertical quay	205 [m']	Chain transporter
	Number of closed storage areas	10	Closed floor storage area, silo, tanks, barge	Closed storage area 3000 m²	Storage and yard machinery
				Silo -55 000 t,	
				Tanks- 8000 m³	
				Barge- approx. 2000 t	
	Intended use and characteristics of closed storage areas	4 liquid cargo tanks	Steel	8000 [m^3]	Pipelines, pumps, valves
		4 silos	Reinforced concrete	55000 [t^3]	Transporters
		1 closed storage area for general cargo	Reinforced concrete	3000 m²	Forklifts
		1 barge	Steel floating object	2000 [t]	Pipelines, pumps
	Number of open storage areas	1	Asphalt surfacing, concrete	10,000 [m^2]	Storage and yard machinery
	Intended use and characteristics of open storage areas	Storage areas for general cargo, storage area for bulk cargo	Asphalt		
CARGO LOADING AREAS					
Ilok Cargo Loading Area	**Number of berths**	1	Vertical quay		Crane
Dalj Cargo Loading Area	**Number of berths**	1			
PASSENGER TERMINALS					
Passenger terminal Vukovar		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	1	Towed barge – fixed alongside sloped quay	Length – 75 m Width – 10 m	-

	Intended use and characteristics of berths	Berth for passengers vessels (river cruisers) Number of vessels on berth –floating facility + 3 vessels	-	120’	Access bridges (2) Power supply Water supply Waste disposal
Passenger terminal Ilok		**Structure**	**Structure type**		**Equipment**
	Number of berths	1	Towed barge – fixed alongside sloped quay	Length – 57,22m Width – 7,93 m	-
	Intended use and characteristics of berths	Berth for passengers vessels (river cruisers) Number of vessels on berth –floating facility + 2 vessels	-	120’	Access bridge Power supply Water supply Waste disposal
Passenger terminal Aljmaš		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	1	Floating facility – fixed alongside sloped quay	Length – 14,53 m Width – 8,02 m	-
	Intended use and characteristics of berths	Berth for passengers vessels (river cruisers) Number of vessels on berth –floating facility + 1 vessel	-	120’	Access bridge Power supply Water supply Waste disposal
Passenger terminal Batina		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	1	Floating facility – fixed alongside sloped quay	Length – 14,53 m Width – 8,02 m	-
	Intended use and characteristics of berths	Berth for passengers vessels (river cruisers) Number of vessels on berth –floating facility + 1 vessel	-	120’	Access bridge Power supply Water supply Waste disposal

46 Table Vukovar port infrastructure, Source: MMATI

OSIJEK PORT - PORT AREA					
Osijek Port - Infrastructure		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	6	Sloped and vertical quay	350 [m']	Cranes and yard and floating machinery
	Intended use and characteristics of berths	1 berth for general cargo	Vertical quay	100 [m']	1 crane
		4 berths for bulk cargo	Sloped quay	100 [m']	4 cranes
					1 loading system
		1 berth for general and bulk cargo	Sloped quay	50 [m']	1 crane
	Number of closed storage areas	1	Reinforced concrete storage area	10000 [m^2]	Storage and yard machinery
	Intended use and characteristics of closed storage areas	1 closed storage area for general cargo	Reinforced concrete	10000 [m^2]	Storage and yard machinery
	Number of open storage areas	2	Asphalt surfacing, reinforced concrete plateau	100,000 [m^2]	Storage and yard machinery
	Intended use and characteristics of open storage areas	1 open storage area for general cargo	Asphalt	50,000 [m^2]	Storage and yard machinery
		1 open storage area for bulk cargo	Reinforced concrete plateau, asphalt	50,000 [m^2]	Storage and yard machinery
PIERS					
Sports pier „Zimska luka“		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	400	Pontoon marina	500 m'	Pontoons, anchoring system, access bridge, quay staircase
	Intended use and characteristics of berths	Pontoons + anchoring system	Pontoons + anchoring system		
		Berths for small vessels (boats)			
Sports pier „Retfala“		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	50	Pontoon marina	300 m'	-
	Intended use and characteristics of berths	Berths for small vessels (boats)	Pontoons + anchoring system		Pontoons, anchoring system, access bridge, quay staircase
Passenger pier „Galija“		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	1	towed boat	100 m'	-
	Intended usde and characteristics of berths	Berth for passenger ships (river cruisers)	Intended use and characteristics of berths		Floating object, access bridges (2), steel ropes

47 Table Osijek port infrastructure, Source: MMATI

SISAK PORT - PORT AREA					
Sisak Port – Crnac basin - Infrastruktura		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	2	Sloped bank revetment	1000 [m']	Pump system for reloading of oil and derivatives
	Intended use and characteristics of berths	2 berths for liquid cargo	Sloped bank revetment	1000 [m']	2 parallel systems for unloading of oil and loading of derivatives
	Number of closed storage areas	5			
	Intended use and characteristics of storage areas	3 crude oil tanks			
		2 oil derivatives tanks			
	Number of open storage areas	none			
	Intended use and characteristics of open areas	none			
Pristanište i skladišta d.o.o – Private port		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	5	Vertical bank revetment	800 [m']	-
	Intended use and characteristics of berths	3 berths for liquid cargo	Vertical bank revetment	800 [m']	2 cranes
		1 berth for general cargo and containers			
	Number of closed storage areas	5	Ground, level, sheds, hangar and pneumatic	10000 [m^2]	Storage and yard machinery
	Intended use and characteristics of closed storage areas	3 crude oil tanks			
		2 oil derivatives tanks			
		5 closed storage arae for general and bulk cargo		100000 [m^3]	
	Number of open storage areas	1	Concrete runway	5000 [m^2]	Storage and yard machinery
	Intended use and characteristics of open storage areas	1 open storage area for general and bulk cargo	Concrete runway		
		1 open storage area for containers			
PIERS					
Shipyard Pier		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**

- Galdovo	**Number of berths**	Receiving pontoon Barbara 80m	Sloped bank revetment and slipway	200 m'	
	Intended use and characteristics of berths	1 slipway	Reinforced concrete slope	90 m'	Crane and slipway
		1 fitting-out berth	Vertical quay	110 m'	1 crane
Passenger Pier Sisak		**Structure**	**Structure type**	**Total size (approximately)**	**Equipment**
	Number of berths	1	Pontoon	10 m'	-
	Intended use and characteristics of berths	Berth for tourist ships	Intended use and characteristics of berths	100 m'	Steel pontoon + small access bridge

48 Table Sisak port infrastructure, Source: MMATI

SLAVONSKI BROD PORT - PORT AREA					
		Structure	**Structure type**	**Total size (approximately)**	**Equipment**
Slavonski Brod Port – Infrastructure	Number of berths	3	Sloped and vertical quay	970 [m']	-
	Intended use and characteristics of berths	2 berths for liquid cargo	Sloped quay	200 [m']	2 pumps
		1 berth for general cargo and containers	Vertical quay	120 [m']	1 crane
	Intended use and characteristics of open storage areas	General cargo			
	Number of open storage areas	4	Various surfacing	22.500 [m^2]	
	Intended use and characteristics of open storage areas	2 open storage areas for general cargo	Concrete, macadam	4.500 [m^2]	
		1 open storage area for bulk cargo	Gravel	15.000 [m^2]	
		1 open storage area for containers	Concrete	3.000 [m^2]	
CARGO LOADING AREAS					
		Structure	**Structure type**	**Total size (approximately)**	**Equipment**
Kruševica Cargo Loading Area	Number of berths	2	Sloped quay	150 m'	Railroad
	Intended use and characteristics of berths	Reloading of gravel and sand	Developed river quay	150 m'	Continuous reloading facility
Gunja Cargo Loading Area	Number of berths	2	Sloped quay	150 m'	
	Intended use and characteristics of berths	Reloading of gravel and sand	Developed river quay	150	Continuous reloading facility
Gunja Cargo Loading Area	Number of berths	2	Sloped quay	150 m'	
	Intended use and characteristics of berths	Reloading of gravel and sand	Developed river quay	150	Continuous reloading facility
Županja Cargo Loading Area	Number of berths	2	Sloped quay	150 m'	
	Intended use and characteristics of berths	Reloading of gravel and sand	Developed river quay	150	Continuous reloading facility
Slavonski Šamac Cargo Loading Area	Number of berths	2	Sloped quay	150 m'	Railroad
	Intended use and characteristics of berths	Reloading of gravel and sand	Developed river quay	150	Continuous reloading facility
Pričac Cargo Loading Area	Number of berths	Railroad	Railroad	Railroad	
	Intended use and characteristics of berths	Reloading of gravel and sand	Developed river quay	150	Continuous reloading facility
Dangerous cargo terminal	Number of berths	1	Quay wall	95	Facility for waste collection and bunkering

49 Table Slavonski Brod port infrastructure, Source: MMATI

4.2.4. Shipping

	TUG-BOATS AND PUSHER VESSELS		SELF-PROPELLED BARGES, SELF-PROPELLED TANKER BARGES	
	NUMBER	KW	NUMBER	CAPACITY, T
2008	24	10,323	74	62,621
2009	24	10,661	72	60,993
2010	z[1]	z	45	50,732
2011	z	z	50	52,992
2012	z	z	47	53,160

50 Table Fleet of national inland waterways carriers in inland waterways, Source: CBS, The Statistical Report "Transport and communication, 2012"

	2008	2009	2010	2011	2012
Total	759	695	134	133	128
Employees in inland waterways transport	312	277	134	133	128
Ship workers	274	253	115	114	109
Other employees in inland waterways transport	38	24	19	19	19
Employees in other activities	401	447	-	-	-

51 Table Employees in inland waterways transport, Source: CBS, The Statistical Report "Transport and communication, 2012"

[1] *Z : Classified data according to CBS markings*

5. MARITIME SECTOR

5.1. Data Analysis

Many materials and data were used in the development of this Subsector analysis. Existing strategic documents used for analysis of the maritime sector are the following:

- Strategy for Sustainable Development of the Republic of Croatia (OG no. 30/2009),
- Strategic Development Framework 2006-2013,
- Transport Development Strategy of the Republic of Croatia (OG no. 139/99),
- Pre-accession Maritime Strategy of the RoC (2006),
- Strategy of maritime development and integrated maritime policy for the Croatia for the period 2014 to 2020 (OG no. 93/14),
- Nautical Tourism Development Strategy of the ROC (2009-2019),
- Physical Planning Strategy of the Republic of Croatia (1997, 2013, OG no. 139/99, 76/13),
- Physical Planning Programme for the Republic of Croatia (OG no. 50/99, 84/13),
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2013-2015,
- Strategic Plan of the Ministry of Maritime Affairs, Transport and Infrastructure 2014-2016,
- Strategic Plan of the Ministry of Economy 2013-2015.

The Croatian Bureau of Statistics performs the tasks of official statistics in Croatia, including the collection and analysis of data about transport on internal watercourses, in co-operation with the Ministry of Maritime Affairs, Transport and Infrastructure. Since 2006, quarterly and annual data on traffic in seaports have been regularly transmitted to the Statistical office of the European Communities, Eurostat. The statistical survey includes all ships under domestic and foreign flags that arrived in or departed from the seaports in the Republic of Croatia, regardless of the activity they perform.

Statistical data were collected from:

- Traffic in Seaports, 2006 – 2010 ,Croatian Bureau of Statistics, Zagreb 2011,
- Traffic in Seaports, Monthly release, Croatian Bureau of Statistics,
- The Statistical Report “Transport and communication, 2012”, Croatian Bureau of Statistics 2013.

Maritime rescue operations data are also collected systematically, on annual basis, and they are obtained from the "Maritime Rescue Coordination Centre Rijeka” and published by the Ministry of Maritime Affairs, Transport and Infrastructure on its website.

Parallel with such official data, the analysis was also based on the data obtained from port authorities, various transport and development studies of specific ports and port master plans.

5.2. Sector Description

5.2.1. Shipping

According to figures obtained from the reports of Croatian Bureau of Statistics there were 155 commercial ships operated by Croatian ship owners in 2012 and 147 ships in 2011. The number of passenger ships is gradually growing, while that of cargo ships is in decline.

Croatian shipping companies are engaged in international shipping and are organised in the Croatian Ship owners Association "Mare Nostrum". The data about ships obtained from "Mare Nostrum" Association are slightly different from the data in the reports of CBS, but are still included into this analysis as they contain the structure of vehicles.

In addition to the data about ships, also data about the number of employees in maritime transport have been collected. The number of employees is growing.

	PASSENGER SHIPS			CARGO SHIPS			
	NUMBER	PASSENGER SEATS	KW	NUMBER	GT, '000	DWT, '000	KW, '000
2008	88	34.025	225.324	68	1.586	2.740	466
2009	88	34.261	218.437	64	1.561	2.707	449
2010	85	33.568	211.065	68	1.631	2.845	458
2011	80	32.498	201.297	67	1.656	2.862	491
2012	91	32.685	200.539	64	1.612	2.791	482
Including ferry boats							

52 Table Maritime transport fleet structure; Source: CBS, The Statistical Report "Transport and communication, 2012"

NUMBER	2008	2009	2010	2011	2012
Passenger ships	46	46	45	41	49
Ferries	42	42	40	39	42

53 Table Transport equipment (passenger ships) in seawater and coastal transport, Source: CBS, The Statistical Report "Transport and communication, 2012"

SHIP'S TYPE	NUMBER OF SHIPS	GT	DWT
Bulk, cement carrier	35	1.024.880	1.784.253
General cargo	2	5.188	8.619
Heavy cargo ship	2	11.598	14.760
Crude carrier	5	370.745	728.217
Product carrier	7	211.375	361.311
Passenger	3	873	-
Fast passenger	9	3.312	-
Ro-Pax	41	101.735	0
Tug boats	21	5.128	-
Anchor handling	7	12.488	11.636
Other ships	10	5.047	9.410
Total (31.12.2013)	142	1.752.369	2.918.206

54 Table Structure of Croatia's shipping fleet in 2013, Source: Mare Nostrum Croatian Ship owners Association, www.mppi.hr

COMPANIES	SHIPS	GT	DWT	TEU	GRAIN VOLUME IN m^3	VEHICLES	PASSENGERS
Tankerska plovidba	14	579.283	1.060.869	-	307.202	-	-
Atlantska plovidba	15	488.503	872.985	914	1.039.233	-	-
Uljanik plovidba	11	332.229	575.163	-	397.923	-	-
Jadroplov	8	217.468	378.101	-	467.436	-	-
Lošinjska plovidba–brodarstvo*	0	-	-	-	-	-	-
Jadrolinija	49	103.802	-	-	-	3.404	26.420
Brodospas	22	17.746	17.868	-	-	-	110
Splitska plovidba d.d.	3	6.303	10.042	-	11.175	-	-
Jadranski pomorski servis	15	4.907	3.178	-	-	-	-
Rapska plovidba	5	2.128	0	-	-	166	1.092
Brodogradilište Cres *	0	-	-	-	-	-	-
Mediteranska plovidba *	0	-	-	-	-	-	304
Total on 31/12/2013	**142**	**1.752.369**	**2.918.206**	**914**	**2.222.969**	**3.570**	**27.622**
Total on 31/12/2012	**154**	**1.907.944**	**3.197.993**	**914**	**2.429.840**	**3.554**	**27.912**
Total on 31/12/2011	**162**	**1.942.812**	**3.252.757**	**1.575**	**2.127.090**	**3.585**	**28.176**
Total on 31/12/2010	**167**	**1.954.924**	**3.268.900**	**2.282**	**2.205.221**	**3.628**	**28.676**

**Shipping companies that owned ships until 2013*

55 Table Capacity of the Mare Nostrum Association members, Source: Mare Nostrum Croatian Ship owners Association, www.mppi.hr

	2008	2009	2010	2011	2012
Employees – total	**4.154**	**3.862**	**3.870**	**3.830**	**4.018**
In seawater and coastal transport	4.032	3.742	3.752	3.768	3.914
Sailors	3.208	2.953	2.982	2.994	3.110
Out of which on contract	1.395	1.768	1.792	1.815	1.835
Other employees in seawater and coastal transport	824	789	770	774	804
Employees in other activities	122	120	118	62	104

56 Table Employees in seawater and coastal transport, Source: CBS, The Statistical Report "Transport and communication, 2012"

5.2.2. Maritime transport

Maritime transport may be divided into passenger and cargo transport. The data have been collected from the reports of Croatian Bureau of Statistics.

Analysing the information, it can be stated that the passenger transport is constant and the cargo transport is in decline. However, the shares of the international transport are different. In the cargo transport, international transport is prevailing, while in the passenger traffic only a small share of it is international transport while the majority refers to public coastal passenger transport.

A total of 14 domestic shipping companies participate in domestic passenger and vehicle transport, with Jadrolinija (85% passengers and 87% vehicles) and Rapska plovidba (6% passengers and 12% vehicles) accounting for the largest share of passenger and vehicle transport.

	PASSENGERS			VEHICLES		
	2011	2012	2013	2011	2012	2013
Ferries	9.141.536	9.149.478	9.338.359	2.796.999	2.764.073	2.785.395
High speed vessels	1.121.831	1.070.024	1.050.712	N/A		
Passenger ship	865.778	937.507	961.040			
Total	***11.129.145***	***11.157.009***	***11.350.111***	***2.796.999***	***2.764.073***	***2.785.395***

57 Table Passenger and vehicle traffic in the public maritime transport, Source: Coastal Liner Services Agency /www.agencija-zolpp.hr

Shipping companies operating between Croatian and Italian ports, whose timetables are approved by the Coastal Liner Services Agency, transported 507,078 passengers and 68,364 vehicles in 2013. The national shipping company *Jadrolinija*, on lines Split-Ancona, Zadar-Ancona and Dubrovnik-Bari, and the *Panama Company Blue Line International* on the line Split-Ancona accounted for the highest share of traffic. Companies operating on lines from Venice and Trieste to ports in Istria and on the North Adriatic included Atlas, Kompas, Venezia Lines, Comodore Travel and Trieste Lines transporting a total of 116,943 passengers in 2013.

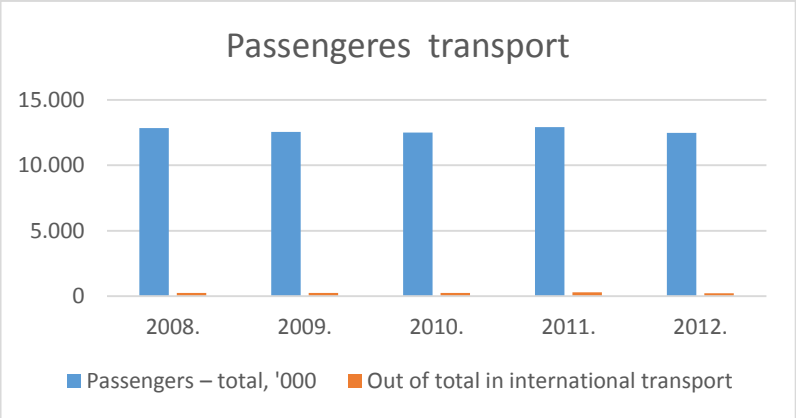
Liner shipping company	Passengers	Vehicles
Atlas	15.023	-
Blue Line International Panama	138.437	22.675
Commodore Travel d.o.o., Pula	13.476	-
Jadrolinija Rijeka	189.910	32.638
Kompas	6.181	-
SNAV SpA , Napoli	61.788	13.051
Trieste Lines	4.767	-

Liner shipping company	Passengers	Vehicles
Venezia Lines Ltd. , Valletta	77.496	-
Total	**507.078**	**68.364**

58 Table Passenger and vehicle traffic on lines between Croatia and Italy, Source: Coastal Liner Services Agency /www.agencija-zolpp.hr

Year	PASSENGERS CARRIED, '000	PASSENGER-MILES, MLN	GOODS CARRIED, '000 T		TONNE-MILES, MLN	
			TOTAL	IN INTERNATIONAL TRANSPORT	TOTAL	IN INTERNATIONAL TRANSPORT
2008	12.861	265	30.768	29.592	77.199	77.065
2009	12.550	263	31.371	30.578	74.160	74.044
2010	12.506	266	31.948	31.151	87.878	87.765
2011	12.926	315	30.348	29.571	83.929	83.812
2012	12.474	325	25.636	24.860	67.861	67.741

59 Table Seawater and coastal transport of passengers and goods, Source: CBS, The Statistical Report "Transport and communication, 2012"



15 Figure Seawater and coastal transport of passengers and goods, Source: CBS, The Statistical Report "Transport and communication, 2012"

	2008	2009	2010	2011	2012
Passengers – total, '000	12.861	12.550	12.506	12.926	12.474
Out of total in international transport	242	249	246	302	239
Goods – total, '000 tonnes	30.768	31.371	31.948	30.348	25.636
Out of total in international transport	29.592	30.578	31.151	29.571	24.860

60 Table Seawater and coastal transport of passengers and goods, by type of transport, Source: CBS, The Statistical Report "Transport and communication, 2012"

16 Figure Seawater and coastal transport of passengers and goods, Source: CBS, The Statistical Report "Transport and communication, 2012"

The table below provides a comparison of the cargo and passengers transported in the specific transport sector, showing the significance of maritime transport, particularly in view of cargo transport.

MODE	RAILWAY TRANSPORT		ROAD TRANSPORT		PIPELINE	MARITIME TRANSPORT		INLAND WATERWAYS	AIR TRANSPORT	
YEAR	PASS	CARGO	PASS	CARGO	CARGO	CARGO	PASS	CARGO	PASS	CARGO
2000	34.937	10.059	66.556	4.873	6.775	32.483	8.009	1.045	1.072	6
2001	36.964	10.807	67.533	40.801	7.969	32.051	9.009	1.123	1.245	6
2002	36.239	10.654	65.582	45.957	8.839	30.674	9.721	739	1.356	6
2003	35.980	11.723	65.413	52.147	9.070	34.223	10.429	1.115	1.582	6
2004	36.747	12.234	64.768	55.323	9.879	31.226	10.908	1.532	1.743	5
2005	39.842	14.333	64.859	58.886	9.396	29.975	11.440	1.446	2.099	6
2006	46.212	15.395	63.576	63.840	8.644	31.423	12.079	1.509	2.148	6
2007	63.131	15.764	63.144	66.814	9.688	32.420	12.723	1.468	2.288	6
2008	70.961	14.851	62.064	110.812	8.765	30.768	12.861	880	2.329	5
2009	73.545	11.651	58.493	92.847	9.201	31.371	12.550	533	2.053	4
2010	69.564	12.203	56 419	74.967	8.936	31.948	12.506	515	1.861	3

61 Table Transport statistics 2006-2010 in thousands passengers and thousands tonnes, Source: MMATI

5.2.3. Traffic and ports facilities

Six major ports (Rijeka, Zadar, Šibenik, Split, Ploče and Dubrovnik) are located along the mainland coast and all are declared ports of special (international) economic interests for the Republic of Croatia. In accordance with the Maritime Domain and Seaports Act (OG no. 158/2003, 100/2004, 141/2006 and 38/2009), for the management and construction of ports in the Republic of Croatia port authorities are

established. Ports are categorised depending on type of traffic (passenger, freight or both). Capacities depend on technical characteristics of the port. All Croatian ports of international economic interest can receive large ocean-going ships.

PORT AUTHORITY	TOTAL						OF WHICH TRANSIT	
	GENERAL CARGO	BULK CARGO	CONTAINERS	LIQUID	TOTAL CARGO	CONTAINER (TEU)	TOTAL TRANSIT (T)	TOTAL TRANSIT (TEU)
2010								
Rijeka	1.210.229.00	2.000.384.00	1.349.264.00	5.623.427.00	10.183.304.00	137.048.00	7.332.770.00	4.114.00
Zadar	18.126.00	224.596.00	0.00	364.432.00	607.154.00	0.00	0.00	0.00
Šibenik	21.359.00	614.537.00	0.00	0.00	635.896.00	0.00	0.00	0.00
Split	913.268.00	1.734.597.00	48.028.00	383.808.00	3.079.701.00	5.940.00	0.00	0.00
Ploče	205.745.00	3.724.423.00	197.429.00	402.229.00	4.529.826.00	21.457.00	4.038.579.00	20.384.00
Dubrovnik	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**2.368.727.00**	**8.298.537.00**	**1.594.721.00**	**6.773.896.00**	**19.035.881.00**	**164.445.00**	**11.371.349.00**	**24.498.00**
2011								
Rijeka	1.054.004.00	2.023.996.00	1.424.631.00	4.887.749.00	9.390.380.00	150.677.00	5.000.181.00	64.148.00
Zadar	22.049	78.739	-	229.448	330.236	-	-	-
Šibenik	25.635.00	566.335.00	0.00	0.00	591.970.00	0.00	0.00	0.00
Split	951.429.00	1.189.890.00	49.205.00	358.437.00	2.548.961.00	7.551.00	-	-
Ploče	198.204	3.566.996	230.154	435.439	4.430.973	22.359	4.244.199	22.359
Dubrovnik	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**2.251.321.00**	**7.425.956.00**	**1.703.990.00**	**5.911.073.00**	**17.292.520.00**	**180.587.00**	**9.244.380.00**	**86.507.00**
2012								
Rijeka	1.244.538.00	1.902.506.00	1.364.186.00	4.042.771.00	8.554.001.00	171.945.00	5.250.199.00	76.564.00
Zadar	19.600.60	44.032.80	0	188.950.00	252.583.40	0	0	0
Šibenik	2.000.00	408.000.00	0	0	410.000.00	0	0	0
Split	883.152.00	1.492.254.00	57.144.00	392.642.00	2.825.192.00	6.045.00	0	0
Ploče	264.101.00	1.624.600.00	224.154.00	469.254.00	2.582.109.00	21.745.00	0	0
Dubrovnik	0	0	0	0	0	0	0	0
Total	**2.413.391.60**	**5.471.392.80**	**1.645.484.00**	**5.093.617.00**	**14.623.885.40**	**199.735.00**	**5.250.199.00**	**76.564.00**

62 Table Freight transport in Croatian national ports, Source: MMATI, www.mppi.hr

PORT AUTHORITY	EMBARKING		DISEMBARKING		CRUISE	TOTAL
	DOMESTIC	FOREIGN	DOMESTIC	FOREIGN		
2010						
Rijeka	94.059.00	-	92.200.00	-	502.00	186.761.00
Zadar	1.181.027.00	28.362.00	1.181.027.00	28.362.00	17.157.00	2.435.934.00
Šibenik	146.801.00	0.00	146.700.00	0.00	11.624.00	315.125.00
Split	1.637.488.00	134.388.00	2.001.375.00	164.252.00	172.376.00	4.109.879.00
Ploče	88.400.00	0.00	75.700.00	0.00	3.522.00	167.622.00
Dubrovnik	190.030.00	48.571.00	195.763.00	48.945.00	637.521.00	1.120.830.00
Total	**3.337.805.00**	**211.321.00**	**3.692.765.00**	**241.559.00**	**842.702.00**	**8.336.151.00**

PORT AUTHORITY	EMBARKING		DISEMBARKING		CRUISE	TOTAL
	DOMESTIC	FOREIGN	DOMESTIC	FOREIGN		
2011						
Rijeka	81,583.00	0.00	89,813.00	0.00	0.00	171,396.00
Zadar	1.177.099	30.592	1.172.476	30.520	28.677	2.439.364
Šibenik	143.288	-	143.264	-	12.860.00	312.272
Split	1.725.624.00	153.699.00	1.869.425.00	154.894.00	181.963.00	4.085.531.00
Ploče	14.720	71.120	16.736	83.202	2.907	188.685
Dubrovnik	200.000.00	58.000.00	214.970.00	65.029.00	705.292.00	1.243.291.00
Total	**3.342.314.00**	**313.411.00**	**3.506.684.00**	**333.645.00**	**931.699.00**	**8.440.539.00**
2012						
Rijeka	85.067.00	0	82.365.00	0	1.758.00	169.190.00
Zadar	1.163.365	23.740	1.158.471	23.694	20.958	2.390.228
Šibenik	140.910.00	0	140.943.00	0	15.355.00	297.208.00
Split	1.677.993.00	140.372.00	2.050.879.00	138.440.00	245.451.00	4.253.135.00
Ploče	467	0	0	0	0	0
Dubrovnik	180.000.00	54.143.00	203.637.00	53.272.00	743.087.00	1.234.139.00
Total	**3.247.802.00**	**194.515.00**	**3.636.295.00**	**191.712.00**	**1.026.609.00**	**8.343.900.00**

63 Table Passenger traffic in Croatian national ports, Source: MMATI, www.mppi.hr

PORT	TERMINAL	CAPACITY (YEAR)	AREA (H)	BERT H	DEPTH (M)	LENGTH (M)	THROUGHPUT (2011)
Rijeka	Container*/RoRo	170.000 TEU	14	2	11.7	164-300	137.000 TEU
	General cargo	3 million tons	10	10	6-9	150-300	2.23 million tons
	Grain	1 million tons	1	1	10	300	0.25 million tons
	Bulk	4 million tons	5	1	18	400	2.02 million tons
	Oil	24 million tons	2	2	29	400	4.9 million tons
	Passenger	10,000 Pax/day	-	11	5-7	56-400	178.956 pax; 5,112 vehicles
Zadar	Handling shores	N/P	N/P	6 piers	4.8-12	850-900	Bulk:78.739 tons; GC:22.049 tons
	Ferry	N/P	N/P	1	10	980	2.4 mil Pax; 0.3 mil vehicle
	Oil	N/P	-	1	10.3-12	60-90	229,448 tons
Split	Multipurpose/container	1 million tons	16.5	5	7-11	800	389.472 tons(of which 49.205 tons/7.551 TEU containers)
	Oil	800.000 tons	10.5	3	7-14	243	344.153 tons
	Ferry	-	-	28	4-7,8	63-175	4.08 mil pax; 0.6 mil vehicles.
	Grain	800.000 tons	6.06	1	8-10.5	210	336.766 tons
	Cement	1.500.000 tons	2.93	4	5-9.5	655	615.964 ions
Ploče	Container	60.000 TEU	4	1	13.8	280	22.300 TEU
	Oil	113,000 m^3	24	1	11.1	50 m (jetty)	435,000 tons
	Ferry	-	1	1	-	140	185,778 Pax; 68,239

PORT	TERMINAL	CAPACITY (YEAR)	AREA (H)	BERT H	DEPTH (M)	LENGTH (M)	THROUGHPUT (2011)
							vehicles
	Multipurpose	5	45	11	14.5	1,243	4 million tons
Šibenik	Cargo import	1.8 million tons	1	1	10	228	236.300 tons
	Cargo export	600.000 ions		1	10	250	355.700 ions
	General cargo	300.000 tons	4	1	10	200	35.700 tons
	Timber	120.000 m^3	6	2	7	330	20.000 m^3
Dubrovnik	Ferry	-	2.4	3	2-6.5	425	538.062 Pax; 20.054 vehicles
	Cruise	N/A	6.7	4	8 - 11	1037	705.292 Pax

*In the meantime, a 2nd phase of container terminal was built in the Rijeka Port and its current capacity is 250,000 TEU.

64 Table Existing facilities in major ports, excluding development projects, Source: Port authorities

5.2.4. Nautical shipping and nautical ports

According to data from CBS, there are 14,431 vessels at permanent berths in nautical tourism ports in Croatia, of which 12,661 (87.7%) of vessels in sea berths and 1,770 (12.3%) in dry berths. Motor yachts (46.7%) and sailing yachts (47.9%) were the main types of vessels using permanent sea berths.

	2008	2009	2010	2011	2012
Under 6 m	574	569	614	563	178
6 - 8 m	1.453	1.323	1.323	1.120	933
8 - 10 m	2.937	2.791	2.642	2.395	2.459
10 - 12 m	3.738	3.776	3.544	3.582	3.754
12 - 15 m	2.998	3.158	3.228	3.169	3.478
15 - 20 m	908	980	1.011	1.071	1.135
Over 20 m	200	281	299	308	365
TOTAL	**12.808**	**12.878**	**12.661**	**12.208**	**12.302**

65 Table Number and size of permanently moored nautical ships 2008 – 2012, Source: CBS, Nautical tourism, Capacity and Turnover of Ports

	2008	2009	2010	2011	2012
Under 6 m	5.663	5.154	5.189	4.831	3.696
6 - 8 m	18.553	16.049	15.731	15.404	12.874
8 - 10 m	36.986	34.884	32.506	30.429	28.358
10 - 12 m	68.393	66.760	68.029	58.889	56.066
12 - 15 m	64.001	58.050	59.744	57.535	58.449
15 - 20 m	13.753	13.389	14.367	11.759	12.957
Over 20 m	3.530	3.529	3.422	3.590	3.630
TOTAL	**210.879**	**197.815**	**198.988**	**182.437**	**176.030**

66 Table Number and size of transit nautical ships 2008 – 2012, Source: CBS, Nautical tourism, Capacity and Turnover of Ports

	2008	2009	2010	2011	2012
Nautical ports	**97**	**98**	**98**	**98**	**98**
of which, marinas	58	58	60	61	62
Moorings	**16.403**	**16.848**	**16.913**	**17.059**	**29.954**
of which for vessels lengths under 6 m	1.054	1.184	1.239	1.074	913
of which for vessels lengths 6 - 8 m	2.128	2.136	2.097	1.470	1.3885
of which for vessels lengths 8 - 10 m	3.602	3.578	3.542	2.905	2.932
of which for vessels lengths 10 - 15 m	7.591	7.827	7.842	8.714	9.239
of which for vessels lengths over 15 m	2.028	2.122	2.193	2.896	2.985

67 Table Number and size of nautical ports 2008 – 2012, Source: CBS, Nautical tourism, Capacity and Turnover of Ports

5.2.5. Cruises of foreign vessels

According to Croatian Bureau of Statistics the number of cruises in 2013 has increased by 3.0% and the number of passengers entering the Republic of Croatia has increased by 7.0%. The total number of passengers' sojourns in Croatia was by 10.5% higher.

The structure of foreign vessels on cruise shows that the majority of foreign vessels on cruise recorded their first entry into the internal seawaters of the Republic of Croatia in the Dubrovačko-neretvanska County (71.2%) and the Splitsko-dalmatinska County (17.9%), which makes the total of 89.1%. The rest of 10.9% of foreign vessels on cruise recorded their first entry into the internal seawaters of the Republic of Croatia in the remaining four counties: Šibensko-kninska (3.7%), Istarska (3.2%), Zadarska (2.8%) and Primorsko-goranska (1.2%).

	I – XI 2009.	I – XI 2010.	I – XI 2011.	I – XI 2012.	I – XI 2013.
Cruises	761	846	821	793	817
Sojourns	1.640	1.1573	1.634	1.439	1.590
Passengers on board	1.017.336	1.088.576	1.133.237	1.154.323	1.234.910

68 Table :Foreign vessels on cruise in the Republic of Croatia, Source: CBS, Foreign vessels on cruise in the Republic of Croatia, releases 2009-2013

5.2.6. Safety

Maritime Rescue Coordination Centre Rijeka (MRCC) jointly with 8 Maritime Rescue Service Centres (MRSC) Pula, Rijeka, Senj, Zadar, Šibenik, Split, Ploče and Dubrovnik, conducts rescue actions in compliance with the International Convention on Maritime Search and Rescue – SAR.

According to the available data, the number of injured and dead at the sea is in decline.

	2010	2011	2012
Stranded ships	43	59	51
Incapable of navigation (engine defect, helm defect, lack of fuel etc.)	105	85	78
Medical transportation, interventions, advices	45	50	59
Divers (scuba)	7	11	5
Divers (free)	9	7	13
Sinking	20	15	10
Man in sea	14	15	12
Collision	9	15	12
Impact	x	4	2
Alluvial	8	13	14
Late arrival at destination	24	15	27
Other (alert rockets, assistances…)	66	19	44
Fire	8	9	7
Swimmers	15	15	20
Surfers	x	15	11
Rescued persons	944	876	825
Deaths	24	20	17
Missing persons	3	3	4
Injured persons	59	52	42
Rescued vessels ship / boat / other	179	21 /183/ 22	12/143/12

69 Table Statistical data about SAR actions, Source: MMATI

6. URBAN, SUBURBAN AND REGIONAL SECTOR

6.1. Data Analysis

Legal provisions relevant to urban, suburban and regional mobility - Jurisdiction of the Ministry of Maritime Affairs, Transport and Infrastructure:

- Roads Act (OG no. 84 /11, 22/13, 54/13, 148/13.92/14),
- Road Transport Act (OG no. 82/13),
- Ordinance on licenses for conducting of passenger transport (OG no. 118/05, 120/10 and 112/11),
- Ordinance on bus stops (OG no. 119/07),
- Ordinance on the technical requirements for vehicles in road traffic (OG no. 51/10, 84/10, 145/11, 140/13 and 158/13),
- Ordinance on the technical inspection of buildings (OG no. 108/04),
- General technical requirements for works on roads I- VI (Croatian Roads - Croatian motorway, OG),
- Ordinance on traffic signs and road signalisation (OG no. 33/05, 155/05),
- Railway Act (OG no. 94/13 and 148/13),
- Railway Safety and Interoperability Act (OG no., 82/13),
- Agency for railways services regulation Act (OG no. 79/07, 75/09 and 61/11),
- Act on transport contracts in railway traffic (OG no. 87/96),
- Act on benefits in domestic passenger traffic (OG no. 97/ 00 and 101/00),
- Act on funiculars for passenger transport (OG no. 75/90, 79/07, 75/09, 61/11 and 22/14),
- Ordinance on the development and publication of the timetable in rail transport (OG no. 128/09, 56/12),
- The decision on the classification of railway tracks (OG no. 03/14),
- Air Traffic act (OG no. 69/09, 84/11, 54/13 and 127/13,92/14),
- Airports Act (OG no 19/98 and 14/11),
- Act on Liner Shipping and Seasonal Coastal Maritime Transport (OG no. 33/06, 39/09, 87/09, 18/11, 80/13),
- Regulation on conditions and evaluation criteria for granting concessions for public transport in coastal shipping (OG no. 131/14),
- Ordinance on the conditions to be met by the ship and the ship operator for conducting public transport in coastal shipping (OG no. 130/06, 41/08, 143/10, 26/14),

Responsibility of other ministries:

- Act on Local and Regional government (OG no 33 /01, 60/01, 129/05, 109/07, 125/08, 36/09, 36/09, 150/11, 144/12 and 19/13),
- Utility Services Act (OG no. 236/95, 70/97, 128/99, 57/00, 129/00, 59/01, 26/03, 82/04, 110/04, 178/04, 38/09, 79/09, 153/09, 49/11, 84/11, 90/11, 144/12, 94/13, 153/13),
- Islands Act (OG no. 34/ 99, 149/99, 32/02 and 33/06),
- Regional Development Strategy, 2011-2013, June 2010,
- Spatial Planning Strategy of the Republic of Croatia adopted by Croatian Parliament on 27 June 1997
- Decision on Amendments to the Physical Planning Strategy of the Republic of Croatia (OG no. 75/13)
- Physical Planning Programme for the Republic of Croatia (OG no. 50/99, 84/13),
- Regional Development Act (OG no. 153/09),
- Ordinance on the establishment and maintenance of central electronic database of development projects (OG no 66/ 10),
- Road Traffic Safety Act (OG no. 67/08, 48/10, 74/11, 80/13, 158/13, 92/14),
- Environmental Protection Act (OG no. 80/13, 153/13),
- Air Protection Act (OG no. 130/11, 47/14),
- Noise Protection Act (OG no. 30/09, 55/13, 153/13),
- Nature Protection Act (OG no. 70/05),
- Spatial Planning Act (OG no. 153/13),
- Construction Act (OG no. 153/13).

6.2. Sector Description

The main cities in the country with urban transport solutions are Zagreb, Osijek, Split and Rijeka.

Lack of data in public transport sector is one of the main difficulties when addressing solutions in this sector. There are no based mobility surveys in Croatia. Pro-rail alliance as non-profit association undertook a series of surveys in the field of public transport. These also included trial (test) mobility questionnaires in the area of the town of Lepoglava and the Municipality of Bednja. Association Pro-rail alliance also took part in the survey undertaken as the part of the USEmobility EU project with the aim of determining the real factors that would make people decide to switch from private cars to public transport services. The project included specific surveys in two Croatian regions, Varaždin and Čakovec, as well as the area of Zagreb. However, mobility surveys are not undertaken for the whole country.

In the following paragraphs, a description of the PT system in relevant cities of Croatia is provided.

ZAGREB

Urban transport is affected by the fact that Zagreb is the only TEN-T core node of urban transport in Croatia. Motorway national and international routes with origin at the Zagreb bypass are A1 Zagreb - Split, A2 Zagreb – Macelj, A3 Bregana - Zagreb – Lipovac, A4 Zagreb – Goričan, A6 Rijeka – Zagreb and A11 Zagreb – Sisak (under construction).

Some identified issues to be addressed are:

- Insufficient and incomplete permeable road network of the city, including the lack of connection between Zagreb International Airport and the city itself,
- Insufficient and outdated rail infrastructure, which leads rail mode to a low share in the suburban rail - city traffic,
- Lack of an integrated public transport system,
- Under - developed bicycle traffic and
- Relatively high degree of motorization, an insufficient number of parking spaces and unsatisfactory safety.

According to the survey campaign carried out in 1998 among households for the purpose of the traffic study of Zagreb (Zagreb Transport Study, MVA, Zagreb, 1999), the modal split was as follows:

CARS AND MOTORCYCLES	35,7%
TAXIS	0,5%
TRAM	23,4%
BUS	11,5%
FOOT	19,4%
RAILWAY	6,5%
BIKE	3%

70 Table Modal Split in Zagreb, Source: Zagreb Transport study (1999)

The population of the City of Zagreb, according to 2011 census is:

City quarters		Total population – Census 2011
GRAD ZAGREB - total		**790.017**
I.	Donji Grad	37.024
II.	Gornji grad - Medveščak	30.962
III.	Trnje	42.282
IV.	Maksimir	48.902
V.	Pešćenica - Žitnjak	56.487
VI.	Novi Zagreb - istok	59.055
VII.	Novi Zagreb - zapad	58.103
VIII.	Trešnjevka - sjever	55.425
IX.	Trešnjevka - jug	66.674
X.	Črnomerec	38.546
XI.	Gornja Dubrava	61.841
XII.	Donja Dubrava	36.363
XIII.	Stenjevec	51.390
XIV.	Podsused - Vrapče	45.759
XV.	Podsljeme	19.165
XVI.	Sesvete	70.009
XVII.	Brezovica	12.030

Table 70 Population census 2011, CBS

Tables below represent certain economic figures related to transport:

Gross domestic product (GDP)				
GDP current prices	2007	2008	2009	2010
millions HRK	96.658	105.620	103.331	107.000
millions €	13.176	14.622	14.079	14.781
millions USD	18.013	21.405	19.569	19.582
GDP per inhabitant				
millions HRK	122.995	134.020	130.749	135.853
millions €	16.766	18.544	17.814	18.645
millions USD	22.921	27.160	24.761	24.700

Active population of the City of Zagreb			
	2009	2010	2011
active inhabitants - total	452.776	446.191	438.733
employees total	424.263	408.864	397.365
employees in legal entities	378.938	367.764	359.430
employed in trades and free lances	44.635	40.479	37.348
farmers	690	621	587
unemployed	28.513	37.327	41.368
The registered unemployment rate	6,3	8,4	9,4

Table 71 Economic figures related to transport, City of Zagreb

- The area of the territory of the City of Zagreb is 641,35 km^2.
- Population density for the entire territory of the City of Zagreb is 1. 232 inhabitants/km^2.
- Total number of registered motor vehicles in the City of Zagreb was 395.391, of which 324.538 were personal vehicles (31.12.2011).
- The motorisation rate in 2011 shows that there were 411 cars per 1.000 inhabitants.

Total population	790.017
Urban Transport	
- Tram, Passengers carried (in thousands) in 286TMK +7 OTP the tram line total length of 133,705 m	166.772
- Bus, Passengers (in thousands) in 429 buses the total length of bus routes of 994 miles per the City of Zagreb	76.713
- Urban, suburban railway, Passengers (in thousands in 2009)	55.000
- Funicular	558
Number of taxi vehicles	1.037
The number of registered motor vehicles	395.391
- Passenger cars	324.538

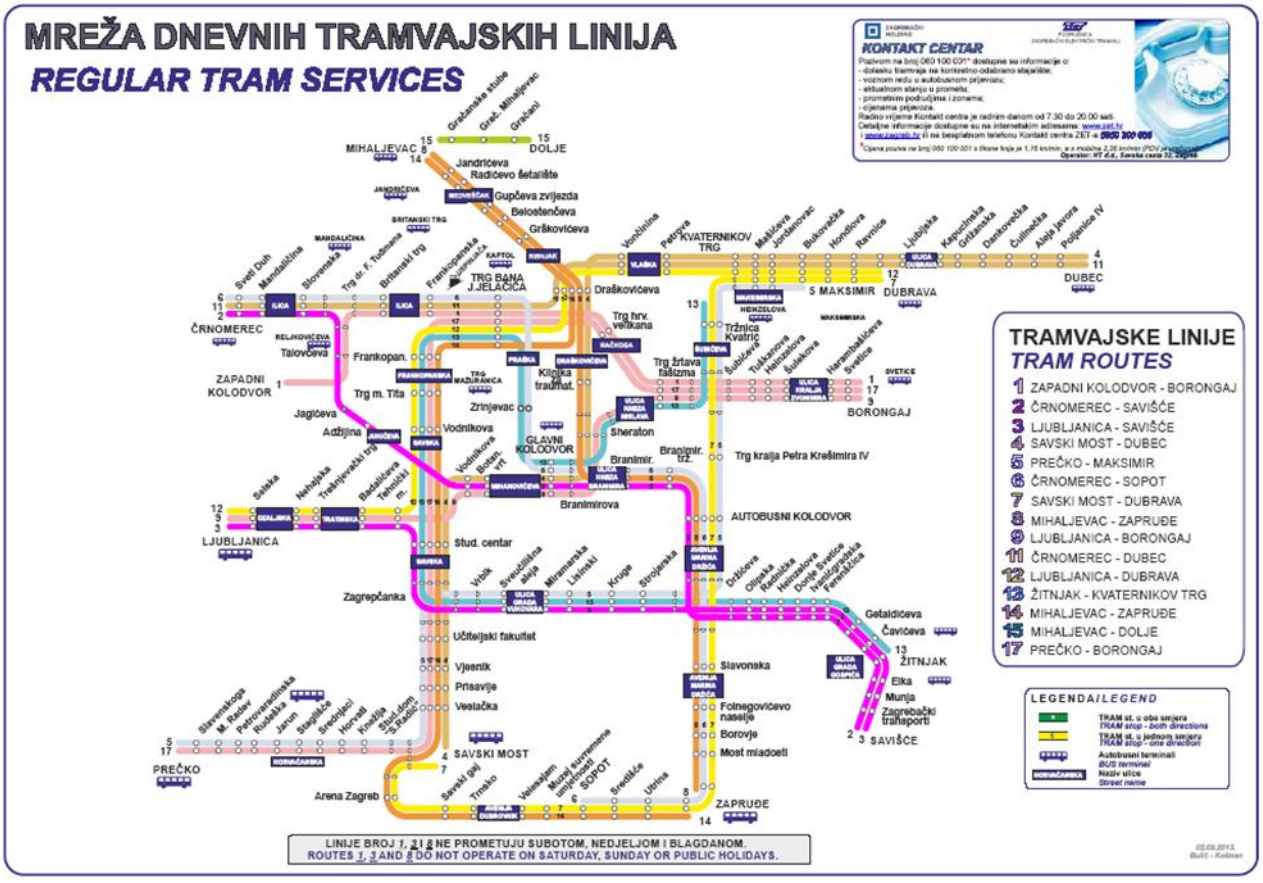
- Trucks and commercial vehicles	35.863
- Motorcycles	9.917
Air Traffic - dispatched and arrived passengers	2.319.098

71 Table Railways Passenger Transport Ltd. 2009 Zagreb Holding - ZET 2013, Source: Statistical Yearbook of the City of Zagreb in 2012

Transit System

Zagreb Municipal Transit System or ZET (Zagrebački Električni Tramvaj) is a branch of the Zagreb Holding for passenger transportation in the city of Zagreb and one part of the Zagrebačka County. It operates buses, trams and cable cars and it is exclusively owned by the city of Zagreb, obtaining financial resources through its budget.

It was founded in 1891 as the "Društvo konjski tramvaj" (Horse Tram Association), which was the forerunner of the joint stock company established in 1892 - "Zagrebački tramvaj" (Zagreb Tram), "Zagrebački Električni tramvaj" (Zagreb Electric Tram) established in 1909 and "Zagrebački Električni Tramvaj (Zagreb Electric Tram) Ltd." Since the 1 of July 2006 ZET is a branch of the Zagreb Holding.



17 Figure Zagreb Tram lines, Source: ZET, www.zet.hr

Trams

ZET continues to follow the city development and connects many newly built districts, and together with the City District Councils adapts the routes and stations to address the needs of citizens.

Regarding rolling stock, 142 new, modern, low-floor trams have been purchased in the last years, and also 214 additional low-floor buses were added to the fleet (2008 and 2009). Following the environmental standards, in 2007 ZET started to use biodiesel in public transportation vehicles and from 2008, compressed gas is also used.

The radio connection system has been modernized and traffic monitoring and control have also been computerized by introducing vehicle location systems.

Bus system

ZET's bus transport is used in Zagreb, Velika Gorica and Zaprešić, and the districts Bistra, Luka, Klinča Sela and Jakovlje. ZET runs 132 day lines and 4 night lines. Pursuant to data from 2008, ZET's buses transport about 94,000.000 passengers every year.

The rolling stock consists of MAN, Mercedes Benz and Iveco - Irisbus buses placed in depots Podsused, Dubrava and Velika Gorica. New vehicles are mostly low-floor ones, which enables the usage of public transport for all types of users. The city government decided that ZET is to take over transportation of school children which was put into practice on the 3rd of September 2007. For this purpose ZET acquired 23 new MAN school buses and 2 minibuses, completely equipped for transportation of school children.

According to development plans, buses are going to use strictly biofuels in the next couple of years, which is Zagreb transit system's contribution to pollution reduction, and elimination of harmful substances produced by fossil fuels.

Funicular

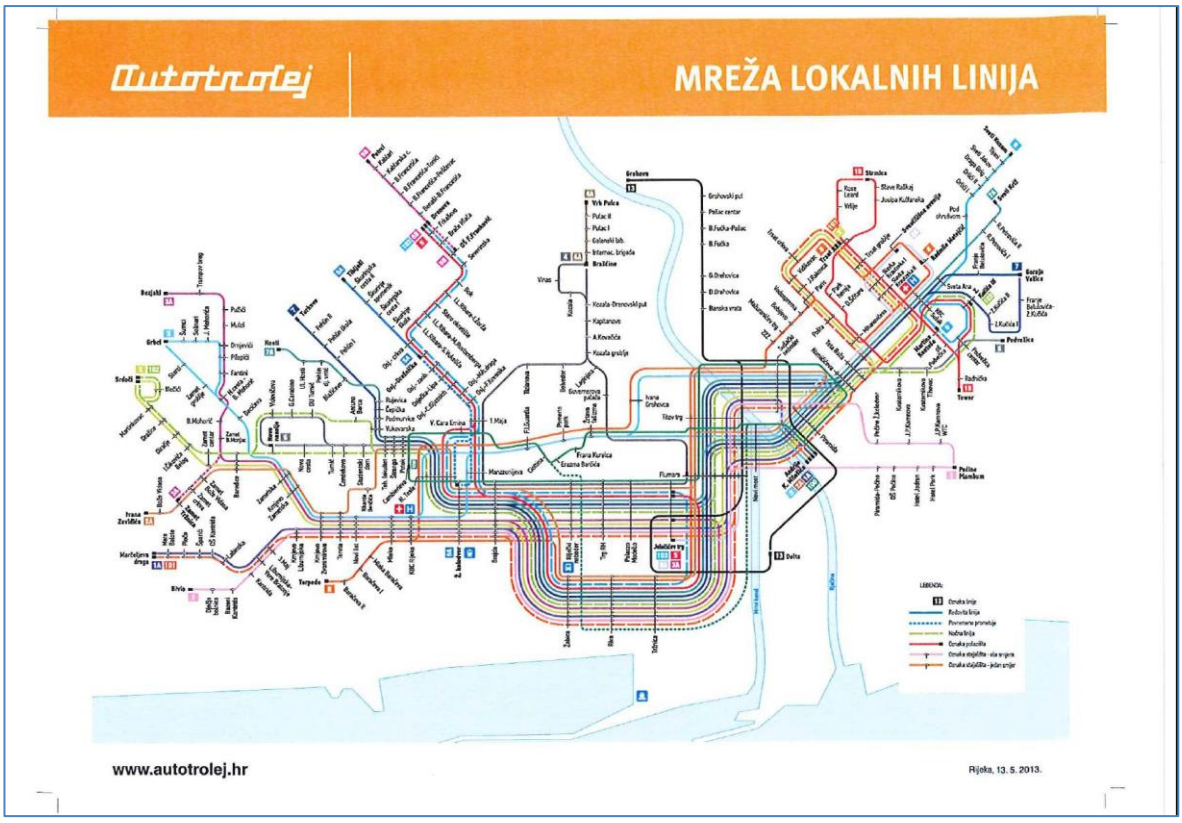
Funicular for Upper City (Gornji Grad) is the oldest transportation system in Zagreb. Although its participation in public transport is minor, its dimensions (two cars) and spatiality make it a significant transportation vehicle. It passes 4.000 kilometres a year and carries around 750.000 passengers.

RIJEKA

The railway network in Rijeka will be affected by the development of the Port of Rijeka. This will be affecting not only freight lines but also passenger's local, regional and long distance connectivity. Regarding bus transport, the municipal company KD Autotrolej d.o.o. Rijeka is in charge of public transportation in the territory of Rijeka, and towns Bakar, Kastav, Kraljevica and Opatija as well as in municipalities Čavle, Jelenje, Klana, Kostrena, Viškovo, Matulji and Lovran. Among owners and founders, the City of Rijeka has 83,4% of owner's share.

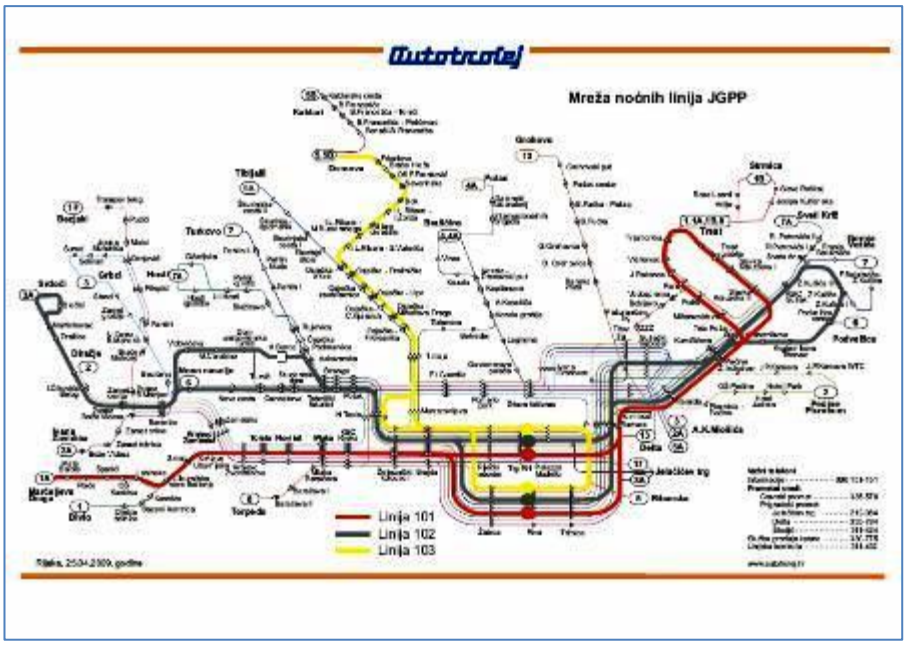
KD Autotrolej d.o.o. Rijeka operates 43 lines, with a total length of 636 kilometres, connecting 12 cities and municipalities with the City of Rijeka. KD Autotrolej d.o.o. Rijeka transports approximately 35 million passengers per year and generates over 10 million kilometres.

The following map shows the density of lines in the region.



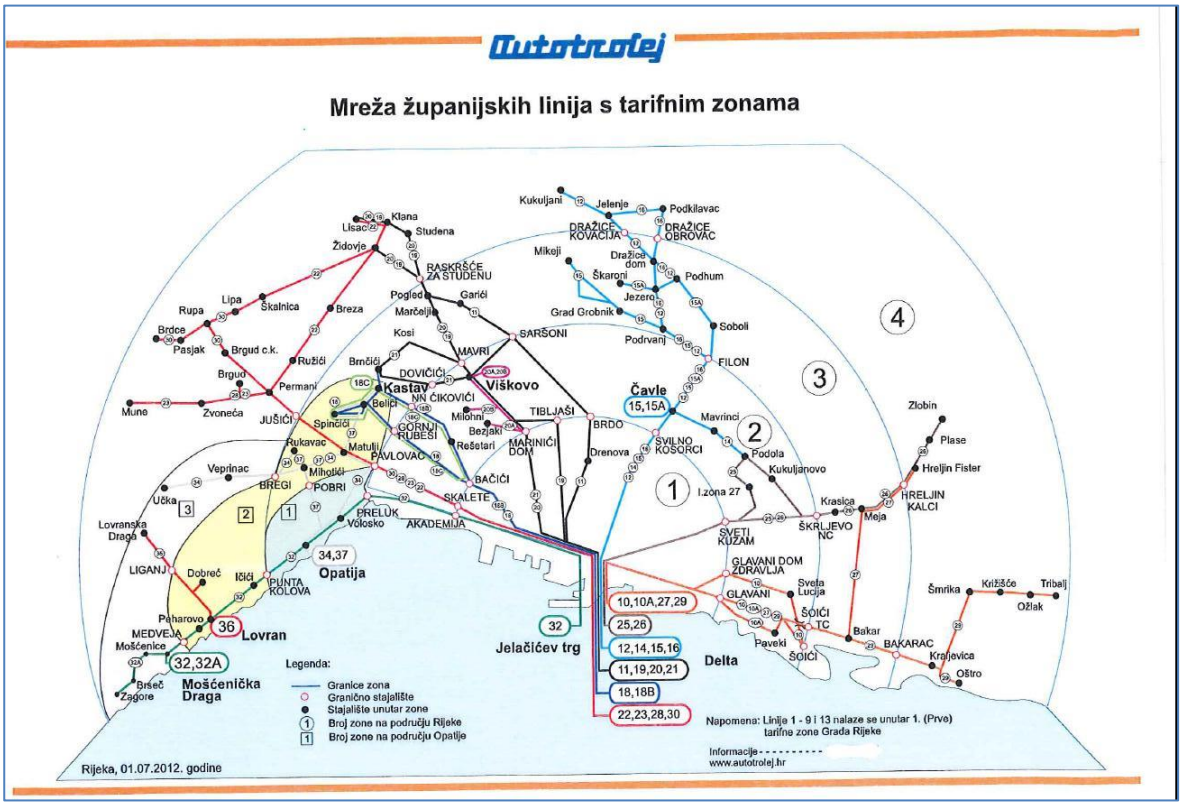
18 Figure Rijeka Urban lines, Source: KD Autotrolej d.o.o Rijeka, www.autotrolej.hr

Urban night transport is carried out on three lines. Lines include the metropolitan area, and the network is arranged according to the main areas of extension of city roads.



19 Figure Rijeka night urban lines, Source: KD Autotrolej d.o.o. Rijeka, www.autotrolej.hr

Suburban transport is based on 25 lines. County Lines follow a radial network, and extends along the main roads towards the east, north and west. All Rijeka lines gravitate around the two terminals - Delta and the Ban Jelačić Square, the lines of Opatija gravitate to Slatina terminal in Opatija.



20 Figure Rijeka suburban lines, Source: KD Autotrolej d.o.o Rijeka, www.autotrolej.hr

SPLIT

The basic data about the population of Split and its geographical distribution can be seen in the following table:

		MUNICIPALITY	POPULATION (CENSUS 1991)	POPULATION (CENSUS 2011)	AREA km²	DENSITY PO/km²2001
1		2	3	4	8	9
I.		***SPLIT***	***207.147***	***193.129***	***149***	***1.353,67***
	1.	SPLIT	200.459	178.102	-	-
	2.	PODSTRANA	5.240	9.129	-	-
	3.	ŠOLTA	1.448	5.898	-	-
II.		***SOLIN***	***27.402***	***36.078***	***472***	***65,43***
	4.	SOLIN	15.410	23.926	-	-
	5.	KLIS	4.241	4.801	-	-
	6.	DUGOPOLJE	3.075	3.469	-	-
	7.	MUĆ	4.676	3.882	-	-
III.		***KAŠTELA***	***32.286***	***40.693***	***250***	***144,96***
	8.	KAŠTELA	29.168	38.667	-	-
	9.	LEĆEVICA	1.041	583	-	-
	10.	PRGOMET	1.078	673	-	-
	11.	PRIMORSKI DOLAC	999	770	-	-
IV.		***TROGIR***	***21.967***	***25.990***	***250***	***98,79***
	12.	TROGIR	11.283	13.192	-	-
	13.	OKRUG	1.640	3.349	-	-
	14.	SEGET	4.627	4.854	-	-
	15.	MARINA	4.417	4.595	-	-
V.		***OMIŠ***	***25.784***	***24.275***	***379***	***67,68***
	16.	OMIŠ	15.630	14.936	-	-
	17.	ŠESTANOVAC	3.318	1.958	-	-
	18.	DUGI RAT	6.544	7.092	-	-
	19.	ZADVARJE	292	289	-	-
		TOTAL	**314.586**	**320.165**	**1.500**	**212,78**

72 Table Split population data, Source: City of Split

City	Rate of motorization with prognosis			
	2001	2008	2015	2025
County	3.49	2.92	2.79	2.39
Split	3.14	2.66	2.55	2.36
Solin	3.20	2.70	2.60	2.40
Kaštela	3.20	2.70	2.60	2.40
Trogir	3.20	2.70	2.60	2.40
Podstrana	3.20	2.70	2.60	2.40
Dugi Rat	3.20	2.70	2.60	2.40
Omiš	3.20	2.70	2.60	2.40
Dugopolje	3.20	2.70	2.60	2.40

73 Table Split rate of motorization, Source: City of Split

PT in the municipal area of the city of Split is conducted only via utility company Promet d.o.o. Split (bus transport). Promet d.o.o. Split is owned by local governments in the area in which it provides services (5 cities/towns and 11 municipalities). The largest share of the ownership has the city of Split with 65.4% share.

Other commercial carriers in the region who perform county regular service are:

- Promet Makarska,
- Autopoduzeće Z d.o.o. Imotski,
- Autotrans Brač d.o.o. and
- Čazmatrans Hvar d.o.o.

Passengers on the lines of PROMET d.o.o. Split:

Year	Local and municipal passengers	Suburban and other passengers	Total
1993	44.745.067	1.635.623	46.380.690
1994	46.431.787	1.061.002	47.492.789
1995	41.965.558	1.654.057	43.619.615
1996	40.354.320	2.587.842	42.942.162
1997	42.716.593	2.483.092	45.199.685
1998	36.834.915	2.375.171	39.210.086
1999	49.624.899	2.356.506	51.981.405
2000	33.908.995	2.350.684	36.259.679
2001	32.954.584	2.526.418	35.481.002
2002	32.643.911	2.439.201	35.083.112
2003	31.885.017	2.045.917	33.930.934
2004	34.567.454	1.998.007	36.565.461
2005	35.223.806	1.900.367	37.124.173
2006	36.090.219	1.811.345	37.901.564
2007	36.528.676	1.728.526	38.257.202
2008	36.971.732	2.086.408	39.058.140
2009	35.390.888	2.055.568	37.446.456

74 Table Number of passengers, Source: PROMET d.o.o. Split

The present data do not include the overall effect of public road transport because it does neither include data from traffic on the islands (except Šolta - PROMET d.o.o. Split) nor information about local

transportation (within the boundaries of individual local governments) outside the area served by public transport PROMET d.o.o. Split.

Data on other transport modes should be upgraded and matched with the data of road transport, which would give a rough picture of the actual number of trips by public transport in the Splitsko-dalmatinska County.

Additionally, data of both public transport and data on actual shares between different transport modes (travel by car, taxi transportation etc.) should be included to complete the overall picture of the mobility in the region.

Taking into account some corrections and adjustments, the number of passengers can roughly reach 38 million per year.

21 Figure Suburban lines, Source: PROMET d.o.o. Split

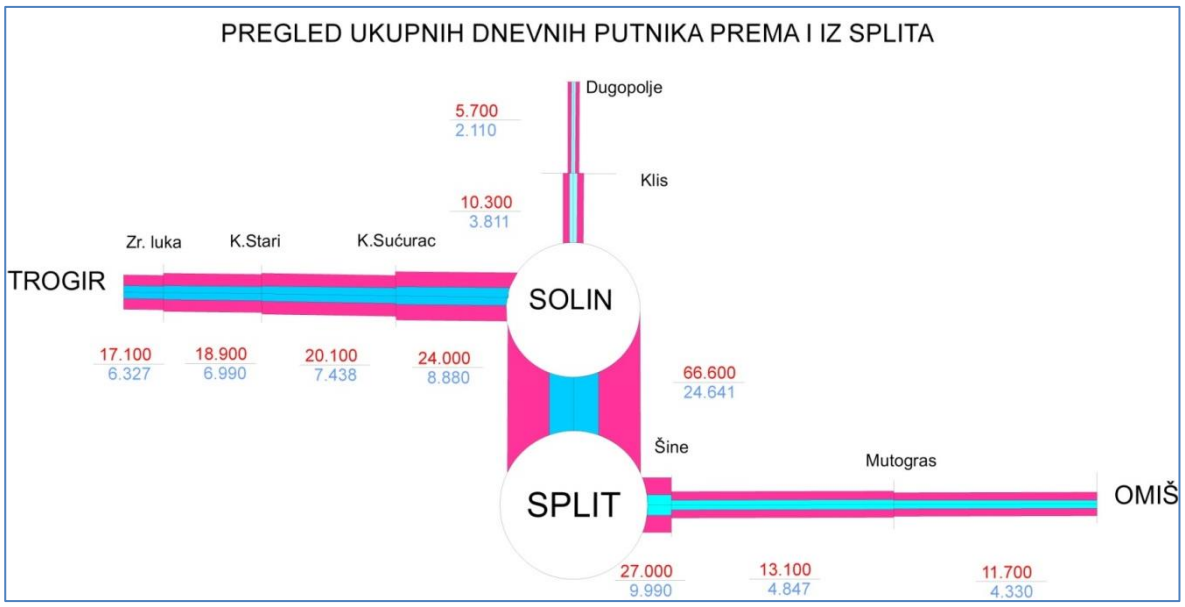
Total daily municipal public transport to and from Split implies the transportation of 34,631 passengers (exclusively Promet d.o.o. Split). This is to be added to the 1.500 daily passengers of other road carriers in both directions

This brings to a total of 36,131 passengers on local and suburban lines towards and from the City of Split.

Based on the daily travels, it has been calculated that yearly (251 on working days/52 on the average Saturdays and 62 on the average Sunday) 11.187.855 passengers are transported on lines towards and

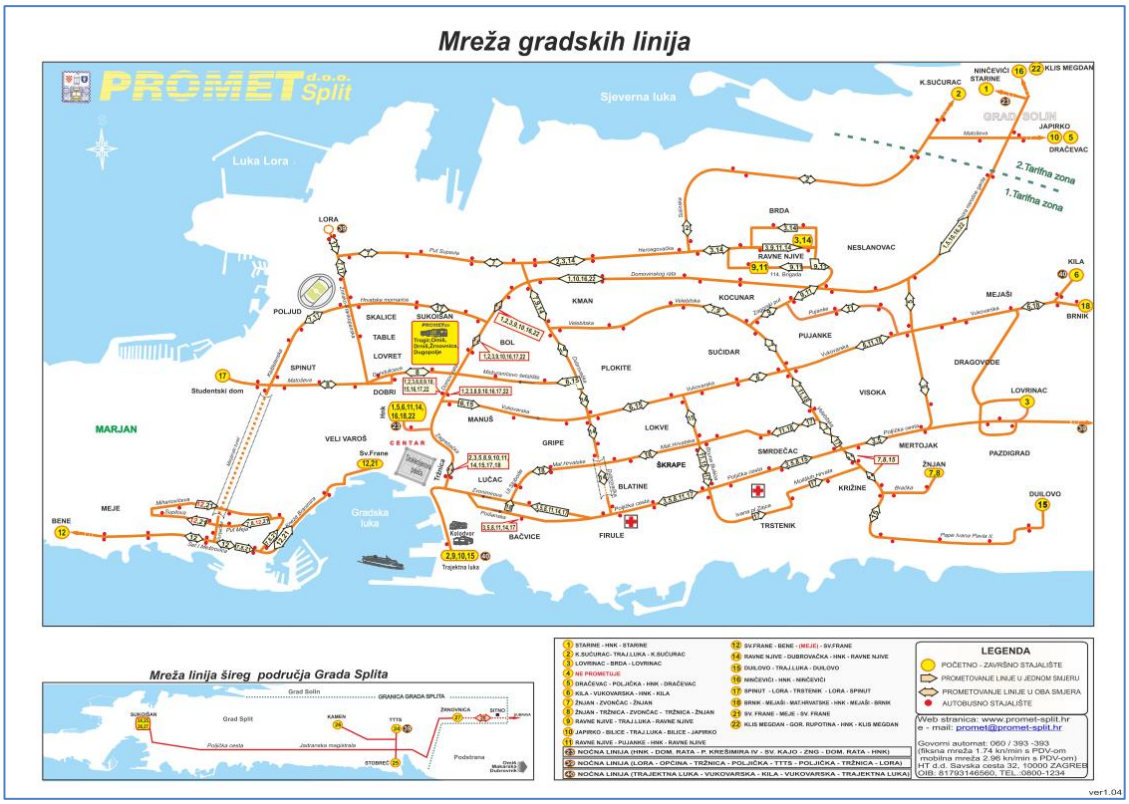
from Split Figure 22 (no. of passengers and installed capacity) which also presents the main nodes of that part of transport.

If out of the total number of passengers in the municipal transport (urban and suburban) which included 35,390,888 passengers in 2009, one detracts 11,187,855 passengers on routes to Split, it remains that in the city itself, 24,203,033 passengers are transported and within the limits of the first tariff zone, ie the border city of Split (Dujmovača and Sirobuja).



22 Figure Number of passengers (blue) / installed capacity (passenger seats) (red), Source: PROMET d.o.o. Split

23 Figure



24 Figure Urban lines, Source: PROMET d.o.o. Split

OSIJEK

Osijek is located at the area of eastern Croatia. According to the Croatian Bureau of Statistics, the total population of the Osječko-baranjska County was 304,899 people in 2011, being Osijek the fourth largest city in Croatia with a population of 108,048. Osijek is located on the right bank of the river Drava, 25 kilometres upstream of its confluence with the Danube (Osijek rkm 15-22).

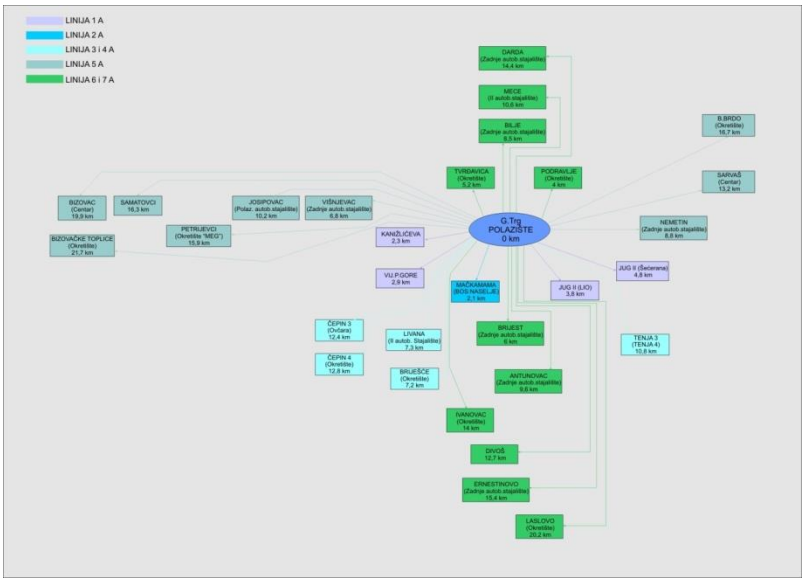
Passenger transport is organized in urban, suburban, county and inter-county traffic. The system is composed of railway, trams, buses and inland shipping. The length of public transport is around 1.070 km.

Several international, regional and local lines serve railway transport, as follows:

Code	Name	Type of line	Length (km)
M301	SB - B. Manastir - Osijek	lines for international transport	32,505
M302	Osijek - Strizivojna-Vrpolje	lines for international transport	48,377
R202	Varaždin - Dalj	lines for regional transport	249,863
L208	Vinkovci - Osijek	lines for local transport	33,77

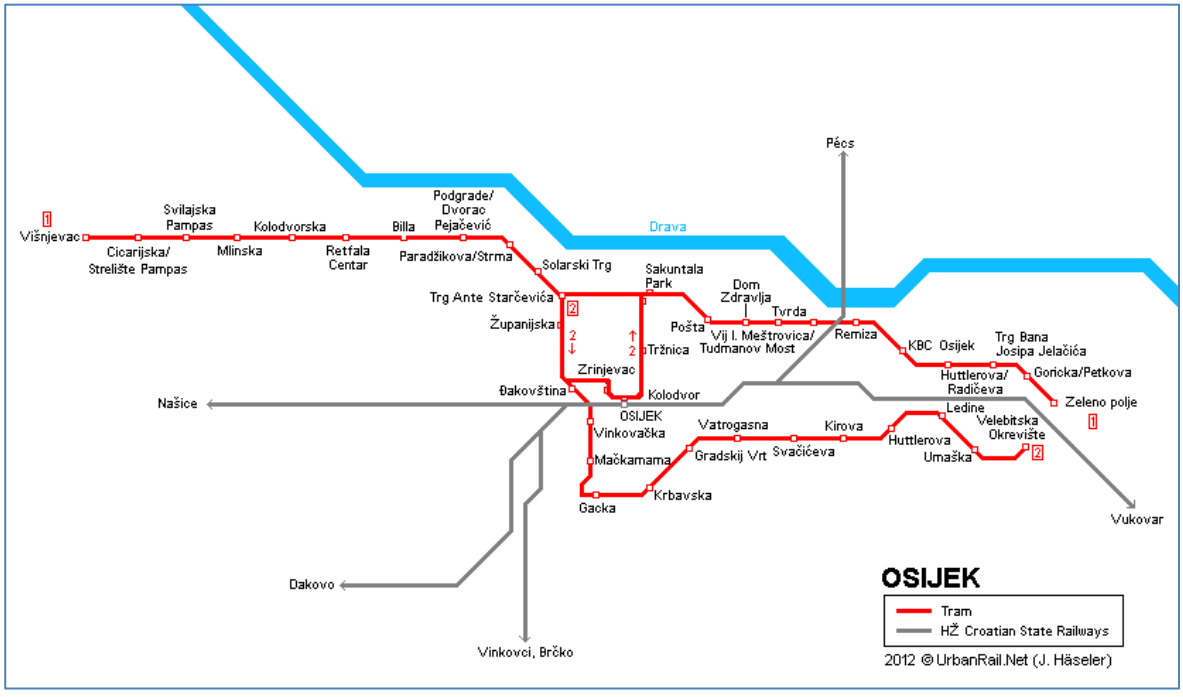
75 Table Rail lines in Osijek, Source: HŽI

Regarding road PT, almost all settlements in the area of Osijek and other municipalities are covered by 17 bus lines operated by means of a fleet of 36 buses with an average age of the fleet of 14 years.



25 Figure Line structure, Source: City of Osijek

The Osijek tram system is operated by the City Transport of Osijek (*Gradski prijevoz putnika d.o.o. Osijek - GPP Osijek*) and serves the city of Osijek. The Osijek network is the only Croatian tram system still in existence outside Zagreb. The present network consists of two lines which intersect in the city square (Ante Starčević square). All tracks are at 1000mm gauge.



26 Figure Osijek Tram lines, Source: GPP Osijek