




# CADASTRE INVOLVEMENT IN SUSTAINABLE DEVELOPMENT AS AN ESSENTIAL COMPONENT

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## SUSTAINABLE DEVELOPMENT



 It is a modern and  
global philosophy of  
the natural resources  
management.

It keeps a balance  
between using,  
saving and restoring  
all our resources.

It is understanding that  
the future generations  
will largely depend on  
our present activities.

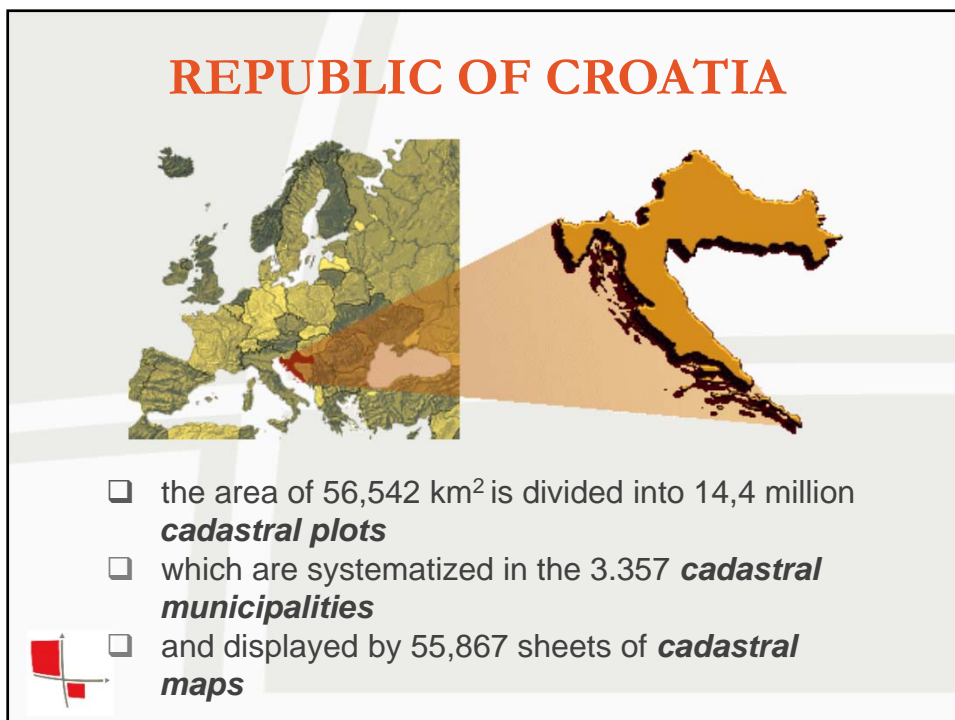
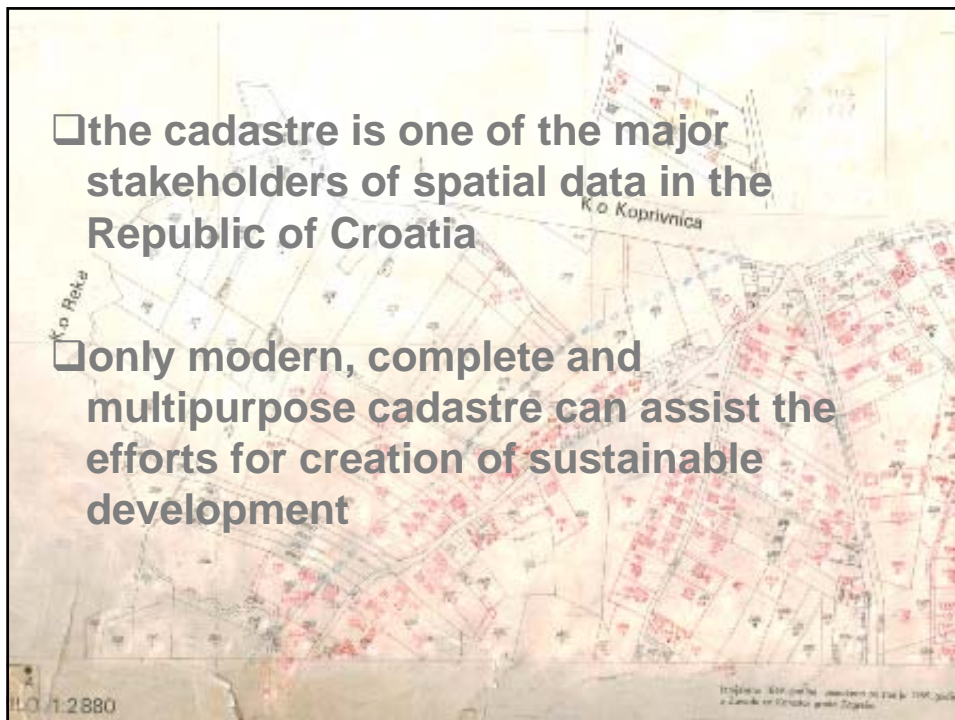
**SUSTAINABLE DEVELOPMENT** points to the need to create a balanced relationship between three seemingly conflicting areas:



**If it is taken seriously, result will be drastic changes in almost all areas of life**

- due to these changes we become increasingly dependent on system that provides us with quick, secure and highly effective source of information in order to create the conditions for making correct decisions
- given as today every piece of information contain a land component it is necessary to have the cadastre involved in the process





## Dual Land Registration System

- ❑ **The cadastre** parties under the jurisdiction of the State Geodetic Administration - documenting the status of the land



- ❑ **Land registers** under the jurisdiction of municipal courts – documenting the real property



## State Geodetic Administration

- legislation
- licensing
- geodetic network
- State survey
- mapping
- **cadastre**
- photogrammetry
- quality control
- spatial units register
- State boundaries



- NSDI

## Regional Cadastral Offices

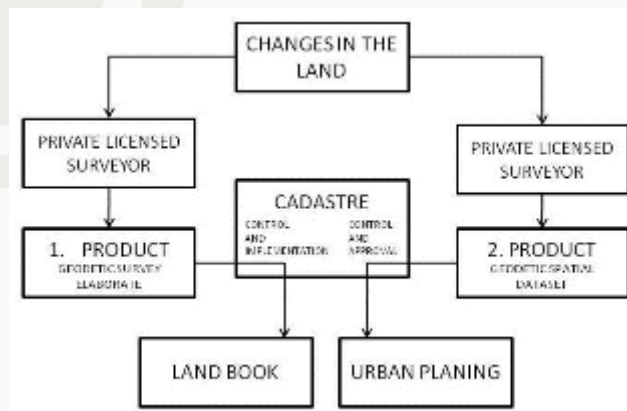
- input, control, registration, presentation of information and issuance of data is an everyday work of cadastre employees



- they correct inherited errors in the graphical or written data which also directly improves the cadastral data



- they record changes in the type of land use
- they control the final outputs of private licensed surveyors - *geodetic survey elaborate* or *spatial geodetic dataset*



## Private Licensed Surveyors

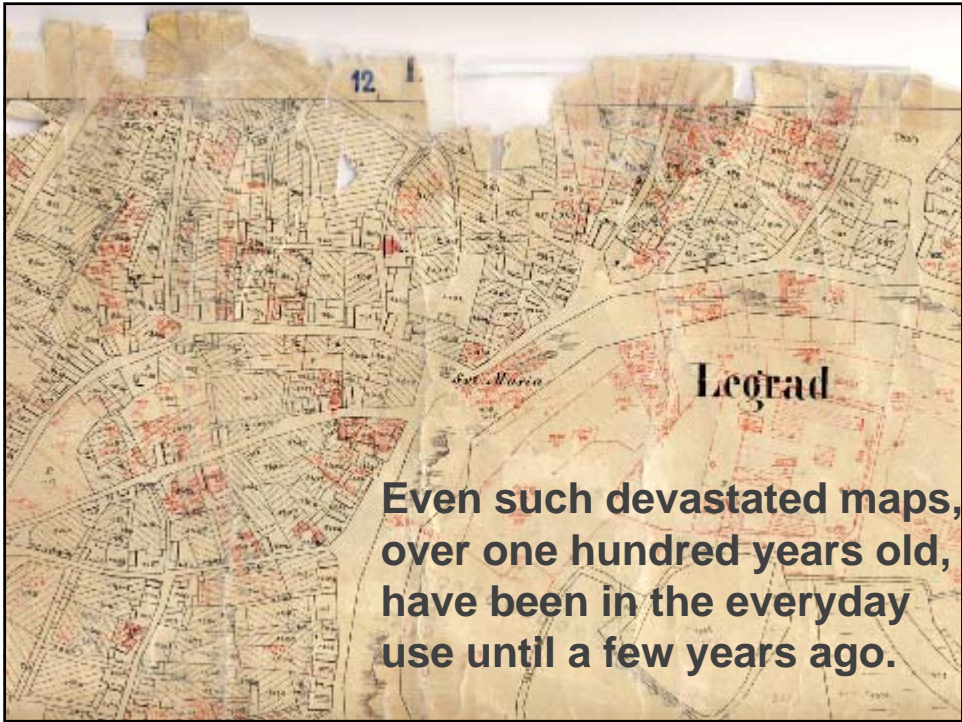
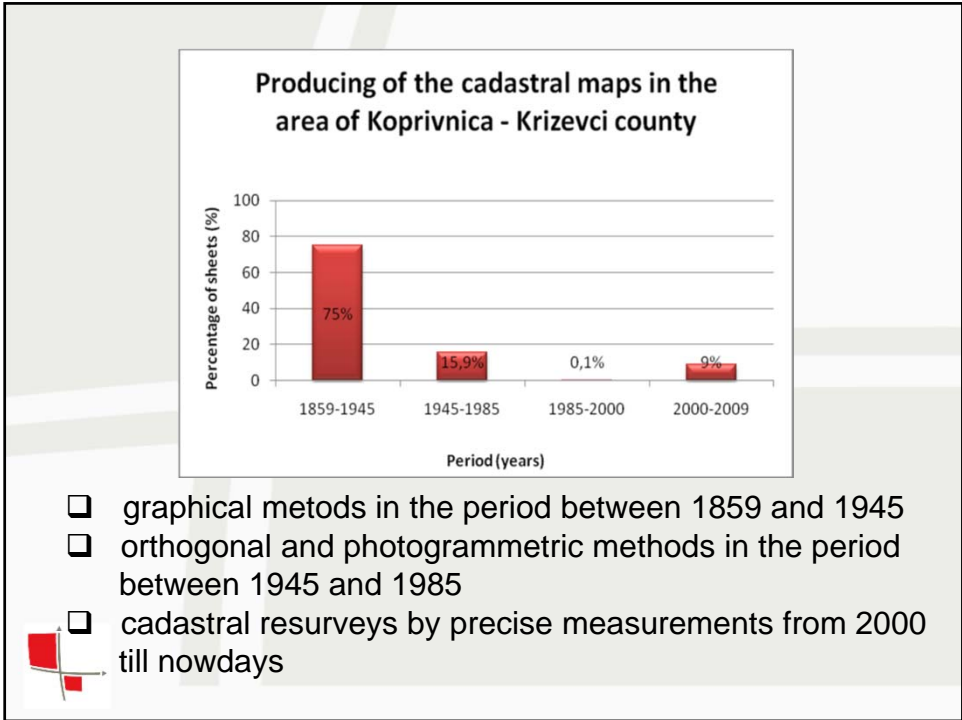
- they produce about 40,000 elaborates a year
- they also perform cadastral resurveys of an entire cadastral municipality or a large tract of agricultural land owned by the State
- the SGA is responsible for their licensing and has established an inspection that controls the work of licensed firms



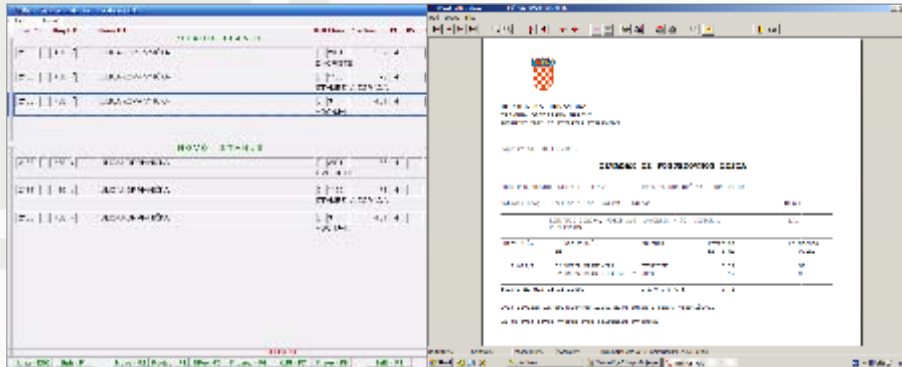
## Cadastral System

- was established in the 19 th century
- has stagnated in its development during 50 or so years
- was ill prepared to play a vital role in booming land market of the 1990's
- the improvement of the cadastre-based information was necessary



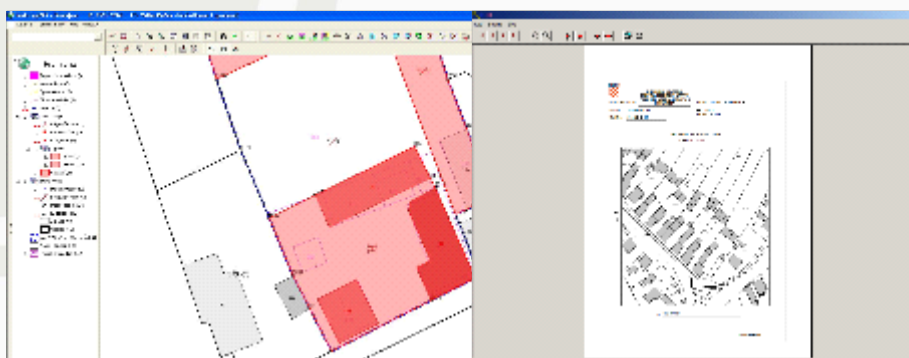


The written information (*owner, address, type of use, purpose of building and special status of the land*) is systematized on the possession registration sheets:



The written cadastral data is the first set of land administration public data that are fully digitized.

The geometric description of the land (*location, shape, area and buildings*) for each cadastral plot is displayed on the cadastral maps systematized in cadastral municipalities:



The transformation of the graphical data into digital form has enabled the comparison with written data which resulted in significant improvements of existing data



## Cadastral Resurveys

- only they provide a complete renewal of cadastre and land registers
- people get a digital portrayal of what they own
- property is clear/accurate records of the real property
- all buildings are charted on a particular part of the land
- data in the Cadastre and Land books is fully compliant



## Course of Implementation

- public tenders for private licensed companies
- signing of an agreement (financiers are SGA, municipalities, counties...)
- the Ministry of Justice necessary approval and official announcement
- informing citizens about their obligation-all land owners are obliged to stake out the boundaries of their property
- establishing a new geodetic network



- geodetic survey and collecting other land description and data about owners
- production of digital maps and orthophotos
- drafting of geodetic elaborate with technical report about resurvey
- public review and court procedure:



- establishing the new cadastral documentation and a new land book



## Indicators of the Benefits

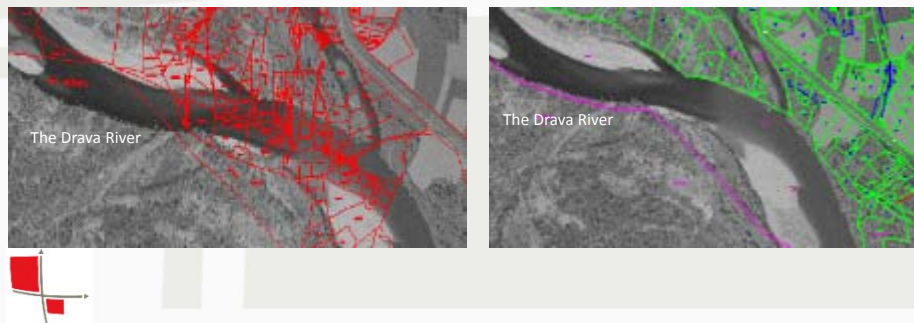
- after the resurveys fragmentation of the land was reduced and security in land transaction increased:

CADASTRAL MUNICIPALITY	AREA (ha)	The number of cadastral plots before resurveying	The number of cadastral plots after resurveying	The number of recorded buildings before resurveying	The number of recorded buildings after resurveying
Podravske Sesvete	3231	9007	5603	507	2203
Jagnjedovec-grad	1373	5953	3053	940	2600
Legrad	3332	9813	5350	765	2367
Gola	1965	6459	3566	820	2820
Reka	1826	5251	2540	971	1921
Kunovec Breg	474	4067	2500	762	1510



## The Difference in Graphical Data

- ❑ the difference is evident when comparing the old cadastral map of the Drava River laid over the digital orthophoto and the new map with the same part of the Drava River laid over the digital orthophoto:



## THE REFORM AND THE RESURVEYS

- ❑ in the past ten years, over 200 million € have been invested in the land administration reform
- ❑ **in 2003 the State officiated a long-term project – The Reform of the Land Registers and the Cadastre**, based on cooperation between two leading organizations in the land administration sector, financed from World Bank Loan, No. –HR-4674
- ❑ an necessary and urgent cadastre development and expansion (if viewed through data, human resorces, organization and tools) began

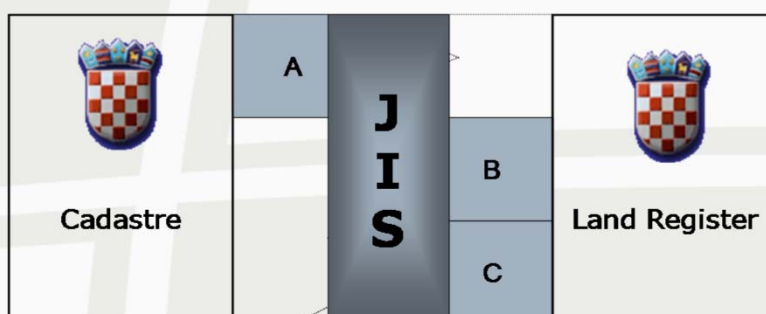


**Within the framework of the Reform many operations are being undertaken:**

- capacity building in the land administration making it capable of implementing the Reform
- digitalization of the paper-based cadastral maps
- renewal of the cadastral and land register data through ***cadastral resurveys***
- public awareness campaign
- establishment of the Joint Information System and National Spatial Data Infrastructure



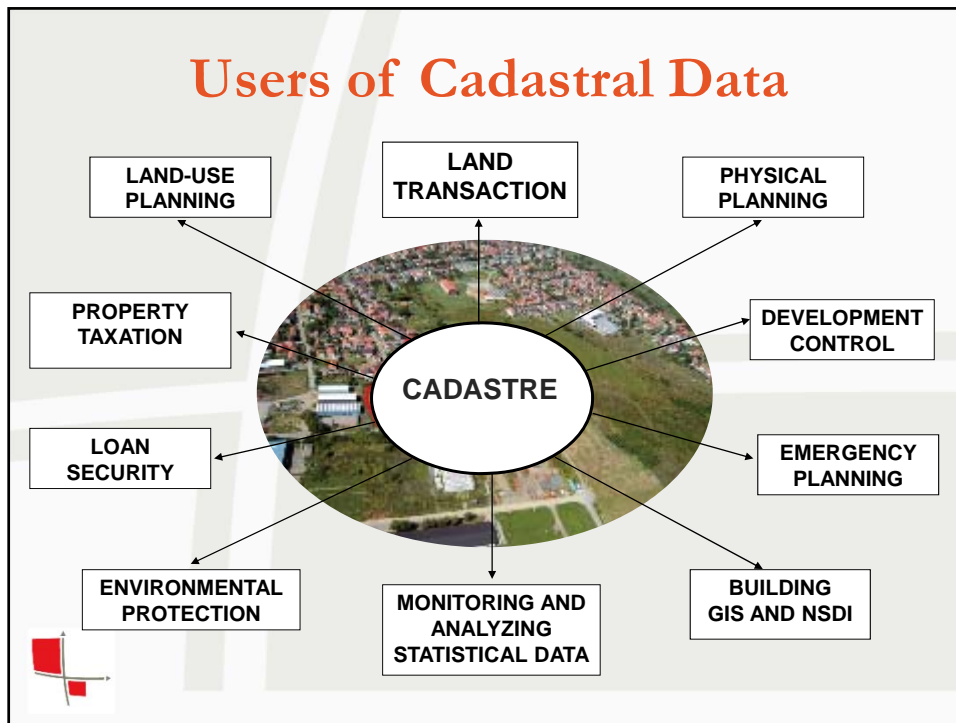
- The Reform has reached the inception level of Joint Information System which is currently in the process of creation:



- A – technical description of the cadastral parcel
- B – owner or holder of other rights
- C – encumbrance sheet

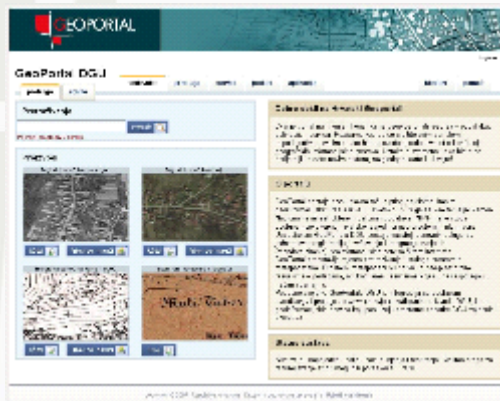


## Users of Cadastral Data

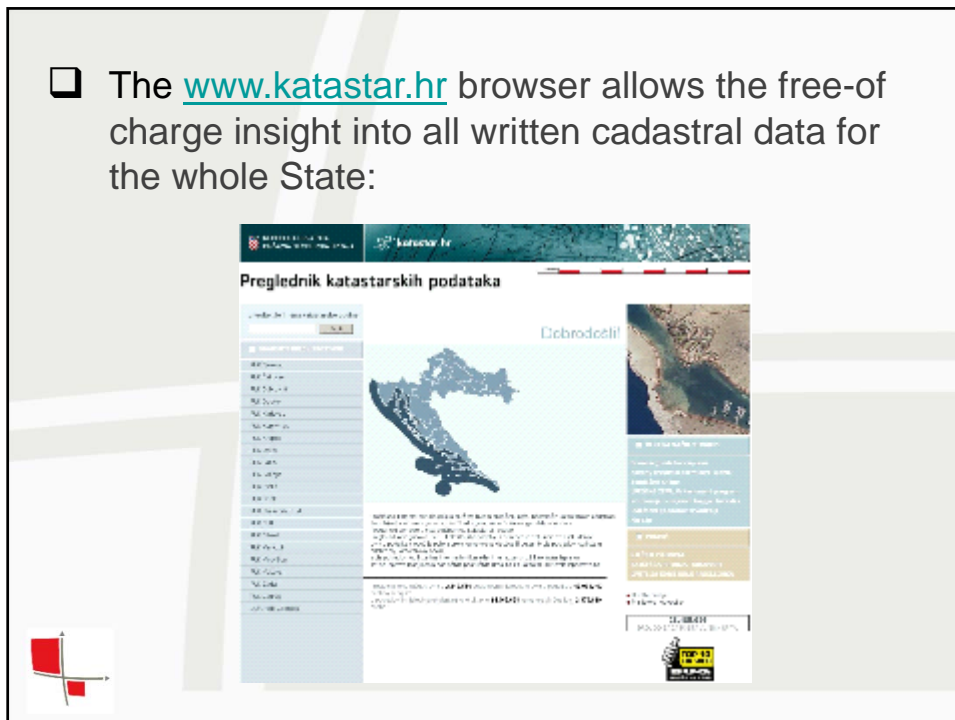


## Publicity of Cadastral Data

- ❑ The [www.geo-portal.hr](http://www.geo-portal.hr) browser allows the free-of charge insight into all digital cadastral maps, orthophotos and other digital topographical maps for the whole State:



- ❑ The [www.katastar.hr](http://www.katastar.hr) browser allows the free-of charge insight into all written cadastral data for the whole State:



- ❑ the [www.cropos.hr](http://www.cropos.hr) browser enable the point positioning in the real time in the entire State. The users have to registrate and pay for the services according to the regulations



- ❑ *the benefits of using the digital on-line cadastral data are obvious and attractive and they include improving timeless, speed an efficiency of the system, extended hours of availability and searching data at home*

## CONCLUSION

- ❑ we make continuous efforts to establish a strong and efficient land administration which can promptly address the future challenges, support the Croatian economy and become an equal peer entity in the process of sustainable development
- ❑ the comparison with the countries that have taken care of their spatial data for centuries is here inappropriate, our path was different and thorny because of discontinuity of 50 and so years
- ❑ one has to be realistic and aware of the fact that these activities require a lot of time, even after the system is built, we will still be facing long and challenging road
- ❑ cadastre is faced with rapid technological and political challenges and transformation into the quick, secure and highly effective cadastral system is ongoing

