



THE CROATIAN ASSOCIATION OF TOLL  
MOTORWAYS CONCESSIONAIRES

2020

# NATIONAL REPORT

ON MOTORWAYS



AUTOCESTA RIJEKA-ZAGREB d.d.  
DRUŠTVO ZA GRAĐENJE I GOSPODARENJE AUTOCESTOM



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*In 2020 there was no new  
opening of motorways but a  
new stretch of the existing  
semi motorway on Istrian Y  
was widened to full motorway  
profile in November 2020  
(Rogovići – Cerovlje of total  
length of 12,6 km).*





# Motorways in the Republic of Croatia

## Network and companies

Company	Motorways	Status of construction	Km in service
 HRVATSKE AUTOCESTE d.o.o.		 IN SERVICE  IN CONSTRUCTION  IN PROJECT	918.50
 AUTOCESTA RIJEKA-ZAGREB d.d.			187.03
 BINA-ISTRA d.d.			141.00
 AUTOCESTA ZAGREB-MACELJ d.o.o.			60.00
<b>TOTAL in service as per 31/12/2020</b>			<b>1,306.53</b>

 A1 Part of the motorway A1 from Zagreb to Bosiljevo is operated by ARZ d.d.

 A7 Part of the motorway A7 is operated by ARZ d.d.

 D10 i D12 were handed over to Croatian Roads Authority  




### Key

 TUNNEL OVER 5 KM

 BRIDGE

 STATE ROAD

 BORDER CROSSING



## Current State of the Network

As on 31 December 2020, the total length of the motorway network in Croatia amounted to **1,306.53 km**. Motorways were operated by four companies:

- **Hrvatske autoceste d.o.o.** (operates motorways A1, A3, A4, A5, A10 and A11),
- **Bina-Istra d.d.** (it operates the so-called Istrian Y – A8 and A9),
- **Autocesta Rijeka – Zagreb d.d.** (operates motorway A6, part of A1 and A7, part of D6 State Road from Novigrad to Netretić and the Krk Bridge.) As of 01.06.2020., the tolling at Krk Bridge was cancelled by the Decision of the Government of the Republic of Croatia. The bridge remains under concession of ARZ company.
- **Autocesta Zagreb – Macelj d.o.o.** (operates motorway A2).

### Motorway and semi-motorway network (in km)

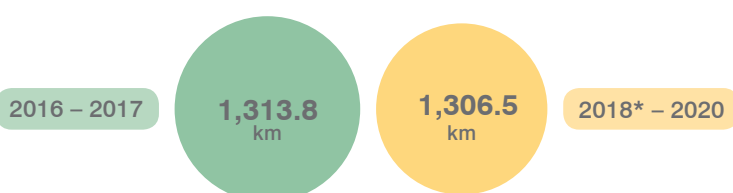
Company	Total network 2019	Total network 2020	Plan openings in 2021	Total network plan for 2021
HAC d.o.o.	918.50	918.50	0.30	918.80
ARZ d.d.	187.03	187.03	0	187.03
BINA-ISTRA d.d.*	141.00	141.00	16.82*	141.00
AZM d.o.o.	60.00	60.00	0	60.00
<b>TOTAL</b>	<b>1,306.53</b>	<b>1,306.53</b>	<b>0.30</b>	<b>1,306.83</b>
% of tolled network from all motorway network in the country	100	100	100	100

\*Widening to full motorway profile of the existing stretch, therefore the length of BINA network remains the same

### Opening of new stretches in 2020

In 2020 there was no new opening of motorways but a new stretch of the existing semi motorway on Istrian Y was widened to full motorway profile in November 2020 (Rogovići – Cerovlje of total length of 12,6 km). Thus the motorway network remained the same in 2020.

### Motorway and semi-motorway network 2016 – 2020

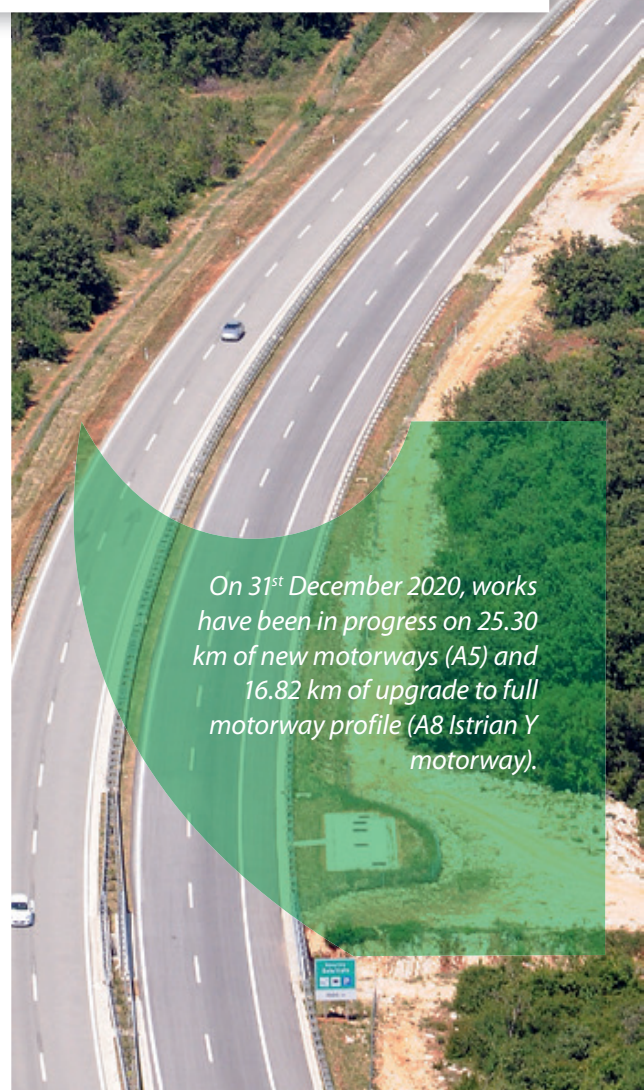


### Tunnels and bridges on the network – single direction

Company	Km of tunnels	Km of bridges	Total km tunnels and bridges
HAC**	27,42	37,64	65,06
ARZ	12,88	14,56	27,44
BINA ISTRA	5,31	9,36	14,67
AZM*	3,50	3,32	6,82
<b>TOTAL</b>	<b>49,11</b>	<b>64,88</b>	<b>113,99</b>

\*Revised length in km

\*\*As of 1.1.2018, tunnel Sv. Ilija, operated by HAC was handed over to HC and toll was abolished.



On 31<sup>st</sup> December 2020, works have been in progress on 25.30 km of new motorways (A5) and 16.82 km of upgrade to full motorway profile (A8 Istrian Y motorway).



# Works in Progress

## Works in progress on 31<sup>st</sup> December 2020

As per 31<sup>st</sup> December 2020 the works were in progress as follows:

- 25.30 km of motorways
- 16.82 widening to full motorway profile

Motorway/Road	Section	Km	Description
A5 Beli Manastir – Osijek – Svilaj	Subsection Beli Manastir – Halasica Bridge	17.50	Construction works and supervision. Opening is planned by Mid 2022
	Subsection Halasica Bridge – Drava Bridge	0.80	
	Drava Bridge	2.50	
	Drava Bridge – Osijek	3.80	
	Sava Bridge	0.70	
A8 Istrian Y: Kanfanar – Matulji	Subsection Cerovlje – Vranja	16.82	Widening to full motorway profile of the existing stretch

## The following sections will be opened to traffic in 2021

In 2021, road works will be completed on the total of:

- 16.82 km of widening of the existing section to full motorway profile
- 0.30 km of bridge

Motorway	Section	Km	Opening to traffic scheduled
A8 Kanfanar – Matulji	Subsection Cerovlje – Vranja	16.82	Widening to full motorway profile
A5 Beli Manastir – Osijek – Svilaj	Sava Bridge	0.30	Cross-border bridge with Bosnia & Herzegovina over the Sava river, half of the bridge is in Croatia. Opening planned by Mid 2021

## Start of new works in 2021

In addition to the continuation of works from the previous year, the following new works will start in 2021:

- 12.62 km of widening to full motorway profile
- 6.50 km of new motorway, single carriageway in the first phase

Motorway	Section	Km	Description
A1 Šibenik Interchange (Podi)	Šibenik – Vrpolje	0.0	Construction of new Interchange
A1 of Dugopolje Interchange	Prgomet – Dugopolje	0.0	Upgrading of the Interchange
A7 Trinajstići Interchange	Rupa – Rijeka	0.0	Construction of new Interchange
A7 Križišće – Žuta Lokva	Selce – N. Vinodolski	6.50	Construction of Novi Vinodolski bypass as a part of the First Phase of motorway construction of total length of 9.8 km (single lane in each direction) whereby single carriageway of total length of 6.5 km of the future motorway will be built together with 3.3. km of junctions with the state road near Selce and Novi Vinodolski. Opening is planned in the first semester of 2023.
A11 Zagreb – Sisak	Lekenik Interchange	0.0	Construction of the Interchange
A11 Zagreb – Sisak	Lekenik – Sisak interchange	11.0	Construction of Lekenik – Sisak Interchange Section (including construction of interregional interchange Sisak)
A8 Kanfanar – Matulji	Vranja – Učka Tunnel	2.14	Upgrade to full motorway profile of the existing subsection Vranja – Učka tunnel including construction of second tunnel tube



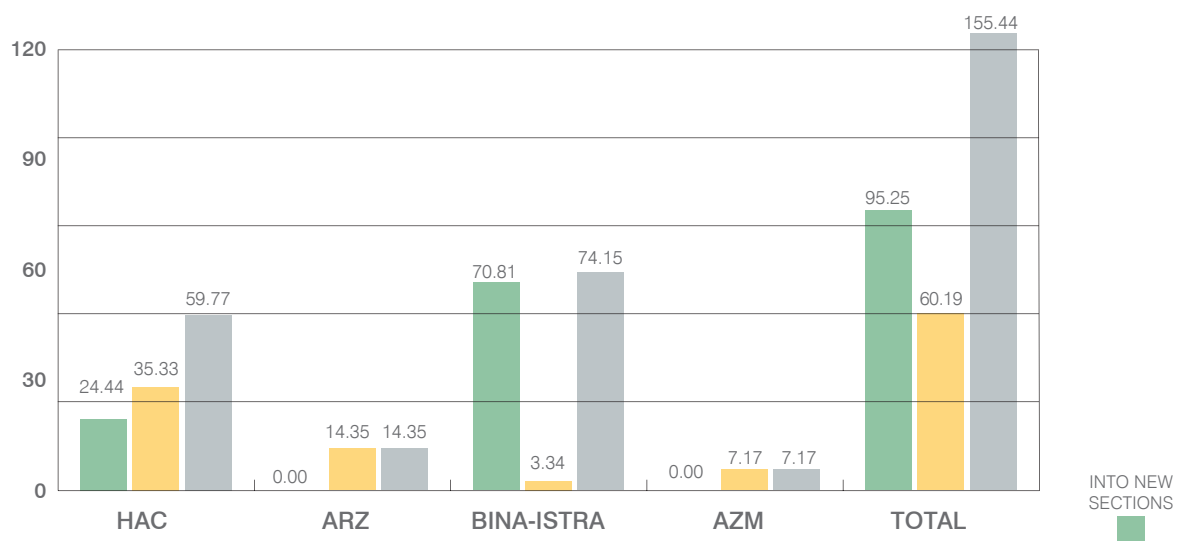
# Cost of Investment and Financing

The total of **€ 95.25 million (HRK 717.24 million)** was invested in the construction of new motorways in 2020, while **€ 60.19 million (HRK 453.21 million)** was invested into sections under traffic.

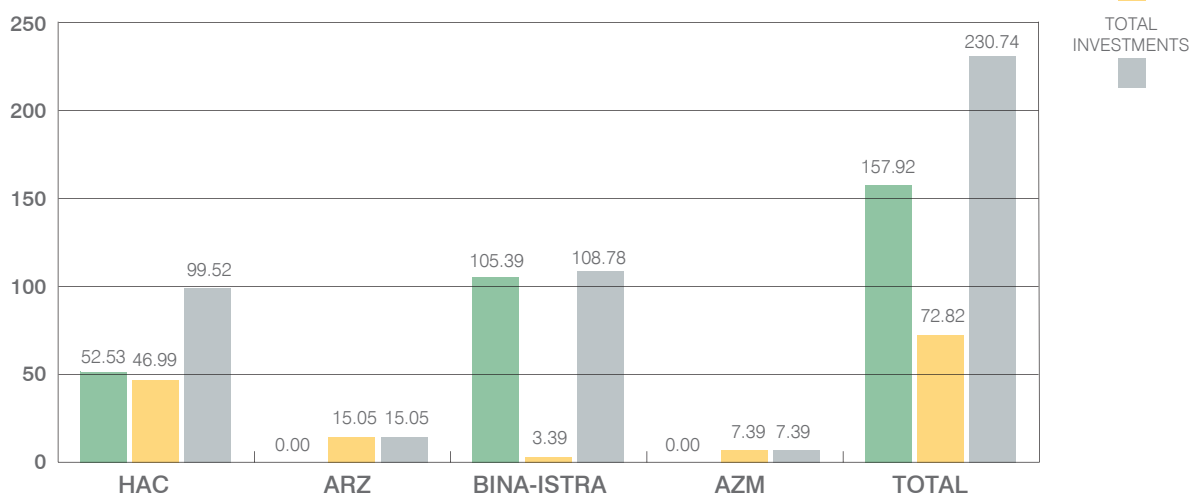
## Investments in 2020 (in Mio. EUR)

Company	Investments in 2020		Plan for 2021	
	Into new sections	Into existing sections	Into new sections	Into existing sections
HAC	24.44	35.33	52.53	46.99
ARZ	0	14.35	0	15.05
BINA ISTR	70.81	3.34	105.39	3.39
AZM	0	7.17	0	7.39
<b>TOTAL</b>	<b>95.25</b>	<b>60.19</b>	<b>157.92</b>	<b>72.82</b>
<b>TOTAL INVESTMENTS</b>	<b>155.44</b>		<b>230.74</b>	

## Investments in 2020 (in Mio. EUR)



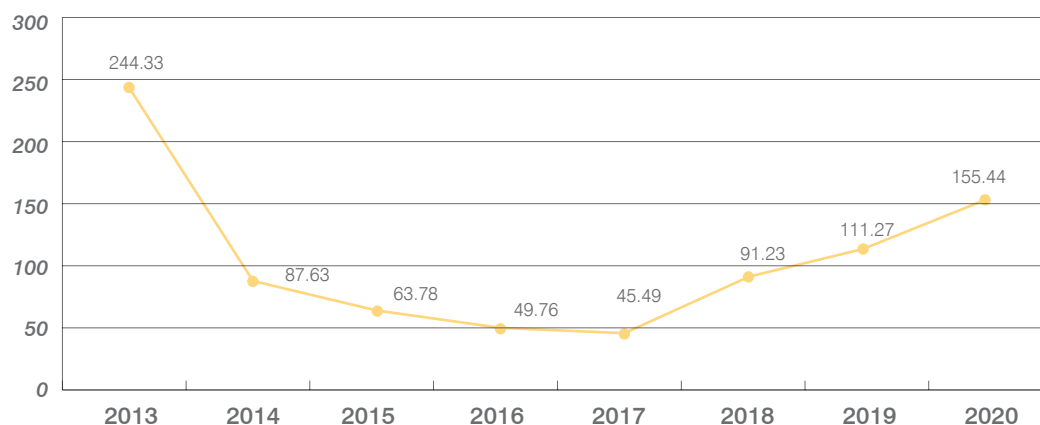
## Investments – plan for 2021 (in Mio. EUR)



1 EUR=7.53 HRK (Average annual exchange rate in 2020, Source: Croatian National Bank)



### Total investments 2013 – 2020 (in Mio. EUR)



### Investments in 2020 (in Mio. HRK)

Company	Investments in 2020		Plan for 2021	
	Into new sections	Into existing sections	Into new sections	Into existing sections
HAC	184.06	266.04	395.57	353.80
ARZ	0	108.02	0	113.31
BINA-ISTRA	533.18	25.13	793.59	25.53
AZM	0	54.02	0	55.65
<b>TOTAL</b>	<b>717.24</b>	<b>453.21</b>	<b>1,189.16</b>	<b>548.29</b>
<b>TOTAL INVESTMENTS</b>	<b>1,170.45</b>		<b>1,737.45</b>	

### Financing structure in 2020

Source of investments financing in 2020 (%)	HAC	ARZ	BINA-ISTRA*	AZM
Loans	26.47	0	23	0
Proper resources	0	0	0	100
Revenues from tolls and other revenues	5.39	91.93	35	0
Revenues from fuel HRK 0.20/l i.e. EUR 0.026/l	66.36	0	0	0
Reimbursable and non-reimbursable state funding	0	0	42	0
EU funds	1.78	8.07	0	0
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\*Bina-Istra d.d.: BINA-ISTRA achieved financial closing in December 2020 and thus successfully refinanced existing debts before the loan instalment matured in 2020. Savings generated by refinancing enabled to cover the losses in toll revenues caused by the COVID-19 pandemic

1 EUR=7.53 HRK (Average annual exchange rate in 2020, Source: Croatian National Bank)



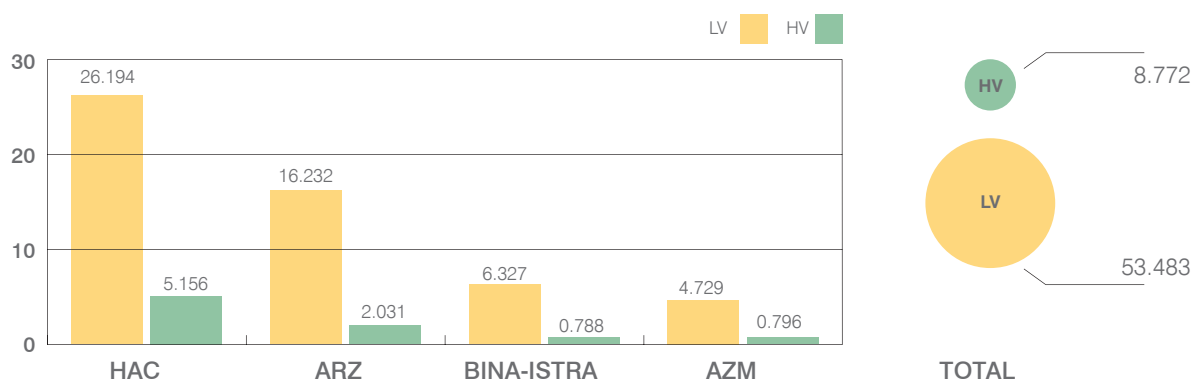
# Traffic

In 2020 all motorway companies experienced decrease in traffic for all categories of vehicles by 28,16% in comparison with the previous year. Such decrease is a direct consequence of COVID-19 pandemic and lockdown imposed on 21<sup>st</sup> March 2020.

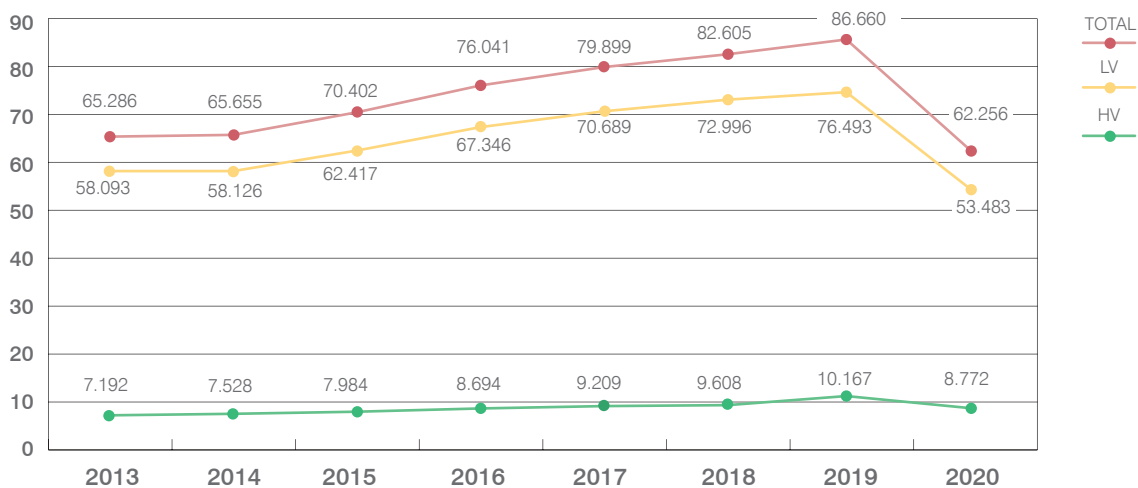
## Number of vehicles in toll collection zones

Company	2019		2020				
	Light vehicles	Heavy Vehicles	Light vehicles	%	Heavy Vehicles	%	%
	(IA+I+II)	(III+IV)	(IA+I+II)	(20/19)	(III+IV)	(20/19)	(20/19)
HAC	37.942.756	5.961.335	26.194.683	-30.96	5.156.760	-13.50	-28.89
ARZ	22.056.892	2.407.576	16.232.023	-26.41	2.031.792	-15.61	-25.35
BINA-ISTRA	9.705.121	926.922	6.327.601	-34.80	788.210	-14.96	-33.07
AZM	6.788.205	871.208	4.729.505	-30.33	796.194	-8.61	-27.86
<b>TOTAL</b>	<b>76.492.974</b>	<b>10.167.041</b>	<b>53.483.812</b>	<b>-30.08</b>	<b>8.772.956</b>	<b>-13.71</b>	<b>-28.16</b>
<b>TOTAL TRAFFIC</b>	<b>86.660.015</b>		<b>62.256.768</b>		<b>-28.16</b>		

## Number of vehicles in toll collection zones 2020 (in Mio. vehicles)



## Total number of vehicles in toll collection zones 2013 – 2020 (in Mio. vehicles)

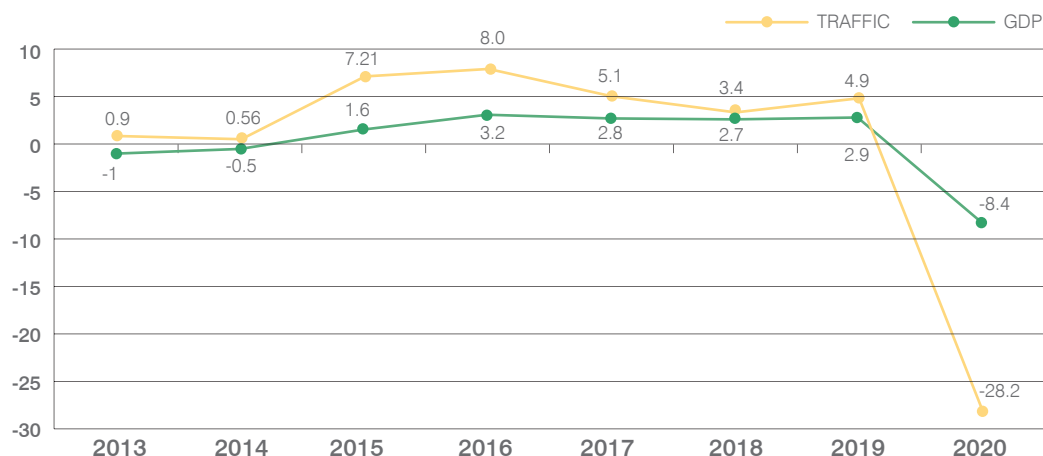


### Traffic, GDP and CPI (%)

GDP 2019 / 2018	TRAFFIC 2019 / 2018	CPI 2019 / 2018	GDP 2020 / 2019	TRAFFIC 2020 / 2019	CPI 2020 / 2019
2.9	4.9	1.5	-8.4	-28.2	0.1

Source: Central Bureau of Statistics

### Traffic and GDP 2013 – 2020 (%)



## Tolling

The closed toll collection system, with several entrances and exit points, is predominantly operated in the Republic of Croatia. Motorway usage is charged per mileage and vehicle category. At the entrance to the motorway, the user takes an entry card (or the entry is recorded on their ETC device) and the payment is made on exit toll stations according to distance travelled.

The open toll collection system is used on Bregana – Zagreb Motorway, on the Krk Bridge and on Rupa – Rijeka.

### Average toll rate per km (with VAT)

Existing systems	Light vehicles (Category I)	
	HRK/km	€/km
Closed system	0.513	0.068
Open system	0.483	0.064
Ratio categories I : IV – closed tolling system	4.3	
	Trucks (Category IV)	
	HRK/km	€/km
Closed system	2.196	0.292
Open system	0.991	0.131
Ratio categories I : IV – open tolling system	4.1	

\*\*\*1 EUR=7.53 HRK (Average annual exchange rate in 2020, Source: Croatian National Bank)

Motorcycles (category IA) pay 60% of the toll charged for category I vehicles.

On all motorways, toll can be paid in cash (HRK and €), by credit and debit cards, by INA card and by SMART cards. Electronic toll collection (ETC) system is available on all motorways except on the Zagreb – Macelj Motorway (A2).

VAT on tolls is 25%.



## Technology of electronic toll collection system in use

The toll collection systems of HAC, ARZ and BINA ISTRA network has a stop and go system that integrates electronic toll collection (ETC).

The technology of electronic toll collection is in accordance with the legal provisions: DSRC 5.8 GHz

Communication standards: Physical Layer EN 12975, ENV 12795 and EN 12253

Data Link Layer: ENV 12834 and ENV 13372

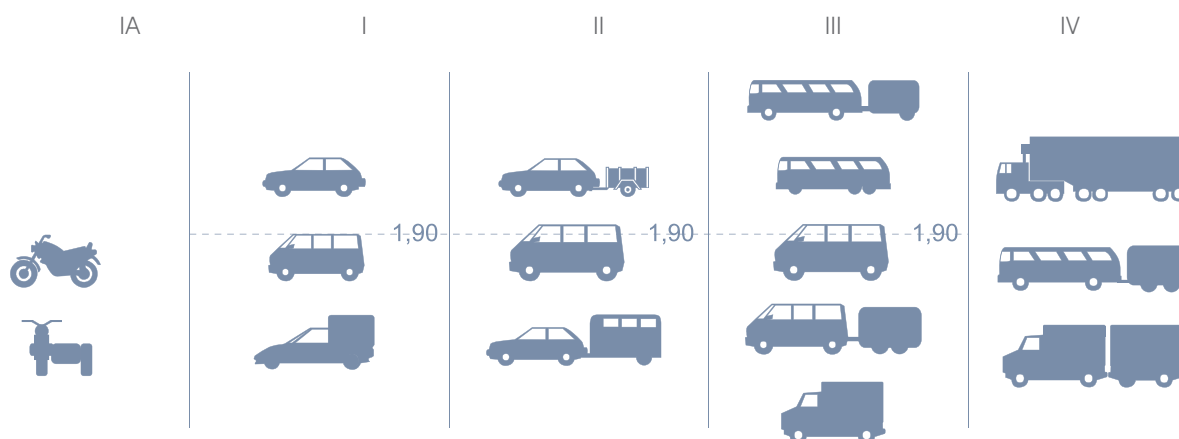
Application standards: Application Layer ISO14906 EFC

Transaction models: PISTA and TIS are in use, with openness to other transactional models in accordance with relevant standards.

Tolling system in the country	Tolling/charging system	Tolling technology
Light vehicles	Distance related system with barriers	DSRC 5,8 GHz
Heavy vehicles	Distance related system with barriers	DSRC 5,8 GHz
Enforcement	Different enforcement means; subsequent back office check and analysis of transactions identified by IT system, video cameras and ANPR (OCR) cameras for vehicle plate recognition	ANPR/OCR enforcement

In the Republic of Croatia tolls are paid according to the following categories of vehicles:

Skupine vozila



### HRVATSKE AUTOCESTE d.o.o. (HAC)

The Government of the Republic of Croatia started a process aiming to transformation of the existing tolling system on motorways into system that will:

- enable electronic tolling without barriers, improvement of road safety and traffic flow levels
- be acceptable and non-discriminatory for all groups of users paying the toll
- ensure to motorway operators optimum costs and revenues regarding tolling
- be interoperable with future EETS service.

### AUTOCESTA RIJEKA-ZAGREB d.d. (ARZ)

Tolls can be paid in cash (HRK or EUR), by credit or debit cards, INA fleet card, by monthly or annual tickets, smart cards and by ETC.

### BINA-ISTRA d.d (BINA)

The Istrian Y network has a closed toll system. Users have at their disposal a total of 108 toll lanes, of which 45 are entry lanes and 63 are exit lanes. Payment can be made in cash in HRK and EUR (only for non-residents), with bank cards or BINA-ISTRA ETC devices.

For frequent users, BINA-ISTRA has prepared special offers with significant discounts on toll rates depending on the package chosen. The discounts can be obtained by using the BINA-ISTRA ETC device, which is compatible with the networks of other motorway concessionaires in Croatia – ARZ and HAC.

During low traffic intensity, toll collection at most toll stations runs in automatic mode without the presence of a toll collector.

BINA-ISTRA ETC subscribers can use the Internet or SMS subscription to see the balance of their accounts and subscription expiry time and can also obtain the listing of passes through toll stations. In addition, they can replenish their accounts and fill in and print invoices for payments via bank transfer. At BINA-ISTRA toll collection points, toll can be paid by all credit and debit cards, and by INA card and the ETC device.

Furthermore, users who already own an ETC device can additionally register devices already bought at HAC and ARZ with the BINA-ISTRA toll collection system and in this way become BINA-ISTRA subscribers (this is valid for frequent users entitled to average discount of 30 to 50%, depending on the section used) or to register their credit cards for an ETC device (applicable to non-frequent users).

From August 17<sup>th</sup> 2020, HAC, ARZ and BINA-ISTRA introduced a new benefit for post-paid users. ENC IN is a model of interoperable ENC device that allows BINA-ISTRA users in the post-paid credit card system (Master Card, Diners, Visa, Visa Premium, INA card) to use ENC devices on HAC network without additional registration with HAC. The ENC IN service will be activated by the first use of ENC devices on motorways managed by ARZ and HAC. Bina - Istra subscribers keep discounts on sections of the Istrian Y while the full amount of toll is charged on the sections of HAC and ARZ.

## **Toll rates in 2020.**

### **HRVATSKE AUTOCESTE d.o.o. (HAC)**

In 2020 HAC did not change its unit toll rates. In peak traffic period during tourist season, from 15<sup>th</sup> June to 14<sup>th</sup> September 2020, seasonal toll tariffs have not been applied (10% increase on regular toll tariffs) due to COVID-19 pandemic.

### **AUTOCESTA RIJEKA-ZAGREB d.d. (ARZ)**

In 2020 the unit toll rates did not change on the motorway network under ARZ concession.

Ministry of Transport extended the duration of "winter" ETC discount until the 1<sup>st</sup> June 2020 and additional discount of 7% for EURO VI vehicles for II and IV categories of vehicles using post-paid ETC.

In 2020, seasonal toll tariffs in peak traffic period during tourist season, from 15<sup>th</sup> June to 14<sup>th</sup> September 2020, have not been applied (10% increase on regular toll tariffs) due to COVID-19 pandemic.

As of 15<sup>th</sup> June 2020 tolls have been cancelled at Krk Bridge for all categories of users in accordance with the Decision of the Government of the Republic of Croatia dated 21<sup>st</sup> June 2020.

### **AUTOCESTA ZAGREB-MACELJ d.o.o. (AZM)**

In 2020 toll rates did not change. To help Banija region (south east of Karlovac), which has been affected by severe and devastating earthquake (6.4 on the Richter scale) on the 29<sup>th</sup> December 2020, company AZM provided toll free passage to institutions and individuals bringing humanitarian aid to local residents upon a written request from Civil Protection Headquarters. Motorway company reimbursed toll costs to institutions or individuals heaving a toll invoice or an approval from competent authority about the humanitarian purpose of the trip.

### **BINA-ISTRA d.d (BINA)**

In 2020 same toll tariffs as in 2019 have been applied on the Istrian Y motorway. As of 6<sup>th</sup> November 2020 toll has been introduced on the upgraded section Rogovići-Ivoli.

The summer tariffs have been applied on Istrian Y also this summer (from 1.6.-30.9.2020.). This special tariff was approved by the Ministry of the Sea, Transport and Infrastructure and represents full toll tariff increased by 10%. For subscribers and local population using ETC device tolls remain unchanged. Since summer 2015 BINA-ISTRA has proposed to its users ETC package called EASY, offering a general discount of 10% without time limit.

ETC users have the possibility to qualify for a series of discounts on the regular toll price. BINA-ISTRA ETC subscribers can use the Internet or SMS subscription to see the balance of their accounts and subscription expiry time and can also obtain the listing of passes through toll stations. In addition, they can replenish their accounts and fill in and print invoices for payments via bank transfer.

To improve services for its users, in 2020 the company launched several projects whose implementation is expected in 2021.



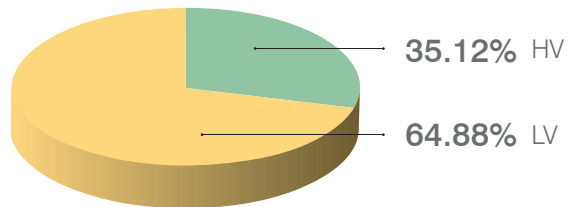
# Toll Revenues

In 2020, the total toll revenues for all motorway companies amounted to € 286.64 million (HRK 2,158.4 million) which represents a decrease of toll revenues by 32.67% when compared to the previous year. Such dramatic decrease is a direct consequence of COVID-19 pandemic and lockdown started on the 21<sup>st</sup> March 2020.

## Toll revenues (without VAT)

Company	2019 <sup>(2)</sup>			2020 <sup>(3)</sup>			% (20/19) <sup>(4)</sup>
	LV	HV	TOTAL EUR	LV	HV	TOTAL EUR	
HAC <sup>(1)</sup>	185,434,977	83,566,774	269,001,751	108,463,217	67,828,264	176,291,481	-34.46
ARZ <sup>(1)</sup>	69,157,136	21,308,024	90,465,160	48,119,710	17,099,345	65,219,054	-27.91
BINA-ISTRA	26,966,850	7,425,037	34,391,887	16,672,376	6,557,603	23,229,979	-32.46
AZM <sup>(1)</sup>	21,357,148	10,488,851	31,845,999	12,719,615	9,179,906	21,899,522	-31.23
<b>TOTAL</b>	<b>302,916,111</b>	<b>122,788,686</b>	<b>425,704,797</b>	<b>185,974,918</b>	<b>100,665,118</b>	<b>286,640,036</b>	<b>-32.67</b>

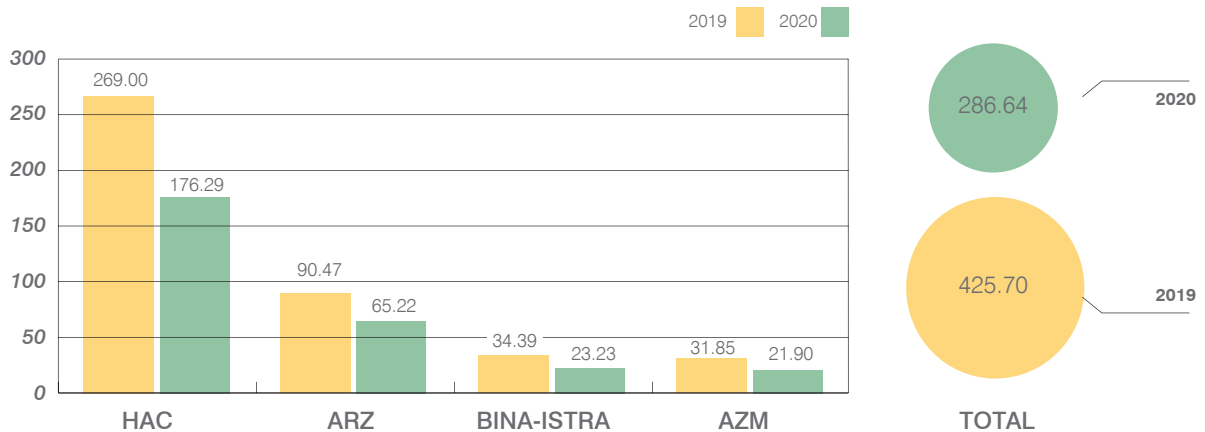
## Portion of LV and HV in total toll revenues 2020



## Toll revenues breakdown for light vehicles and heavy vehicles

Company	2020					
	Light vehicles (IA+I+II)	Heavy vehicles (III+IV)	Total (IA+I+II+III+IV)	LV% (20/19)	HV% (20/19)	% (20/19) <sup>(4)</sup>
HAC <sup>(1)</sup>	108,463,217	67,828,264	176,291,481	-41.51	-18.83	-34.46
ARZ <sup>(1)</sup>	48,119,710	17,099,345	65,219,054	-30.42	-19.75	-27.91
BINA-ISTRA	16,672,376	6,557,603	23,229,979	-38.17	-11.68	-32.46
AZM <sup>(1)</sup>	12,719,615	9,179,906	21,899,522	-40.44	-12.48	-31.23
<b>TOTAL</b>	<b>185,974,918</b>	<b>100,665,118</b>	<b>286,640,036</b>	<b>-38.16</b>	<b>-18.02</b>	<b>-32.67</b>

## Toll revenues 2019 – 2020, without VAT (in Mio. EUR)



<sup>1</sup>Toll revenues are based on the temporary reports for 2020

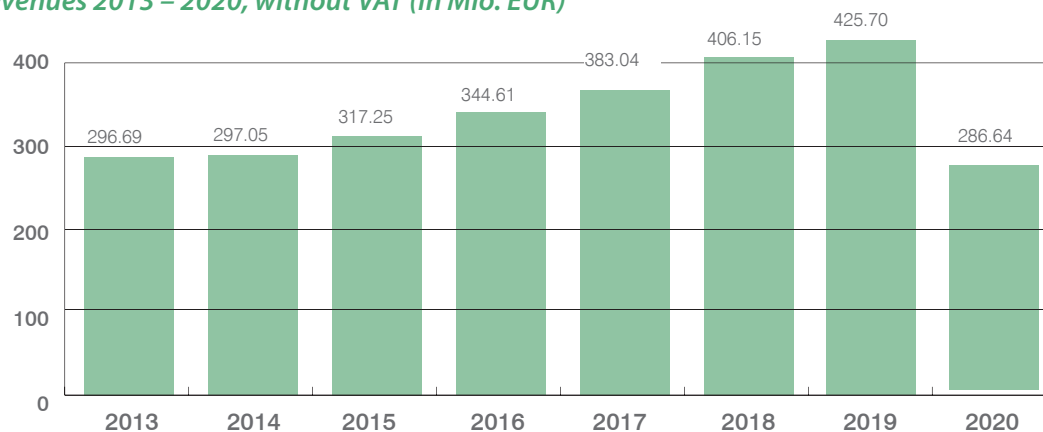
<sup>2</sup>1 EUR=7.41 HRK (Exchange rate as per 31st December 2019, Source: Croatian National Bank)

<sup>3</sup>1 EUR=7.53 HRK (Average annual exchange rate in 2020, Source: Croatian National Bank)

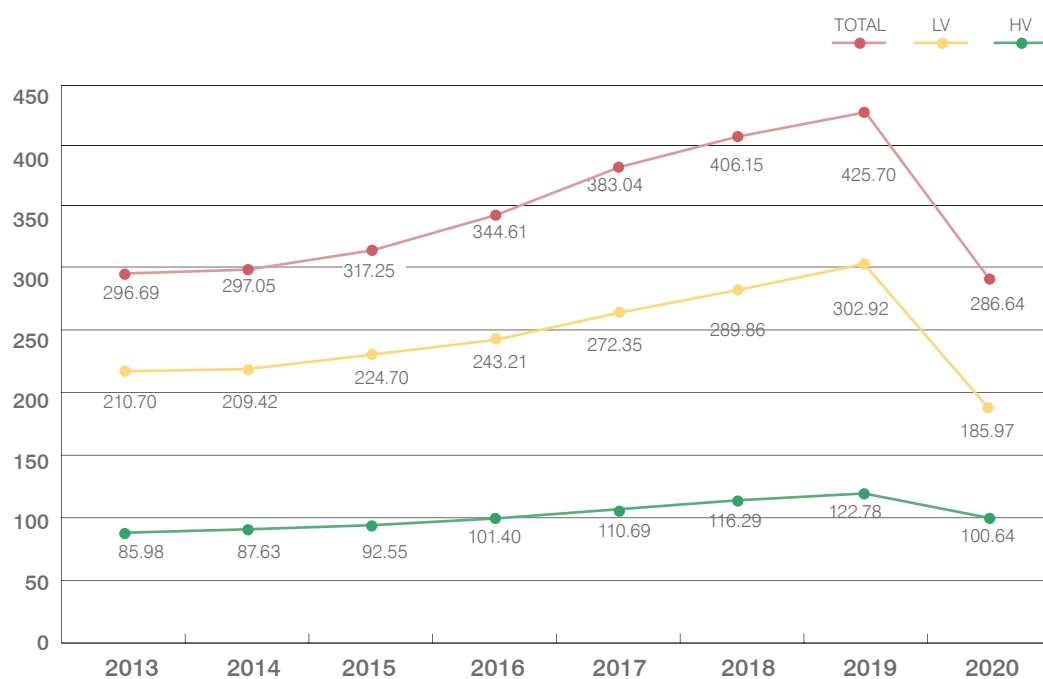
<sup>4</sup>Percentages of change in revenues 20/19 in EUR and in HRK are slightly different due to different exchange rates in 2019 and 2020



**Toll revenues 2013 – 2020, without VAT (in Mio. EUR)**



**Toll revenues for light and heavy vehicles 2013 – 2020 without VAT (in Mio. EUR)**



Toll revenues are based on the temporary reports for 2020

Average annual exchange rate for 2020 is 1 EUR = 7.53 HRK (Source: Croatian National Bank)





# Traffic Safety

The total of 2.123 traffic accidents, with 22 fatalities and 294 injuries was registered in 2020. The total number of all traffic accidents registered in 2020 decreased by 21.3 % and total number of fatalities decreased by 29 %, when compared to the previous year. Number of injured people decreased by 36 % when compared to the year 2019.

## Traffic accidents 2019 – 2020

NUMBER OF TRAFFIC ACCIDENTS:	2019					2020					%
	HAC 911 km	BINA- ISTRA* 141 km	ARZ 187 km	AZM 60 km	TOTAL 1299 km	HAC 911 km	BINA- ISTRA* 141 km	ARZ 187 km	AZM 60 km	TOTAL 1299 km	
With fatalities	16	3	5	1	25	10	3	4	0	17	-32.00
With injured	178	13	57	8	256	104	9	54	15	182	-28.91
With material damage	1.660	73	567	116	2.416	1.324	53	461	86	1.924	-20.36
<b>TOTAL number of traffic accidents</b>	<b>1.854</b>	<b>89</b>	<b>629</b>	<b>125</b>	<b>2.697</b>	<b>1.438</b>	<b>65</b>	<b>519</b>	<b>101</b>	<b>2.123</b>	<b>-21.28</b>
<b>TOTAL number of injuries</b>	<b>333</b>	<b>23</b>	<b>93</b>	<b>10</b>	<b>459</b>	<b>169</b>	<b>20</b>	<b>84</b>	<b>21</b>	<b>294</b>	<b>-35.95</b>
<b>TOTAL number of fatalities</b>	<b>22</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>31</b>	<b>11</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>22</b>	<b>-29.03</b>

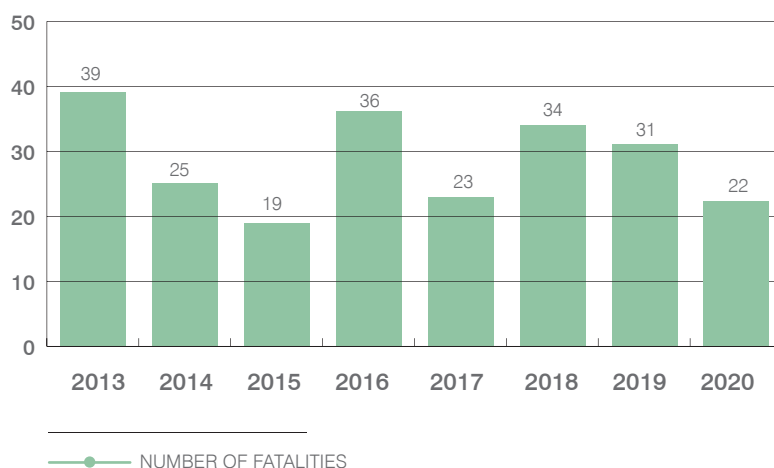
Traffic accidents are observed on the totality of the motorway network.

\* BINA-ISTRA figures on traffic accidents are given for the total network of Istrian Y (both motorway and semi motorway) while safety ratios are given only for stretches in full motorway profile to be comparable with other concessionaires.

## Traffic accidents on the entire motorway network 2013 – 2020

NUMBER OF TRAFFIC ACCIDENTS:	2013	2014	2015	2016	2017	2018	2019	2020
With fatalities	31	21	18	27	20	30	25	17
With injured	308	293	307	315	332	316	256	182
With material damage	1.823	1.863	1.961	2.055	2.113	2.455	2.416	1.924
<b>TOTAL number of traffic accidents</b>	<b>2.162</b>	<b>2.177</b>	<b>2.286</b>	<b>2.397</b>	<b>2.465</b>	<b>2.801</b>	<b>2.697</b>	<b>2.123</b>
<b>TOTAL number of fatalities</b>	<b>39</b>	<b>25</b>	<b>19</b>	<b>36</b>	<b>23</b>	<b>34</b>	<b>31</b>	<b>22</b>

## Total number of fatalities 2013 – 2020



The total number of all traffic accidents registered in 2020 decreased by 21.3 % and total number of fatalities decreased by 29 %, when compared to the previous year.

## Main safety ratios (per 10<sup>9</sup> km travelled)

	10 <sup>9</sup> vehicles/km in 2020					Change 2020/2019 in %				
	HAC* 911 km	BINA-ISTRA*** 100 km	ARZ** 146 km	AZM 60 km	CRO 1217 km	HAC* 911 km	BINA-ISTRA*** 100 km	ARZ** 146 km	AZM 60 km	CRO 1217 km
Personal injury accident rate	28.12	8.62	37.42	57.99	32.60	-16.06	-28.94	-5.27	201.25	1.89
Personal injury rate	45.70	15.08	86.51	81.18	52.66	-27.09	24.32	20.40	237.27	-8.20
Fatal accident rate	2.70	2.15	2.76	0	3.05	-10.30	-100	-20	0	-2.54
Rate of dead**	2.97	2.15	7.21	0	3.94	-28.26	-100	86.63	0	12.61

\* km of the network maintained used for calculating the safety figures

\*\*ARZ safety ratios refer to A1 and A6 motorways i.e. to 146.5 km, while table with traffic accidents include the total ARZ network i.e. 187.03 km

\*\*\* BINA-ISTRA figures on traffic accidents are given for the total network of Istrian Y (both motorway and semi motorway) while safety ratios are given only for stretches in full motorway profile to be comparable with other concessionaires. To calculate safety ratios in 2020 only the stretches of full motorway profile (100 km) were taken into account since on the remaining 12.6 km of full motorways there has been no accidents (opened to traffic in November 2020)

## Road safety

### CROATIA\*

	2019	2020	% 20/19
N. of dead (fatalities) on all roads in the country	297	237	-20.20
N. of dead (fatalities) on all motorways in the country	31	22	-29.03

\*Source: Ministry of the Interior of the Republic of Croatia 2020.

### HUKA members

	2019	2020	% 20/19
N. of persons injured (light and heavy injuries)	459	294	-35.95
Personal injury rate	57.37	52.66	-8.20
N. of fatal accidents	25	17	-32
Fatal accident rate	3.50	3.94	12.61
N. of dead (fatalities)	31	22	-29.03
<b>Fatality rate on members network</b>	<b>3.50</b>	<b>3.94</b>	<b>12.61</b>

## Long and Medium-Term Development Program

### According to the Roads Act, the construction and maintenance of motorways is planned:

- In the long term, through the public road development strategy
- In the medium term, through four-year Public Road Construction and Maintenance Programmes passed by the Government of the Republic of Croatia based on the proposal of the Ministry of Sea, Transport, and Infrastructure,
- Annually, through construction and maintenance plans defined by individual motorway operating companies.

In order to provide quality transport planning the Government of the Republic of Croatia prepared in 2017 the National Transport Model which was followed by adoption of the Strategy of Transport Development of the Republic of Croatia for the period 2017 – 2030 and set up the framework for further development of road network in Croatia.

The Government of the Republic of Croatia adopted by now five four-year Public Road Construction and Maintenance Programs (2001 – 2004, 2005 – 2008, 2009 – 2012, 2013 – 2016, 2017 – 2020). Procedure for adoption of the Program for the period 2021 – 2024 is under way.

The Republic of Croatia will complete its strategic goals and implement the standard of regular road maintenance as planned, harmonize the entire core road network with modern road transport requirements and complete the needed network of motorways and fast roads in Croatia.

### According to Public Road Construction and Maintenance Program 2017 – 2020 the following motorways and express roads remain to be completed and opened to traffic:

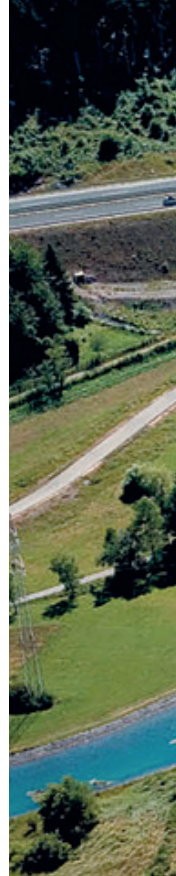
#### A5 Beli Manastir – Osijek – B&H Border Section

- Osijek – Beli Manastir Section including Drava Bridge
- Sava Bridge

#### A7 Križišće – Žuta Lokva

- Selce – Novi Vinodolski section – construction of the First Phase of Motorway (1 lane in each direction)





#### A8 Kanfanar – Matulji Motorway

- Finalizing of widening to full motorway profile of the Pazin – Učka Tunnel Section (Phase 2B1) i.e. completion of the Istrian Y.
- Construction of second tube of Učka Tunnel including the Vranja – Učka Tunnel Section (Subphase 2B2-1).

Start of construction of the “Ranžirni” Overpass on the A11 Motorway Zagreb – Sisak in 2022.

#### Major long-term projects of Hrvatske autoceste d.o.o.:

Among major long term projects of Hrvatske autoceste d.o.o. we emphasise the following ones:

- Completion of the Motorway A5 and finalizing of the cross-border section from Hungarian border to Beli Manastir, the motorway A5 which is part of the Corridor Vc, will enable the development and use of the entire Corridor.
- Construction of A7 motorway, almost the half of the total length of A7 motorway going from Rupa (Slovenian border) to Križišće is already completed, while for the subsection from Križišće to Žuta Lokva projects are under development. A7 motorway is important link in Croatian motorway network, between the motorway A8 (Istrian Y), A6 motorway (Rijeka- Bosiljevo) and A1 motorway (Zagreb-Split). Furthermore, considering the international importance of motorway A7 it could become steering wheel for regional and local development of Croatian coast, its islands and Adriatic-Ionian region as well as link between Adriatic ports and cities. In the first phase the Novi Vinodolski bypass will be constructed.
- Continuation of construction of motorway A1 to Dubrovnik – further construction of stretch from Metković to Dubrovnik and integration of the Pelješac bridge by linking it to motorway network. Preparation of preliminary study documentation is under way to define possible options and feasibility of the project (construction by phases).
- Reconstruction of Zagreb bypass and enlargement of the existing structure by adding one extra traffic line to cope with traffic jams.
- Optimizing the lighting by implementing LED technology along the entire motorway network under operation of Hrvatske autoceste as to decrease energy consumption and improve energy efficiency.
- Renewal of road service facilities to provide better service to users.
- Upgrade and modernization of tolling system aiming to optimize managing of toll activities and improve traffic flow.
- Implementation of safety fences compliant with legislation. The goal is to increase road safety by improving passive safety systems which will have direct impact on reducing the traffic accidents (reduction of fatalities and injuries). This project aims to make safety fences on motorways under HAC operation compliant with regulations, standards and EU Directive.

**CROCODILE 3 CROATIA** project is a cooperation between public authorities, road administrations and traffic information service providers as logical follow up of the previous CROCODILE project phases. The Project is part of CROCODILE 3 corridor which includes EU-Member States from the Central European region who are working together to improve cross-border traffic and transport through implementing harmonized and synchronized ITS applications on the high-level road network in this area. The corridor involves Central European (CE) countries, thereby ensuring coordinated traffic management and control resulting in high quality travellers' information services on one of the most important road-corridors in an enlarged Europe.

For drivers, the provision of information services along the whole CROCODILE 3 corridor before and during their journey will help them to optimize their route, respond to disruptions, and avoid hazardous situations.

#### Project details

Start	End	Value	Co-funding by EU
01.01.2018.	31.12.2020.	4.896.000,00 EUR	4.161.600,00 EUR

#### Participants

Project coordinator: Hrvatske autoceste d.o.o.

Beneficiaries: Autocesta Rijeka-Zagreb d.d.; Autocesta Zagreb-Macelj d.o.o.; Bina-Istra d.d.; Hrvatske ceste d.o.o.



## Significant activities in 2020 and plans for 2021

### HRVATSKE AUTOCESTE d.o.o.

#### In 2020 the company was focused on works as follows:

- On A5 Motorway Beli Manastir – Osijek – border with Bosnia and Herzegovina, completion of works and equipment of full motorway stretch from Halasica Bridge to Osijek (subsection Osijek Interch. – Drava Bridge of total length of 3.8 km, subsection Halasica Bridge – Drava Bridge of total length of 0.8 km as well as construction works of the Drava Bridge of total length of 2.5 km) and construction of Sava Bridge of total length of 0.66 km.  
On subsection Beli Manastir – Halasica Bridge construction works continued on 7 road crossings as well as on the Halasica Bridge, representing the first phase of construction of this subsection (17.5 km).
- Renewal of road service facilities – renewal of Popovača – Gračenica and Križ rest areas on the A3 Motorway
- On A3 Motorway Bregana – Zagreb – Lipovac – setting up of noise protection walls in accordance with the Noise Protection Action Plan.

In addition, Hrvatske autoceste carried out heavy maintenance works that included renewal and reconstruction of pavement and structures, cleaning up of cuttings, water drainage system, road equipment and road signs, procurement of ITS equipment in TMMC (application of ITS Directive and DATEX I protocol), upgrade of tunnels with requirements of the Directive 2004/54/EC (construction requirements), harmonizing of safety and protection fences with new regulation requirements, works at TMMC, systems etc. as to extend the life span of assets and improve quality and safety of motorway as well as regular maintenance in compliance with regulations and standards for regular maintenance.

#### In 2021 the main activities are planned as follows:

- A5 Motorway Beli Manastir – Osijek – border with Bosnia and Herzegovina: opening to traffic of the Sava Bridge, together with border sections in Croatia and in Bosnia, continuation of works on the subsection from Beli Manastir Bridge to Halasica Bridge (17.5 km) and opening to traffic of 7 road crossings representing the part of the foresaid subsection.
- A1 motorway Split – Dubrovnik enlargement of Dugopolje Interchange – II. and III. Phase.
- A1 Zagreb – Split – Dubrovnik: start of construction works on Šibenik Interchange (Podi)
- Start of construction works on Novi Vinodolski Bypass, being the I. Phase of the construction of future motorway.
- A7 Rupa – Križšće – Žuta Lokva: start of construction works on Trinajstići interchange
- A11 Zagreb – Sisak: start of construction of section from Lekenik to Sisak Interchange
- A3 Bregana – Lipovac: renewal of road service facilities and service areas on the motorway
- A3 Bregana – Lipovac: setting up of noise protection walls in accordance with the Noise Protection Action Plan

### AUTOCESTA RIJEKA-ZAGREB d.d.

#### Activities of the company in 2020:

Among major projects of the Company for the year 2020 we underline the investments relating to the rehabilitation and maintenance of existing facilities on the motorway and of the motorway itself as well as the maintenance of equipment.

Projects undertaken by ARZ and planned for the year 2021 include improvement of service to users and of road safety level.

Some of important projects in 2020 and which will be continued also in 2021 are:

- Adjustment project for Zagreb – Karlovac Motorway
- Noise Protection Walls Project



### Activities of the company in 2021:

In its session held on 21<sup>st</sup> May 2020 (Official Gazette NN 61/2020) the Government of the Republic of Croatia adopted the Decision on Amendment to decision on establishment of joint stock company Rijeka-Zagreb d.d. and on grant of concession for construction and operation of Rijeka-Zagreb motorway, by which Decision the toll collection is abolished on Krk Bridge as of 15<sup>th</sup> June 2020. In the same session the Decision was adopted to terminate the concession granted to motorway company Rijeka-Zagreb d.d. and to merge the company with Croatian Motorways Company (Hrvatske autoceste d.o.o.)

As of 31<sup>st</sup> December 2020 Commercial Court in Zagreb adopted Resolution on merging the Autoceste Rijeka-Zagreb d.d. motorway company with Hrvatske autoceste d.o.o. motorway company, whereby the merged company ARZ does not exist any longer. All long term activities, planned by ARZ, will be continued and carried out by the company Hrvatske autoceste d.o.o.

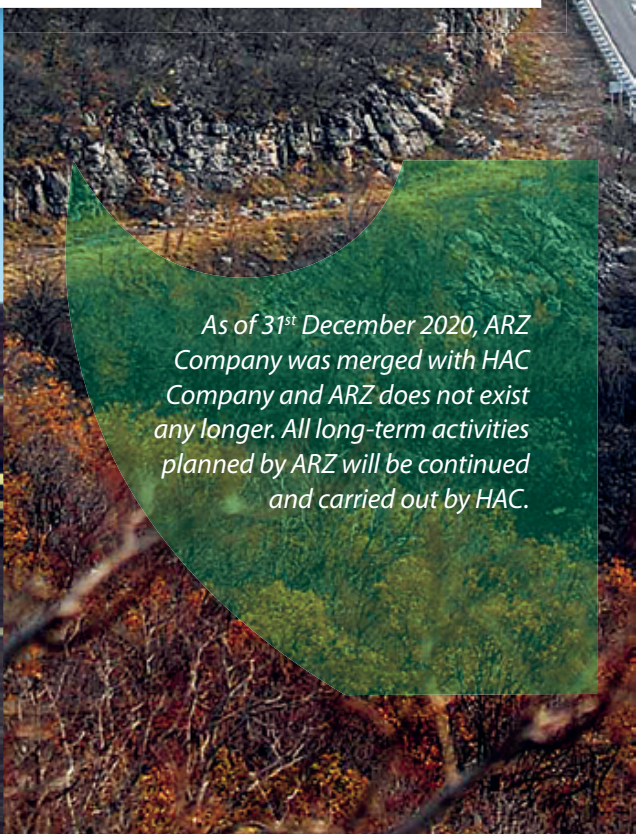
### BINA-ISTRA d.d (BINA)

#### In 2020 the company's activities were focused on:

In order to mitigate the impact of COVID-19 pandemic on our customers in 2020 BINA-ISTRA prepared and implemented several measures: for users of ETC Plus package who had active discounts in the period from 15<sup>th</sup> March to 17<sup>th</sup> April 2020 the period of validity of discounts has been extended by additional 90 days for vehicle cat. I., IA. and II. and by 120 days for vehicles cat. III. and IV. Starting from the 17<sup>th</sup> April 2020 and 1<sup>st</sup> June 2020 until the 10<sup>th</sup> July 2020. We also launched action for new users for purchasing the ETS device for only 1 kn with the aim to improve traffic fluidity and decrease physical contacts at toll plazas.

In December 2020 BINA-ISTRA achieved financial closing of total value of 0,92 billion EUR and successfully refinanced the existing debt before the due date of the installment of loan. Savings which resulted from this refinancing enabled the company to cover revenue losses caused by COVID-19 pandemic. With financial closing in December 2020 also work started at subphase 2B2-1.

Subphase 2B2-1 in principal consists of widening of the existing road, i.e. construction of second carriageway from Vranja Interchange to Učka Tunnel/Portal Kvarner, including construction of second tube of Učka Tunnel in the north-east of the existing tube. The total length of this subsection is 8 km, out of which 5,63 km is a new tunnel tube that will be equipped and via transversal junctions connected to the existing tube. This will enable compliance with the Directive 2004/54/EC on minimum safety requirements for road tunnels on TEN-T network. Also, new road side facility will be built on the Kvarner side of the Učka tunnel. The works will also include the following: construction of new Vranja Interchange, construction of new underpass and 2 new overpasses, construction of connecting road over the portal of both tubes of the Učka tunnel on the Istrian side, construction of 3 new toll plazas and construction of new building for fire brigades on the existing plateau on the Istrian side of the Učka tunnel. It is expected that construction of subphase 2B2-1 will lead to a series of benefits for the



*As of 31<sup>st</sup> December 2020, ARZ Company was merged with HAC Company and ARZ does not exist any longer. All long-term activities planned by ARZ will be continued and carried out by HAC.*



citizens and for users of motorway including: improvement of road safety level of this motorway section, decrease of bottlenecks, shortening of the travel time, improvement of environmental protection, upgrade of overall Trans-European road network (TEN-T). All this will enable adequate connection of Istrian region with the rest of the Republic of Croatia, improvement of economic and social cohesion and significant economic benefits. Construction works on this section will take 3.5 years whereby in average 500 employees and almost 100 construction machines, out of which 10 are special tunnel boring machines for tunnelling of second tube of Učka tunnel in parallel from the Kvarner side and Istrian side of the tunnel. It is estimated that works on this subphase will boost the GDP increase by 0,5 %.

Works on phase 2B1, i.e. widening to full motorway profile of the section Pazin – Učka tunnel were carried out as planned and section Rogovići – Cerovlje was open to traffic in November 2020 (total length of 12,60 km). Works on section Cerovlje – Vranja (16,82 km) should be finished by fall 2021 at the latest.

**In 2020 the company's activities were also focused on:**

For sixth year in a row BINA-ISTRA proposes to its users new ETC subscription model with unlimited duration of funds available on their accounts and 10 % discount on toll price.

In addition, all current and future ETC users have the possibility to associate their ETC device with their credit card or INA fleet card account. In that way users do not need to replenish their ETC account, but their credit card or INA fleet card is charged on monthly basis for all trips made in one month. The feedback from users is positive.

BINA-ISTRA introduced improved web page version for mobile phones offering to users better and more user-friendly experience while searching for information on ETC packages, gathered information about weather forecast, conditions on Istrian Y motorway, road assistance including automatic localisation on the motorway, possibility for ETC users to access to their personal accounts and about general organizing travel information and other useful information.

**In 2021 Company plans the following activities:**

- Completion of upgrade to full motorway profile of the Pazin – Učka tunnel Section (Phase 2B1)
- Construction of second tube of the Učka tunnel including the Vranja – Učka tunnel Section (Subphase 2B2-1)

**In the long term the Company plans as follows:**

- Construction of two additional lanes between Matulji and Učka tunnel (Subphase 2B2-2)
- Doubling of Mirna and Limska Draga viaducts (Subphase 2B2-3)
- Debt refinancing

**AUTOCESTA ZAGREB-MACELJ d.o.o.**

**Long term project of AZM:**

- Upgrade of the left carriageway of the A2 Krapina – Đurmanec Section of the total length of 3,9 km to the full motorway profile and
- Construction of noise protection walls at Jankomir – Krapina (Velika Ves) motorway Section



## Key Data

Croatia	2019	2020	% (20/19)
The total length of motorway network, in km, as on 31/12/2020	1.306.5	1.306.5	
<b>TOLLED NETWORK LENGTH</b>	<b>1.306.5</b>	<b>1.306.5</b>	
2 x 1 lanes – not including the stopping lane	57.1	44.5	
2 x 2 lanes – not including the stopping lane	1,228.6	1241.2	
2 x 3 lanes – not including the stopping lane	20.8	20.8	
2 x 4 lanes – not including the stopping lane	0	0	
Length of tunnels longer than 500 m (in km of tunnel tubes)	79.18	79.18	0
Number of tunnels operated by the members longer than 500 m	31	31	0
Single directional length of bridges longer than 100 m	55.01	55.01	0
Number of bridges operated by the members longer than 100 m	171	171	0
<b>NETWORK</b>			
Number of km opened to traffic	2019	2020	
MOTORWAYS	0	0	
WIDENING OF EXISTING STRETCH TO FULL MOTORWAY	0	12.6 <sup>(1)</sup>	
SEMI-MOTORWAYS/FAST ROADS	10.6	0	
Number of km under construction as on 31/12	2019	2020	
MOTORWAYS	25.3	25.3	
WIDENING OF EXISTING STRETCH TO FULL MOTORWAY	10.3	16.8 <sup>(1)</sup>	
Planned opening of new sections, in km	2020	2021	
MOTORWAYS	0.3	0.3	
WIDENING OF EXISTING STRETCH TO FULL MOTORWAY	10.3	16.8 <sup>(1)</sup>	
<b>INVESTMENTS</b>			
New investments (in M€)	58.65	95.25	62.4
Investments into existing network (in M€)	52.62	60.19	14.4
Total annual investments (in M€)	111.27	155.44	39.7
<b>TOLL REVENUES in 2020, in EUR (without VAT)</b>			
Annual toll revenues from light vehicles (in M€)	302.95	185.97	-38.6
Annual toll revenues from heavy vehicles (in M€)	122.79	100.67	-18.0
Annual toll revenues – total (without VAT, in M€)	425.74	286.64	-32.7
Taxes other than VAT calculated on toll	0	0	0
VAT %	25 %	25%	0
Calculated VAT/VAT charged on tolls (in M€)	106.43	71.66	-32.7
<b>EMPLOYMENT</b>			
Total full-time employees <sup>(2)</sup>	3,048	2,922	4.1
<b>TRAFFIC DATA</b>			
AADT LIGHT VEHICLES	14.695	9.911	-32.5
AADT TRUCKS	2.496	2.052	-17.8
AADT LV + HV	17.191	11.963	-30.4
<b>NUMBER OF KILOMETRES TRAVELLED (10<sup>6</sup> x km)</b>			
Total number of kilometres travelled	8,000.7	5,582.5	-30.2
Number of kilometres travelled – light vehicles	6,839.26	4,624.7	-32.4
Number of kilometres travelled – heavy vehicles	1,161.47	957.81	-17.5

Croatia	2019	2020	% (20/19)
<b>ROAD SAFETY</b>			
Total number of accidents on motorways <sup>(3)</sup>	2,697	2,123	-21.3
Number of accidents with injuries	272	182	-33.1
Number of fatalities	31	22	-29.0
Number of injuries	459	294	-35.9
Fatality rate	3.50	3.94	12.6
Number of kilometres travelled (10 <sup>6</sup> x km)	8,000.73	5,582.51	-30.2
<b>TOLLING</b>			
Total number of toll transactions	86,660,015	62,256,768	-28.2
Number of toll transactions – light vehicles	76,492,974	53,483,812	-30.1
Number of toll transactions – heavy vehicles	10,167,041	8,772,956	-13.7
Total number of ETC transactions	30,298,213	23,687,852	-21.8
% of manual transactions (other forms of payment; CC, BC and fuel cards)	65	62	-5
% of ETC transactions	35	38	8.6
Number of toll stations	108	108	0
Number of toll lanes	712	714	0.3
Number of ETC lanes or mixed lanes	505	506	0.2
Number of ETC subscribers – total	461,445	484,583	5.0
Number of ETC subscribers – light vehicles	n/a	n/a	0
Number of ETC subscribers – heavy vehicles	n/a	n/a	0
Number of ETC devices in use	788.278	791.388	0.4
Length of the network tolled electronically (in km) <sup>(5)</sup>	1,178.2	1,178.2	0
Length of the network tolled in the MLFF (Multi-lane free flow)	0	0	0
<b>ITS</b>			
Length of the network covered by traffic monitoring	1.079	1.113	3.2
<b>SERVICES</b>			
Number of truck parking lots or spaces	2.122	2.122	0
Number of roadside rest areas (with filling stations)	74	74	0
Number of rest areas	124	121	-2.4
Number of restaurants	27	29	7.4
Number of hotels	9	9	0
<b>ENVIRONMENT</b>			
Euro-emission classes (yes/no)	NO	NO	0
If yes: % of »clean traffic« (per Euro class categories EURO V, VI and EEV)	NO	NO	0

(1) Widening of the existing section of Istrian Y to full motorway profile

(2) Total number of work force in all motorway companies and their operators

(3) BINA-ISTRA figures on traffic accidents are given for the total network of Istrian Y (both motorway and semi motorway) while safety ratios are given only for stretches in full motorway profile to be comparable with other concessionaires.

(4) The percentage of penetration of ETC in total transactions is not taking into account AZM Company which does not have ETC

(5) The Autocesta Zagreb-Macelj d.o.o. has not yet introduced the ETC





THE CROATIAN ASSOCIATION  
OF TOLL MOTORWAYS  
CONCESSIONAIRES

www.huka.hr



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