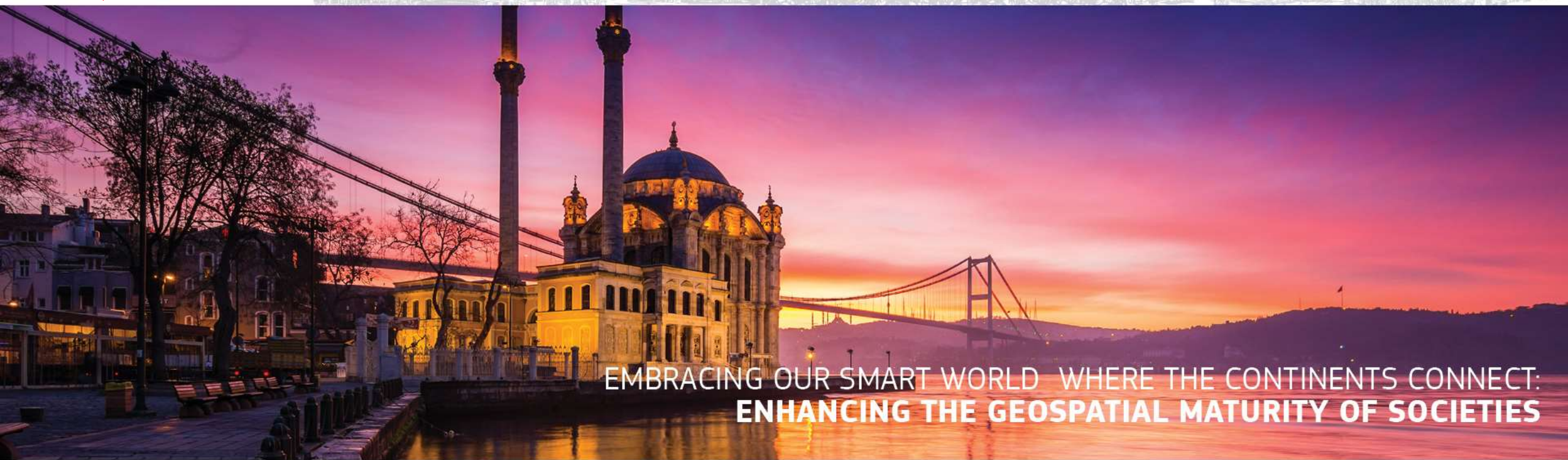
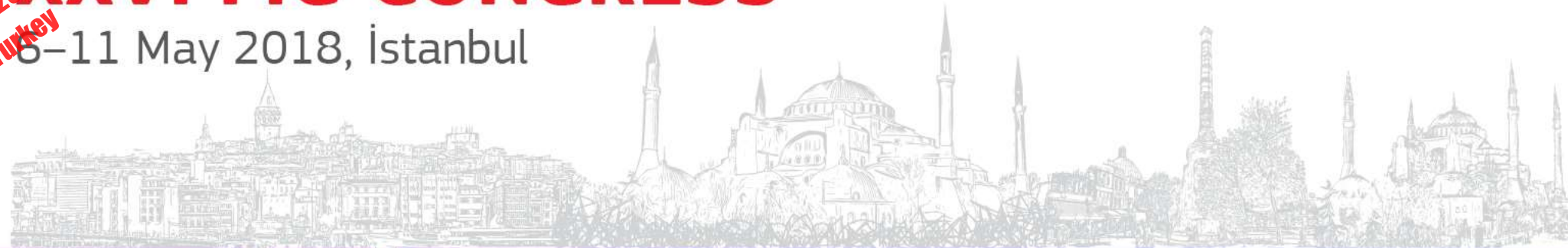


FIG
2018
ISTANBUL

Presented at the FIG Congress 2018
May 6-11, 2018 in Istanbul, Turkey

XXVI FIG CONGRESS

8-11 May 2018, İstanbul



EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6-11 May 2018, Istanbul

Design and Determine Cadastral and Land Management Performance of Turkey with Cadastre 2034 Vision

Mehmet ALKAN *, Hicret Gürsoy SURMENELI* and Zeynel Abidin POLAT * (Turkey)

*Yildiz Technical University, Civil Engineering Faculty, Department of Geomatics

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6-11 May 2018, İstanbul



CONTENTS

INTRODUCTION

PURPOSE of STUDY

MATERIAL

RESULTS

- The Vision of Cadastre 2014
- The Cadastre 2014 Studies and Performance In Turkey
- The Comparison of Cadastre 2014 Activities In Other Countries With The Situation In Our Country
- The Works for Cadastre 2034
- The Description Turkey Cadastre With Cadastre 2034

CONCLUSION

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6–11 May 2018, İstanbul



INTRODUCTION

LTC data has two components in Turkey; land title data and cadastral data. Land title data includes such information as the owner and ownership rights (Comert & Alkan 2004; Alkan and Comert, 2010). Whereas, cadastral data defines the location, shape and size. In Turkey these two components are handled by land title and cadastre offices which are separate state departments.

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6-11 May 2018, İstanbul



INTRODUCTION

(FIG)'s 7th Commission which deals with the subjects of Cadastre and Land Management decided that a vision should be developed for cadastre in the following 20 years period in XXth ordinary congress in 1994. Within the scope of this decision, the working group completed its long-term studies and published a report named "Cadastre 2014 - A Vision for A Cadastral System in the Future" in 1998. This study called as "The Vision of Cadastre 2014" has underlined the view on how cadastre will be developed and how it will look like in the following twenty years. Within the scope of determined targets, the working group reviewed the current cadastral systems for developing the vision and researching the trends on the cadastre as a first step. For this purpose, a survey was decided to prepare for determining the existing developments related to the cadastre in the world in the first year interviews of commission members. The survey form was arranged for analyzing the existing cadastral trend in the world and these surveys were conducted for many countries. Many important suggestions occurred as a result of this survey and six subjects were determined. It was agreed on six principles which are created within the public rights and integration of limitations, the activation of services, the digital format and data model, the partnership of public and private sector and the economic productivity are suggested to implement across the world (Steudler, 2006). These six principles were published as "The Vision of Cadastre 2014" by FIG in 1998.

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6-11 May 2018, İstanbul



PURPOSE of STUDY

In Turkey, there are a lot of cadastral works have been made under the leadership of the General Directorate of Land Registry and Cadastre (GDLRC). Also, a lot of academic studies should be found for Turkish cadastral and land management system. According to this, in this study, the technical, scientific and other studies that have been done so far in Turkey will be presented by a needs analysis. Based on the needs analysis and the 2034 vision, a description design for Turkey will be proposed in the context of both cadastre and land management.

Organized by



Main Supporters



Platinum Sponsors

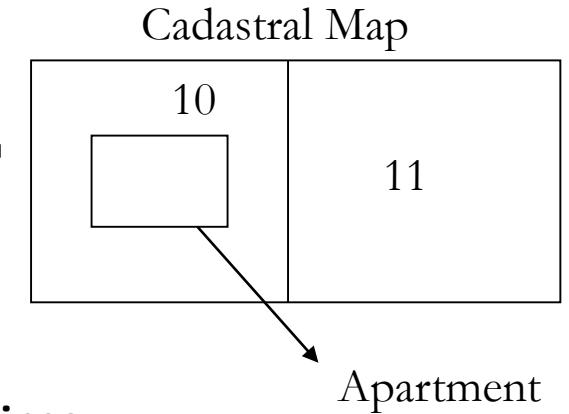




MATERIAL : Current Land Title And Cadastral Systems (Turkey)

Land Title Data : Parcel or apartment, owners, ownership rights information's.

Cadastral Data :



In the current land title and cadastre system of Turkey, real estate's such as land parcels, buildings, apartments, business offices etc. are defined with two general types of information. These types are named as "land title data" and "cadastral data" in this article.

In Turkey, land parcels are registered in the land title register while buildings, apartments, and business offices which are commonly called "independent parts" are registered in the real estate register.

Organized by



Main Supporters



Platinum Sponsors

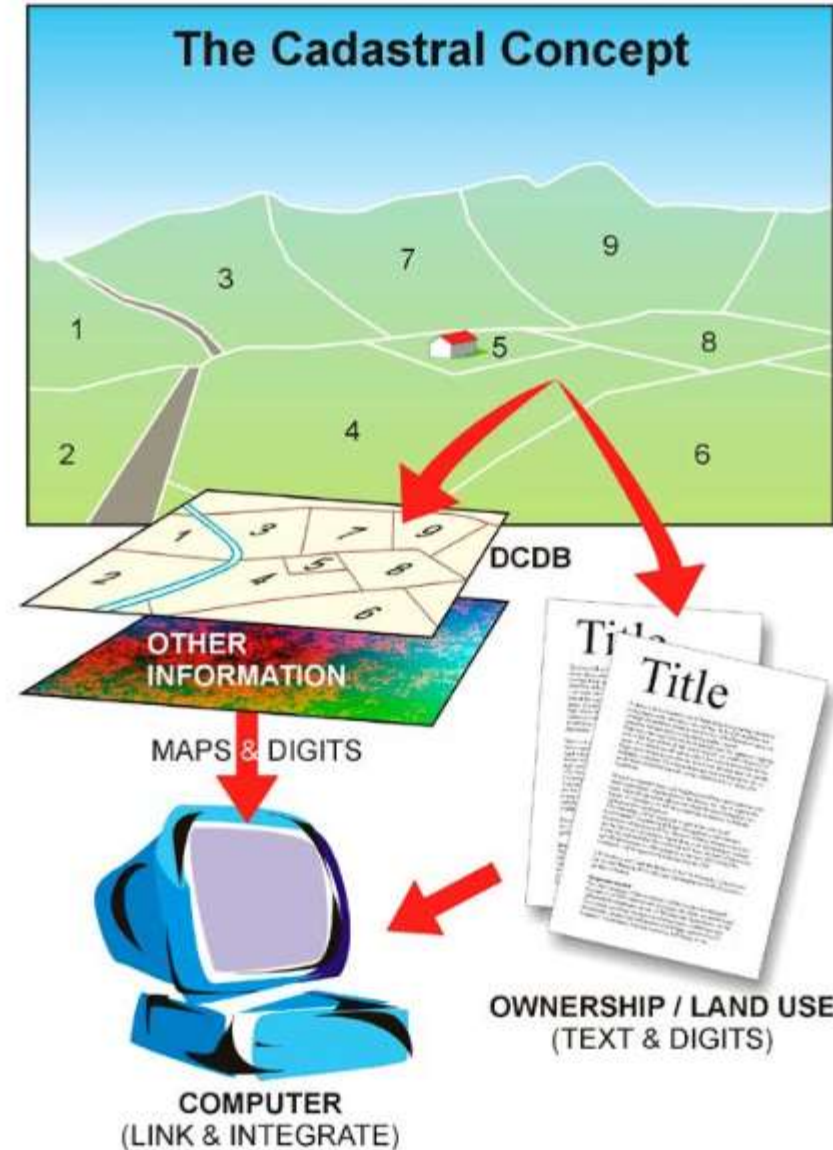
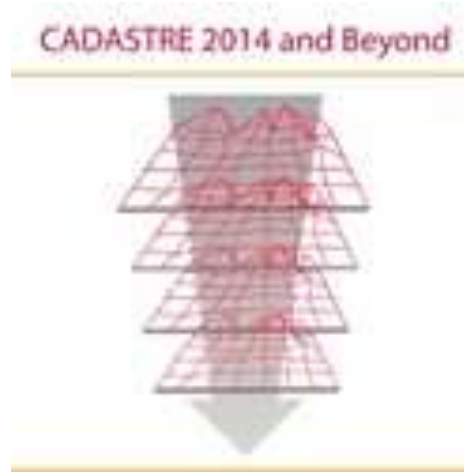




RESULTS

THE VISION OF CADASTRE 2014

- According to the first principle of the Cadastre 2014, "*The Cadastre 2014 will indicate all legal condition of land including the public rights and limitations*". The world population and the consumption of land have increased. The full monitoring of personal and legal existence of land have gradually limited by the public interests. In order to ensure the security for having lands, all facts related to land should be clearly realized by future cadastral systems.



Organized by



Main Supporters

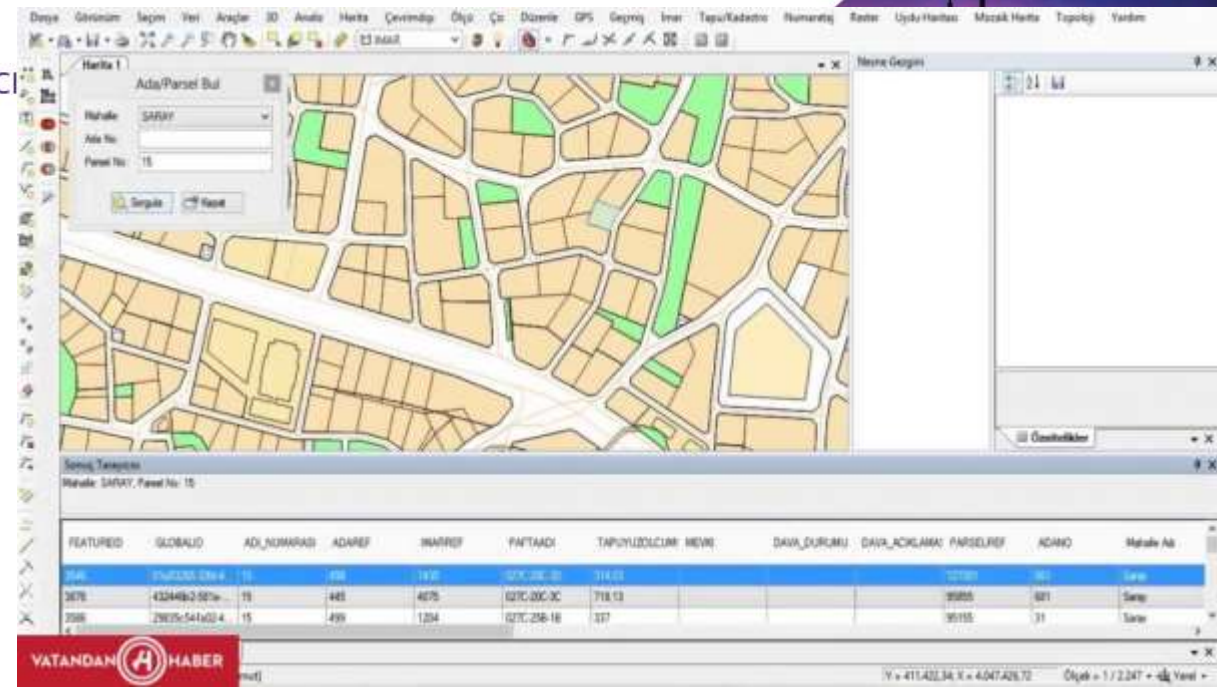


Platinum Sponsors





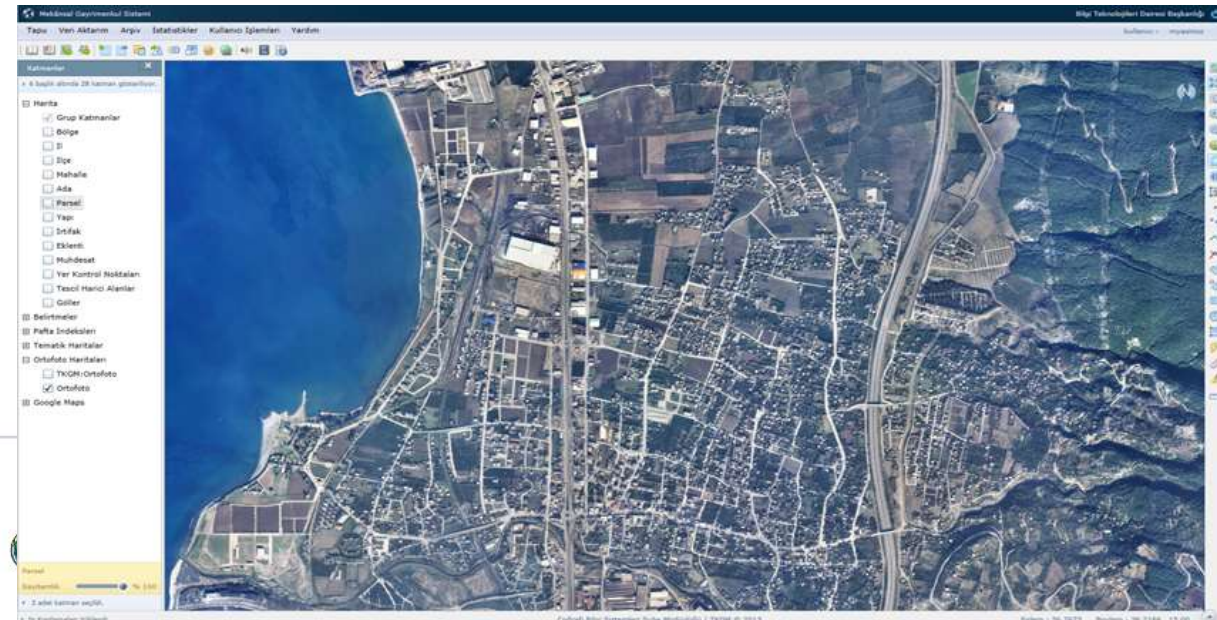
EMBRACI



RESULTS

THE CADASTRE 2014 STUDIES AND PERFORMANCE IN TURKEY

- Turkish Land Registry and Cadastre Information System (TAKBIS)
- Spatial Property System (MEGSIS)
- Land Registry Archive System (TARBIS)
- Land Registry and Cadastre Modernization Project (TKMP)
- The Map Data Bank (HBB)
- Turkey's National Geographic Information System Project (TUCBS)
- The Licensed Topographical and Cadastral Offices (LIHKAB)



Organized by



Main Supporters



Platinum Sponsors





RESULTS

EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
 6-11 May 2018, İstanbul



Table : The relationship between each project and these 6 principles are presented with their realization percentages

Name of Activity/Project	Start/End date	The Six Statements on Cadastre 2014					
		1- Cadastre 2014 will show the complete legal situation of land, including public rights and restrictions	2- The separation between 'maps' and 'registers' will be abolished!	3- The Cadastral mapping will be dead! Long live modelling!	4- 'Paper and pencil - cadastre' will have gone!	5- Cadastre 2014 will be highly privatized! Public and private sector are working closely together!	6- Cadastre 2014 will be cost recovering!
Land Registry and Cadastre Information System (TAKBİS)	2005-2013	✓	✓		✓		
Spatial Property System (MEGSİS)	2011-continues		✓		✓		
Land Registry Archive Information System (TARBİS)	2005-2009		✓	✓			
Land Registry and Cadastre Modernization Project (TKMP)	2008- continues	✓				✓	
Map Data Bank (HBB)	2004-2008			✓	✓		✓
Turkey's National Geographic Information System (TUCBS) Project	2006-2011	✓		✓			
licenced mapping and cadastre offices	2005-continues					✓	
Tax and fees							✓
Applied percentages of Statements on Cadastre 2014 (in Turkey)		60-80	100	60-80	80-100	100	100

Organized by



Main Supporters



Platinum Sponsors





RESULTS

The Six Statements on Cadastre 2014	Some countries and European average				
	Turkey	Greece (Lolonis, 2014a)	Slovakia (Horňanský at al., 2014)	Sweden (Land, 2014)	European average (Lolonis, 2014b)
1- Cadastre 2014 will show the complete legal situation of land, including public rights and restrictions	60%-80%	60%-80%	40%-60% (fulfilled only partially)	60%-80%	40%-60%
2- The separation between 'maps' and 'registers' will be abolished!	100%	100%	100% (applied fully)	80%-100%	80%-100%
3- The Cadastral mapping will be dead! Long live modelling!	60%-80%	100%	100% (applied fully)	80%-100%	100%
4- 'Paper and pencil - cadastre' will have gone!	80%-100%	80%-100%	100% (being applied)	100%	100%
5- Cadastre 2014 will be highly privatized! Public and private sector are working closely together!	100%	40%-60%	80%-100% (implemented to a considerable extent)	not applied	40%-60%
6- Cadastre 2014 will be cost recovering!	100%	80%-100%	not applied	100%	40%-60%

- **Table : Applied percentages of Cadastre 2014 Vision in some countries**

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
 6-11 May 2018, İstanbul



RESULTS

There is not much detailed information when the studies about cadastre 2034 are screened all over the world. Only detailed studies are available in Australia and New Zealand. When these studies are examined, it is seen that they define some visions in the context of cadastre 2034. They have been identified for their intended purpose. In this context, wherein after the vision and objectives in terms of what Turkey as part of cadastre and land management will be evaluated in this study can be done. The reason, detailed study and analysis is done in the context does not already cadastre in 2034 in Turkey. The work done here will be mentioned here.



Cadastre 2034

Outlook
 Cadastre 2034 anticipates that the modern cadastral system we know today will not fulfil community expectations in the future; we can already see a gap emerging between what we have and what will be needed.
 Societal demands will change substantially over the next 20 years as new technologies, environmental challenges and social and political influences gradually transform our inherent accountability, traditions, practices and thinking.
 Cadastre 2034 responds to these changes and the challenges they represent. It builds on the achievements of Cadastre 2014 that heralded the creation of digital cadastral and continues the journey to link cadastral information with broader social and legal interests on land¹⁶.

Purpose
 The purpose of Cadastre 2034 is to establish a single point philosophy on what the community can expect and what the government has to deliver in the future.
 Cadastre 2034 is intended to guide the evolution of jurisdictional systems and ensure a coordinated and consistent approach to planning future policies, legislation, standards, models and research.
 Each jurisdiction will use this high level strategy to work towards achieving the identified goals from their own unique starting points. This includes New Zealand, which shares the same vision and expectations but has a different physical and administrative environment¹⁷.

CADASTRE 2034 Powering Land & Real Property



Cadastre 2034

A 10-20 Year Strategy for developing the cadastral system:
 Knowing the 'where' of land-related rights



Organized by



Main Supporters



Platinum Sponsors





RESULTS

THE DESCRIPTION TURKEY CADASTRE WITH CADASTRE 2034

Table : General Framework of Cadastre 2034 and Land Administration for Turkey

Studies conducted in the context of cadastre in Turkey in 2014, was evaluated around the concept of six statements. It has been observed here that large requirements are provided. It also has important aspects in terms of land management.

The studies and analysis requirements according to Turkey's main objectives cadastral surveying in 2034 in the context of the framework provided by the 2014 principles are described herein.

	1	2	3	4	5
Goals	Sustainably Managed for Cadastral Systems	To Make an Accurate and Object Oriented Cadastral Systems	Definitions Rights, Restrictions and Responsibilities (RRR)	3D / 4D Cadastre Models for Real Word	Real-Time Cadastre (Accessible / Update / Interoperability)
Outcomes	Optimise general cadastral data model, standards and NSDI	Fix Parcel Boundaries, Upgraded to Survey-Accuracy, All of the Object Should be Defined Accurately	Integrated RRR	3D /4D Model for Real Cadastre System, Legislation for 3D /4D Cadastre	Accessed and Updated Cadastre and Land Title Information, Interoperable Cadastre at Any Time

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6-11 May 2018, İstanbul



CONCLUSION

- Although the property rights on the immovable property is under the state guarantee in our country, all legal conditions related to the property aren't completely reflected depends on the cadastre 2014 six statements. Many projects carried out in our country are valuable and important in the context of cadastre 2014.
- On the other hand, the criteria for cadastre 2034 should be put forward and the studies in this context should be carried out by GDLRC. In the light of these explanations, the general goals and outcomes for cadastre 2034 have been realized by taking the studies done in this world and our country in this study.

Organized by



Main Supporters



Platinum Sponsors





CONCLUSION

- In this study, from past to present Turkey cadastral system and studies were evaluated in general. These evaluations have been examined and examined especially in relation to the cadastre 2014 and its vision which have been put forward for years. On the other hand, outcomes were obtained from all these studies and objectives and requirements for cadastre 2034 vision were given.
- In the studies that will continue the findings made here should be used in a wider perspective and new and timely models should be presented. In this case, it is important not only in terms of the cadastral system and integration of the entire world is not Turkey. In this context, relevant institutions and organizations should make all the aims and all necessary detail inferences in the context of cadastre 2034 vision and a general model should be introduced.

Organized by



Main Supporters



Platinum Sponsors





EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES
6-11 May 2018, İstanbul



THANK YOU FOR YOUR PATIENT

Organized by



Main Supporters



Platinum Sponsors

