



## State Geodetic Administration (SGA) Croatia

## Benefits for the society by improving the Croatian Cadastral Data

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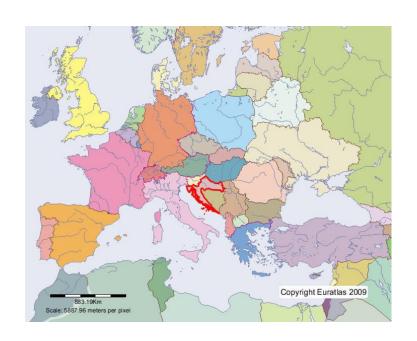
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## The Republic of Croatia

- Republic with multi-party parliament
- [Constitution adopted on 22 December 1990]
- 56 594 sq km (land surface)
- Counties (21), including the City of Zagreb; Towns (127); Municipalities (429); Settlements (6755)
- 4.290.612 persons /75,81 persons /sq km,
- Croatia became the 28th member state of the European Union on 1.
   July 2013.







## **Cadastral & land registry data**

- the first land cadastre still in use today was created in the 19<sup>th</sup> century, at the time when Croatia was part of the Austro-Hungarian Empire
- Cadastral data is the base for establishing LR
- Two data bases/Two different ministries/Two different agencies:
- Cadastre A, B
- Land Registry A, B, C
- all data are transformed in digital form

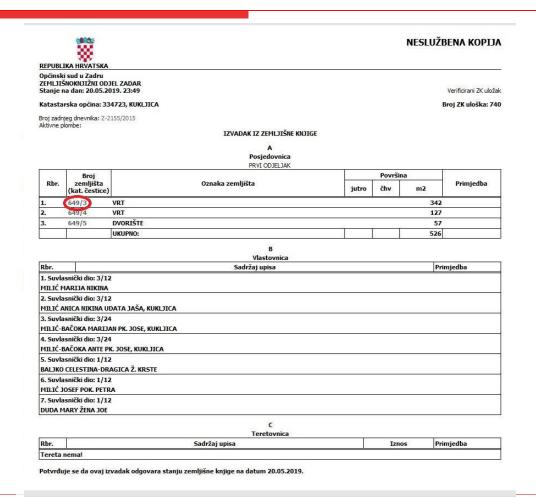






## Quality of the cadastral & land registry data

- Data about the same parcel is different in C&I R
- The number of the parcel is not always the same in C&LR (dual numeration about the same parcel)
- In some cases the graphical data are lost or destroyed
- Security in real property rights in not secured by using these data







## Improvement of data

### **New cadastral surveys**

- Cadastral survey is collecting and processing of all necessary data for the purpose of establishing cadastral parcels, recording of buildings, recording of special legal regimes on land and land use, and making cadastre of real estate cadastre (and new land registry).
- The process of cadastral survey ensures harmonized data between the cadastre and land registry and actual situation on the field.

#### Homogenization

- geometric improvement of the cadastral maps, a technical action that does not change the legal state of the cadastral graphical data and cannot substitute the cadastral survey
- The process of homogenization ensures geometric improvement of cadastral maps and ensures easier and better maintaining of graphical data but not harmonized data between the cadastre and land registry and actual situation on the field.





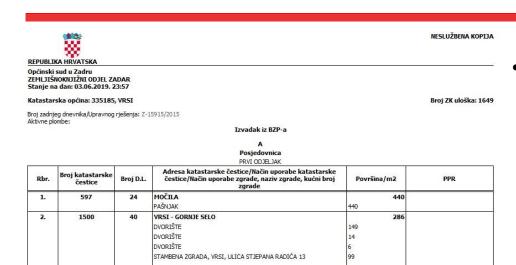
## **New cadastral survey**

- The decision on cadastral survey is made by the **State Geodetic Administration** (in the agreement of the Ministry of Justice) and some technical activities within cadastral survey are done by private sector
- Public representation of collected data is conducted simultaneously and is linked to the establishment, renewal or amendment of the land registry. (2 commissions, cadastral and land registy)
- The decision on putting into the official use of the cadastre of real estate cadastre
  is issued by the director of SGA on the basis of a notice issued by the competent
  court on the date of opening the land register





## New cadastral surveys



Rbr. Sadržaj upisa Primjedba

Zaprimljeno 03.11.2015.g. pod brojem Z-15915/2015

1.1 ZABILJEŽBA, u smislu članka 174 st. 2 Zakona o gradnji ( NN-153/13) da je za građevinu na čest.br.1500 priložena Uporabna dozvola za građevine izgrađene do 15.veljače 1968.g. izdana od Upravnog odjela za provedbu dokumenata prostornog uređenja i gradnje ZŽ od 7.rujna 2015.g. (Basa: UPJ-361-05/15-30/000517, Ur. br. 239/81-11/8-15-0009.

Vlastovnica			
Rbr.	Sadržaj upisa	Primjedba	
1. Vlasnički di TRESOGLAVIO	io: 1/1 É BOŽE, MATE, OIB: 13345037469, VRSI, VRSI II ULICA 35	**	

Teretovnica				
Rbr.	Sadržaj upisa	Iznos	Primjedba	
Tereta nema!				

Potvrđuje se da ovaj izvadak odgovara stanju baze zemljišnih podataka na datum 03.06.2019.

SPREMIŠTE

UKUPNO:

- The final product of cadastral survey and administrative and court procedure is unified data for cadastral parcel & ownership (Land data base)
- Maintaining the C&LR data is
  organized in one common database Joint Information System of Land
  Registry and Cadastral data (JIS)

06.06.2019.

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## Before and after new cadastral survey



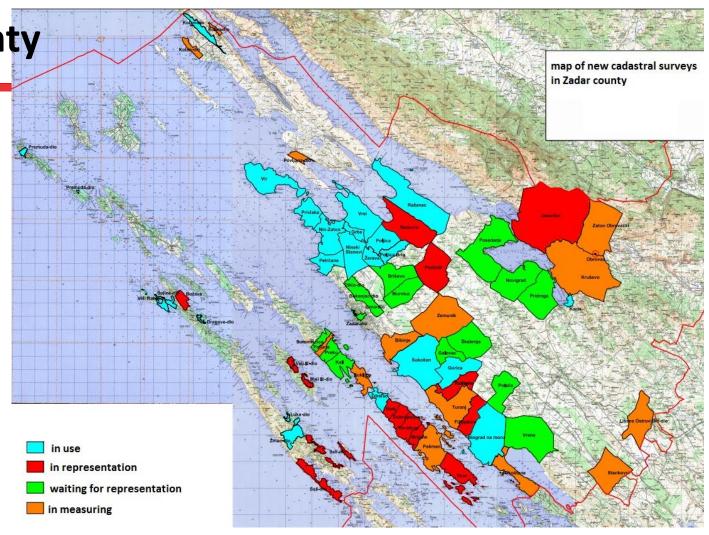




**Zadar county** 

- •26 in use,
- •16 in representation,
- •16 waiting for representation,
- •10 in measuring

of 161 Cadastral Municipality in total





# Benefits for society after new cadastral survey (1)

- the rise in real estate prices in terms of fully arranged and transparent ownership,
   rise of sold ground
- rise in tax revenue based on real estate sales
- continuously increasing job opportunities in the construction sector
- arranged, organized and accurately described real estate is the precondition of good planning and economy of the area
- big infrastructural projects involving vast land surfaces and a large number of landowners which cannot be realized in mismatched conditions are also affected. (EU funds)





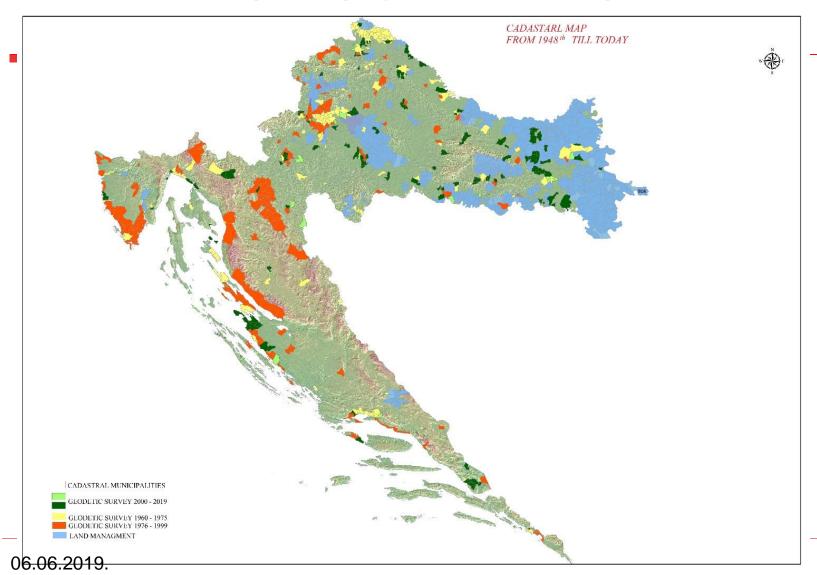
# Benefits for society after new cadastral survey (2)

- optimization of land disposition allows the definition of special business zones and other similar sites that strongly influence the economical development of particular area
- exploitation of these real estates in terms of calculation and collection of utility, fiscal and other charges is maximized
- increase of budget funds and revenues of local self-government units
- better management and real estate records and thus higher revenue related fees





## HOMOGENIZATION







Geometric improvement of the cadastral maps. A technical action that does not change the legal state of the cadastral graphical data and cannot substitute the cadastral survey

### **Legal framework**

- The Law on State Survey and Real Property Cadastre (Official Gazette, no. 112/2018)
- The Rule book about cadastral survey and technical reambulation (Official Gazette 147/2008)





#### Goal:

 improve map so that changes based on the measured individual geodetic surveys can be drawn in the official records by the method of overlapping the measured data and properly represent the real position on the field.

## The challenge:

- correct deformations
- keep the parts of the cadastral maps that are already mapped by the geodetic records unaltered on their position.





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## **Deformation**



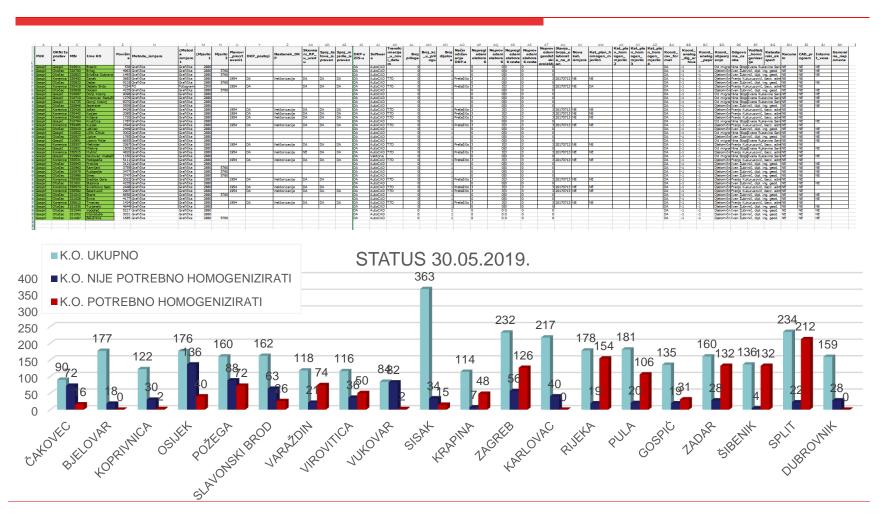








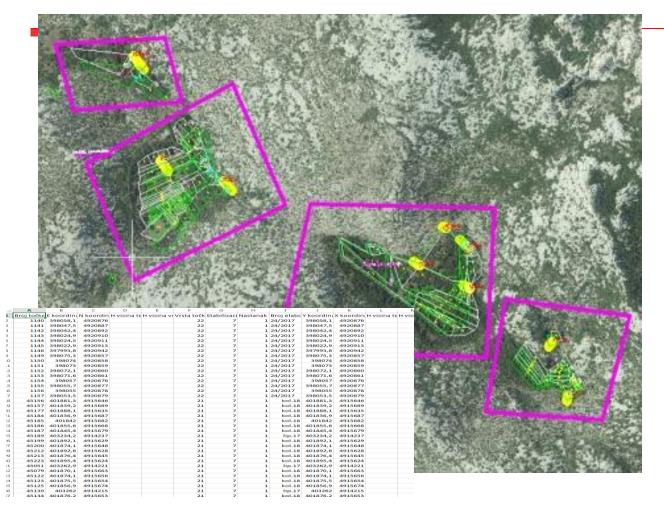
## Analysis of the data







## Types of transformation parameters



- Identical points
- Isolated areas
- Points from geodetic records





## Before - After











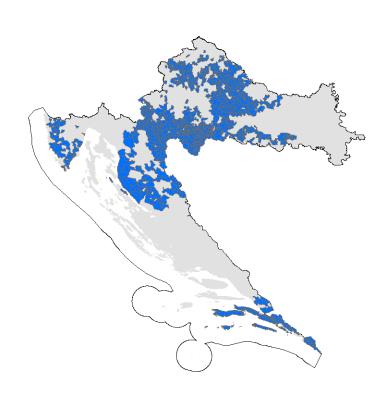












The homogenization process based on this methodology is now in implementation in Republic of Croatia. Till today 1253 cadastral municipalities has been improved. The process will include 2500 cadastral municipalities. According to schedule, whole process will be finished in year 2020.





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