

DEVELOPMENTS IN TURKISH CADASTRE AND OPEN DATA APPLICATIONS

Dr. Orhan ERCAN
Mert Yasin ÖZ



TURKEY AT A GLANCE

A POPULATION OF 80
(+3) MLN 50% UNDER
AGE 30

LOKOMOTIVE SECTOR OF TURKISH ECONOMY

TURKEY RANKED 2ND AFTER CHINA IN INTERNATIONAL CONTRACTING BUSINESS. “42 TURKISH CONTRACTORS” RANKED AMONG WORLD`S TOP 250

SOURCE: ENR (ENGINEERING NEWS REORD 2017)

NEW INFRASTRUCTURE INVESTMENTS

- ISTANBUL 3RD AIRPORT,
- CANAL ISTANBUL
- ISTANBUL FINANCE CENTRE
- BRIDGES, TUNNELS, AIRPORTS, HIGH SPEED TRAINS, NATURAL GAS PIPELINES, LOGISTICS CENTRES, CITY HOSPITALS ETC.

WORKING AREAS

ENGINEERING SURVEYS
CADASTRE RENOVATION (COMPANIES)
POST CADASTRE ACTIVITIES (LICENSED OFFICES)
LAND CONSOLIDATION
PHOTOGRAMMETRIC MAPPING
GIS/DIGITIZATION
URBAN REGENERATION PROJECTS
LAND VALUATION
GEODETIC WORKS/GNSS
LAND DEVELOPMENT PLANS
EXPROPRIATION
MUNICIPAL WORKS
ETC..

PROPERTY RIGHTS AND PROTECTIONS

PROPERTY RIGHTS

- PROPERTY RIGHTS THAT ARE ***LEGALLY PROTECTED***, SECURE, RECORDED IN A SINGLE, ACCURATE, ELECTRONIC REGISTRY AND THAT LEAD TO HIGH LEVELS OF FORMAL OWNERSHIP FOR ALL CITIZENS

LEGAL PROTECTION

- ***EFFECTIVE AND SUFFICIENT LEGAL FRAMEWORK EXIST*** TO PROTECT PROPERTY RIGHTS FOR ALL CITIZENS.
- EVERYONE HAS THE RIGHT TO OWN AND INHERIT PROPERTY. THESE RIGHTS MAY BE LIMITED BY LAW IN VIEW OF PUBLIC INTEREST.
- FOREIGN OWNERS HAVE EQUAL PROPERTY OWNERSHIP RIGHTS WITH SOME RESTRICTIONS DEFINED IN LAND REGISTRY LAW ARTICLE 34 AND 35.

CADASTRE

- LAND REGISTRY AND CADASTRE ACTIVITIES ARE MANAGED AND CARRIED OUT **BY ONE INSTITUTION**, ACCORDING TO THE CIVIL CODE OF TURKEY, **LAND REGISTRY SYSTEM IS GUARANTEED BY STATE AUTHORITY.**
- PEOPLE CAN ACCESS CADASTRAL FIGURE OF A PARCEL VIA INTERNET (cbs.tkgm.gov.tr). ONLY RELATED PEOPLE WITH PARCEL (OWNER OR ATTORNEY) CAN DEEPLY RESEARCH CADASTRE REGISTERS IN LOCAL CADASTRE OFFICES.
- GNSS SYSTEMS ARE EXTREMELY BEING USED FOR CADASTRE IN TURKEY.

LAND REGISTRY

- **NO NOTARY SYSTEM**, REGISTRATION PROCESS DOES NOT INCLUDE ANY NOTARY IN TURKEY. CONTRACTS AND OTHER DOCUMENTS HAVE TO BE PREPARED IN LAND REGISTRY OFFICES BY AUTHORIZED OFFICERS.
- THE DURATION OF TIME IN CALENDAR DAYS THAT IT WOULD TAKE TO COMPLETE THE TRANSFER IS 1 OR 2 DAYS

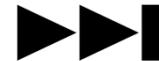
TAKBIS

LAND REGISTRY AND CADASTRE INFORMATION SYSTEM (TAKBIS)

“LRC – IS” IS ONE OF THE
FUNDAMENTAL E-GOVERNMENT
PROJECT OF TURKEY.
LRC-IS IS COVERING *ALMOST 650*
DIFFERENT TYPE OF OFFICIAL
LAND REGISTRY TRANSACTIONS.
IT IS FULLY OPERATIONAL SINCE
2004.



ADRES INFORMATION
SYSTEM IS INTEGRATED
WITH THE **CENTRAL CIVIL**
REGISTRATION SYSTEM
(UNIQUE TR
IDENTIFICATION NUMBER)



VALUATION BASED REAL
ESTATE INFORMATION
SYSTEM IS INTEGRATED
WITH TAKBIS

ECONOMIC IMPORTANCE OF CADASTRE

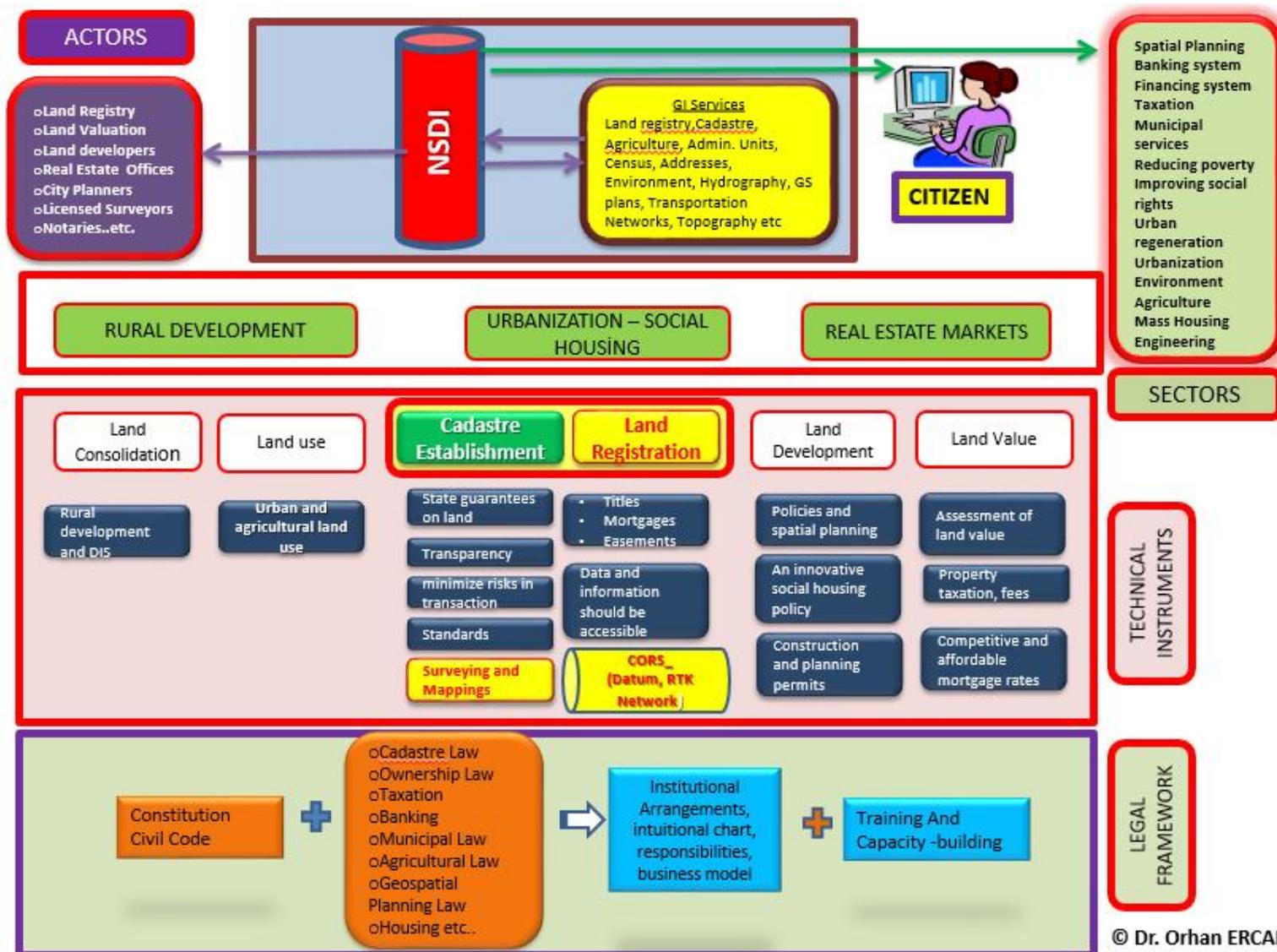
THERE ARE APPROXIMATELY 57 MILLION PARCELS AND OVER 2 MILLION TRANSACTIONS A YEAR.

IN PARALLEL WITH THE URBANISATION, CONSTRUCTION SECTOR HAS BEEN GROWING AND ALMOST 800,000 RESIDENTIAL PROPERTIES GOT BUILDING PERMITS ONLY IN 2017.

4,56 PERCENT OF GDP IS CONSTRUCTION SECTOR AND 9,8 PERCENT OF GDP IS REAL ESTATE ACTIVITIES IN 2014.

- CADASTRE INSTITUTION; REVOLVING FUND; USD 250 ML REVENUE PER YEAR
- STATE; FEES FROM LAND TRANSACTIONS IS MORE THAN USD 3,1 BN PER YEAR

IN TURKEY, OWING TO THE FACT THAT PROPERTIES ARE ONE OF THE MOST PREFERRED INVESTMENT INSTRUMENTS.



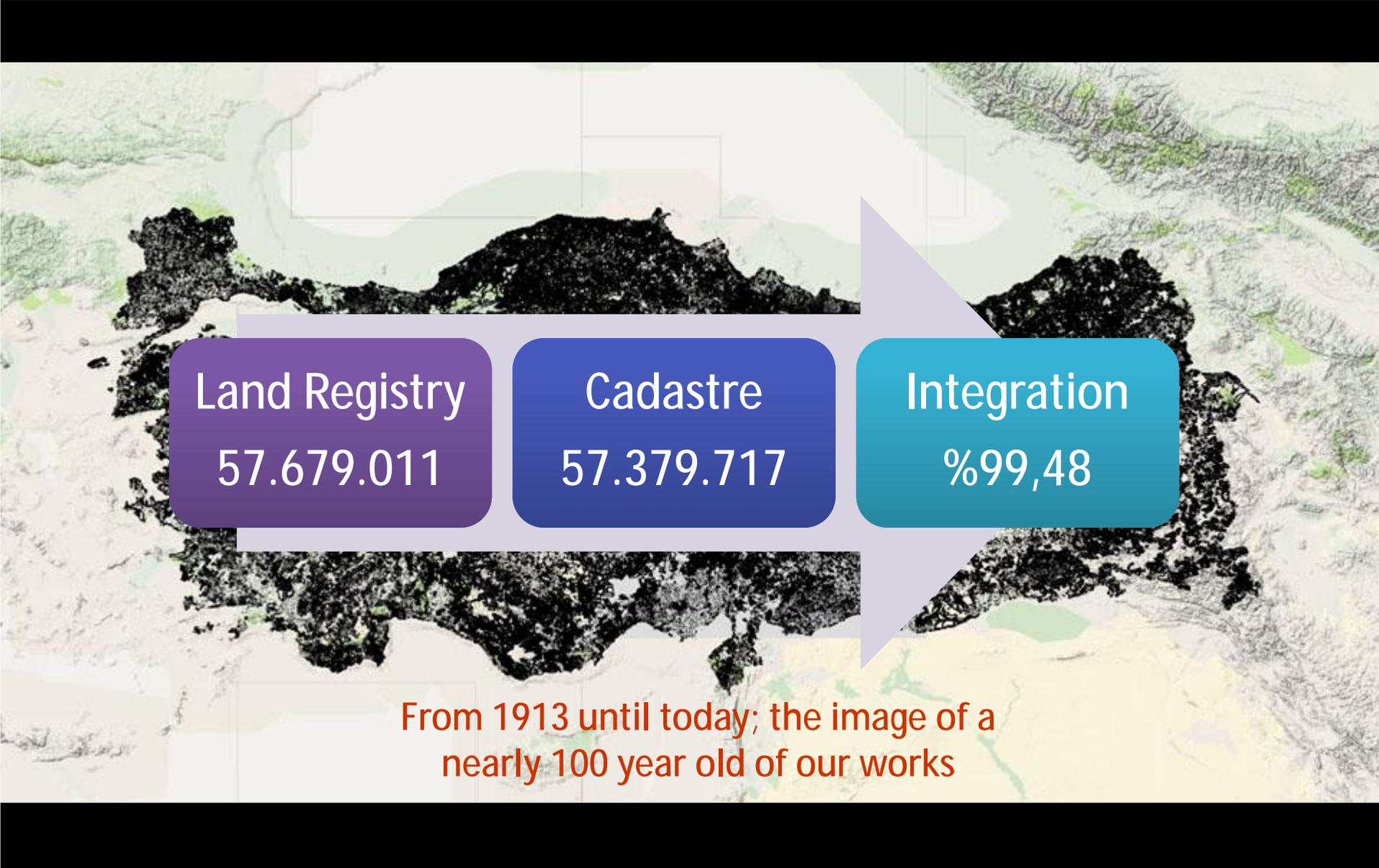
© Dr. Orhan ERCAN
August 2016

WHAT HAS CHANGED IN THE LAST 15 YEARS?

	2003	2018
LR IS	UNDER DEVELOPMENT	FULLY OPERATIONAL
CORS	NO	YES - 2007
CADASTRE COMPLETION	70%	100% 2009
CADASTRE DIGITIZATION	NO	YES 100%
LICENSED CADASTRE BUREAUS	NO	YES
CADASTRE RENOVATION	LOCAL	10,000,000 C parcel
CADASTRE SW	NOT AVAILABLE	YES 2014
OTTOMAN ARCHIEVE	FULLY ANALOGUE	DIGITAL 2012
INSTUTIONAL DEVELOPMENT	NO	YES
DATA SHARING	NO	YES
WORKING WITH PRIVATE COMPANIES	VERY LITTLE	YES
TKGM INTERNATIONAL	NO	UNDER DISCUSSION
3D CADASTRE	NO	PILOT PROJECT
VALUATION	NO	PILOT PROJECT COMPLETED
RESTRICTION FOR FOREIGNERS	YES	HAVE BEEN EASED
ACQUIRING PROPERTY		

DEVELOPMENT OF GEOSPATIAL MATURITY PROCESS

- PARCEL INVENTORY APPLICATION (2009)
- SPATIAL PROPERTY SYSTEM (MEGSIS) (2010)
- CADASTRAL DATA SHARING WITH MAP SERVICES (2011)
- CADASTRAL DATA SHARING AT E-GOVERNMENT PORTAL (2012)
- PARCEL INQUIRY APPLICATION: WEB (2014)
- ORTOPHOTO SERVICES (2016)
- PARCEL INQUIRY APPLICATION: MOBILE (2016)
- LICENSED SURVEYING ENGINEERS AND BUREAUS SOFTWARE (LIHKAB) (2018)



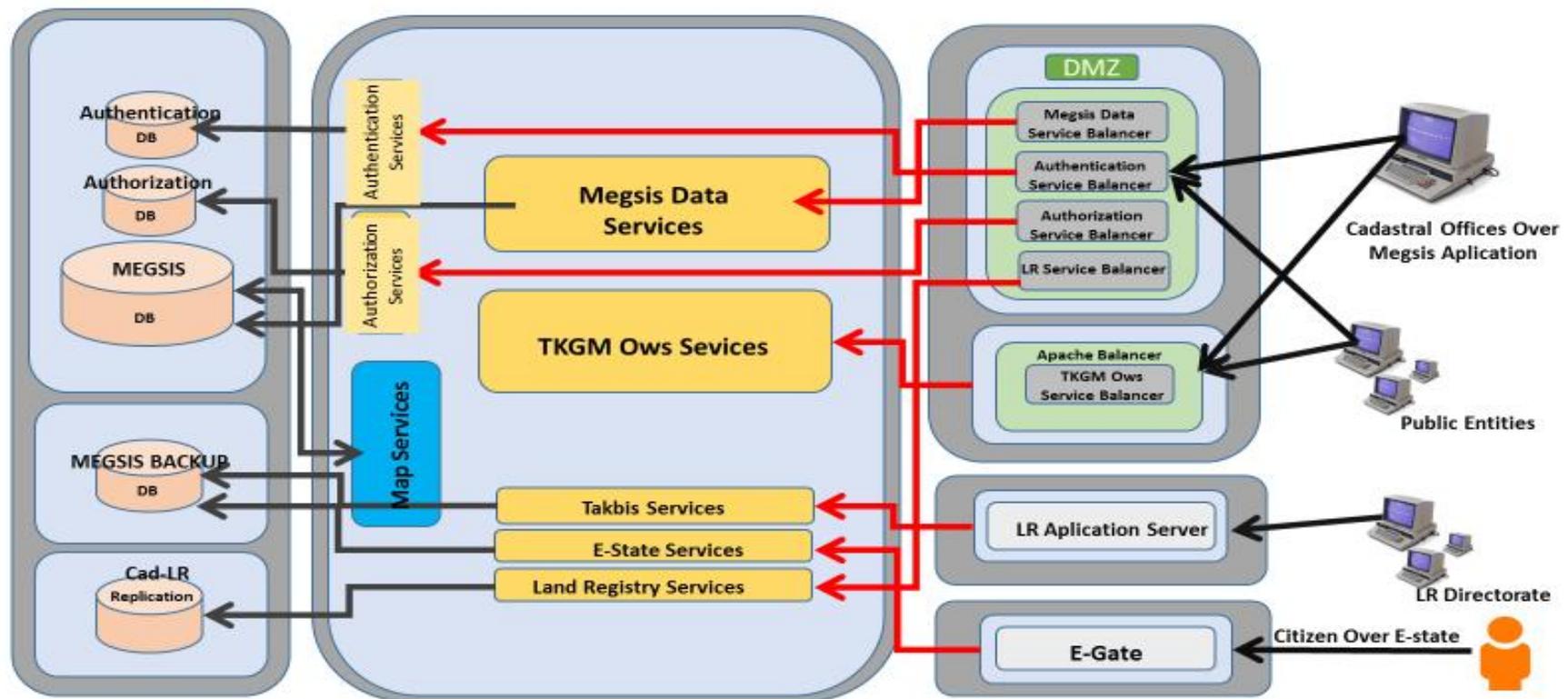
Land Registry
57.679.011

Cadastre
57.379.717

Integration
%99,48

From 1913 until today; the image of a
nearly 100 year old of our works

SPATIAL PROPERTY SYSTEM (MEGSIS)



Spatial Property System (MEGSIS)

1

Web
Application

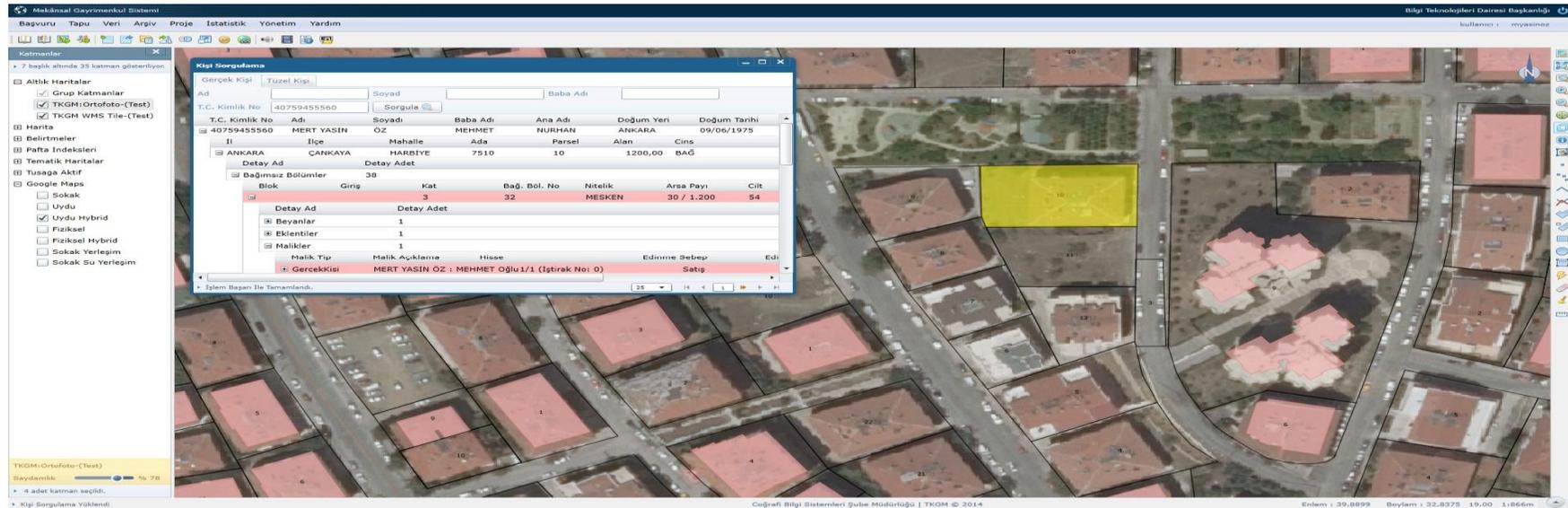
2

3

4

WEB APPLICATION

- CONTROLLING THE COMPATIBILITY OF LAND REGISTRY AND CADASTRAL DATA WITH EACH OTHER,
- COLLECTION OF ATTRIBUTE INFORMATION,
- VERIFICATION USING AIR IMAGES (ORTHOPHOTO AND GOOGLEMAPS),
- INCREASING THE QUALITY OF THE DATA WITH CONTROL INQUIRIES,
- THE DATA CAN BE KEPT UP TO DATE.



CADASTRE IN A DIGITAL WORLD - NORDIC AND GLOBAL PERSPECTIVES, 26 SEPTEMBER 2018, BERGEN, NORWAY

Spatial Property System (MEGSIS)

1

2

3

4

Map
Services

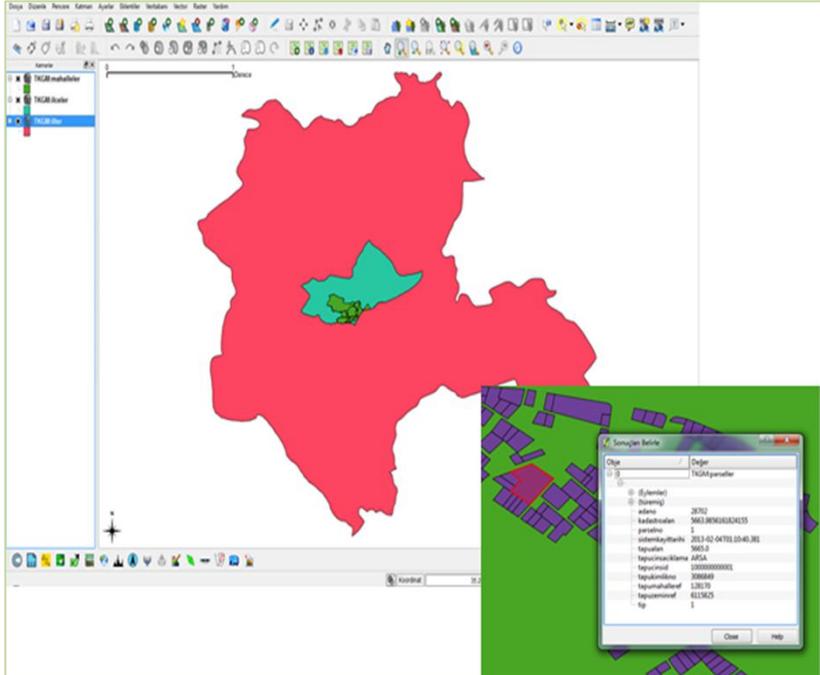
MAP SERVICES

- MAP SERVICES ARE DEVELOPED
 - IN ORDER TO SHARE CADASTRE DATA COLLECTED WITHIN THE SCOPE OF MEGSIS WITH INSTITUTIONS, ORGANIZATIONS AND MUNICIPALITIES THAT HAVE DEMANDED THEM ACCORDING APPROPRIATE PROTOCOLS.
 - THE STANDARDS OF THE DATA ARE TESTED WITH OPEN SOURCE AND COMMERCIAL PRODUCTS.

MAP SERVICES



2018 TOTAL INQUIRY AMOUNTS VIA WEB SERVICES IN TURKEY		
MONTHS	WMS	WFS
January	100.929.192	9.306.910
February	86.684.046	8.167.796
March	53.975.560	12.479.842
April	50.786.816	16.453.716
May	62.165.763	12.147.124
June	43.408.687	13.803.928
TOTAL	397.950.064	72.359.316
Monthly Average	66.325.011	12.059.886



the average of the last 6 months inquiries has reached 66M WMS service demands per month and 12M WFS service demands per month.

Spatial Property System (MEGSIS)

1 2 3 4

E-Government
Services

E-GOVERNMENT SERVICES

THESE SERVICES ARE THE FIRST SPATIAL SERVICES OFFERED FROM WWW.TURKIYE.GOV.TR.

Bu hizmet Tapu Ve Kadastro Genel Müdürlüğü işbirliği ile e-Devlet Kapısı altyapısı üzerinden sunulmaktadır.

Bu işlem için yaklaşık 3 dakikanızı ayırmalısınız.

Bu işlem toplam 3 aşamalıdır. Şu anda 2. aşamadasınız.

1. Taşınmaz Listesi
2. Taşınmaz Detay Bilgileri
3. Şerh,beyan,rehin,irtifak vb

ÖNERİLEN HİZMETLER

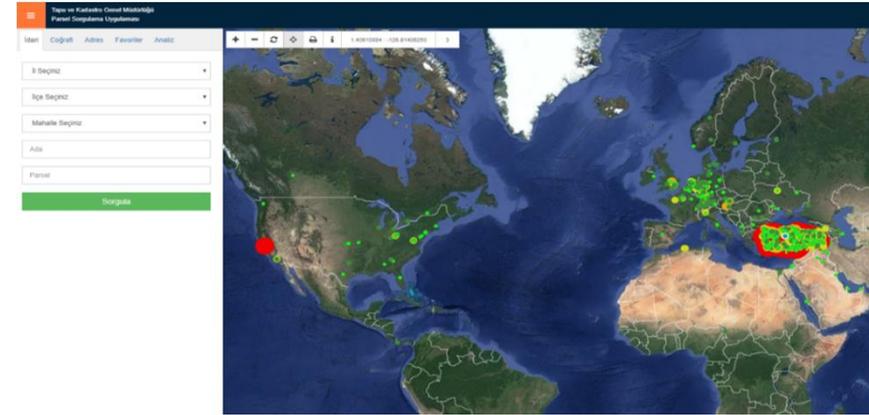
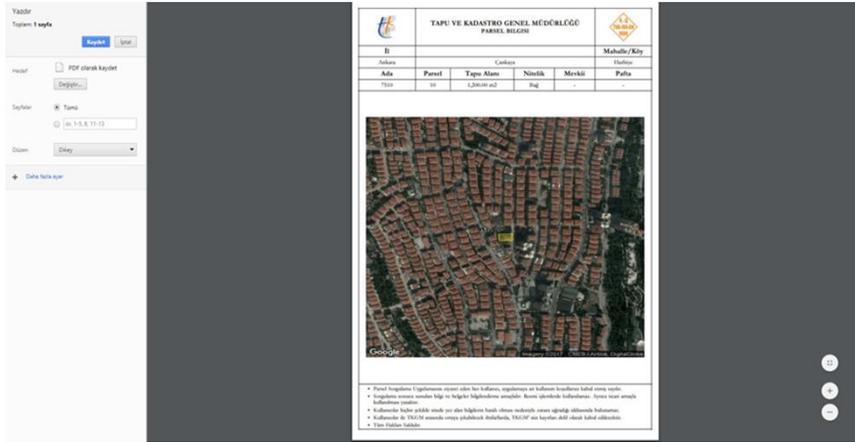
- Vergi Borcu Sorgulama
- Tapu Telefon Bilgileri Beyan
- Tapu Taşınmaz Beyan
- Tapu ve Kadastro Harç ve Döner Sermaye Sorgulama / Döner Sermaye Ödeme

İl	ANKARA	Yüzölçümü (m2)	5018
İlçe	ÇANKAYA	Niteliği	MESKEN
Mahalle/Köy	DİKMEN	Blok No	C
Ada	13362	Giriş	
Parsel	2	Kat	8
Cilt No	91	Bağımsız Bölüm No	34
Sayfa No	8913	Arsa Pay/Payda	123/9500

⚠️ Taşınmazınızın üzerinde bulunan (şerh,beyan,rehin,irtifak hakkı vb.) için tıklayınız.



Approximately 6 million requests in a month and 7th most used of 3.397 services – available SINCE 2010



PARCEL INQUIRY INFORMATION OUTPUT on the left side WW DISTRUBUTION OF INQUIRIES on the right

Spatial Property System (MEGSIS)

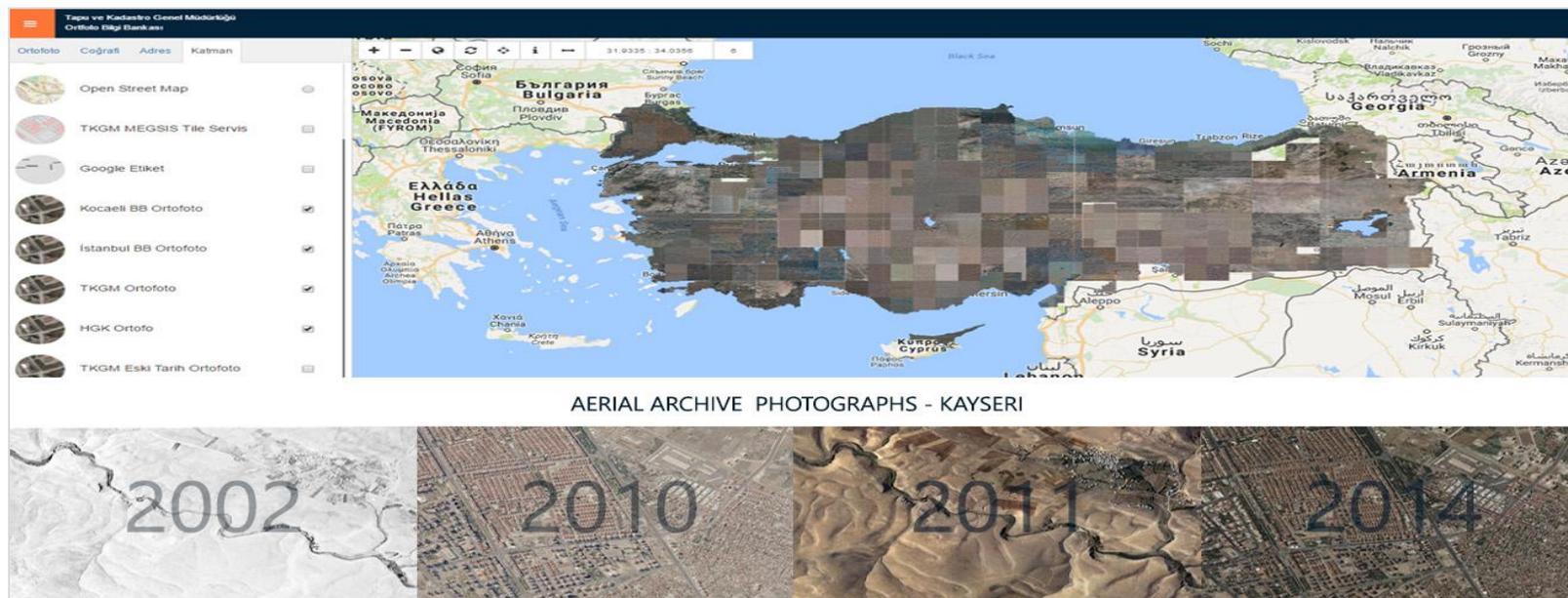
1 2 3 4

Ortophoto
Services

ORTOPHOTO SERVICES



ORTHOPHOTO SERVICES PRESENT ORTHOPHOTO MAPS THAT HAVE BEEN PRODUCED AT 1/5.000 SCALE, BY USING THE OPEN SOURCE GDAL LIBRARY AT A TILE MAP SERVICE (TMS) STANDARD.



CADASTRE IN A DIGITAL WORLD - NORDIC AND GLOBAL PERSPECTIVES, 26 SEPTEMBER 2018, BERGEN, NORWAY

DATA SHARING



MERNIS
IDENTITY SHARING SYSTEM

MINISTRY
OF
INTERIOR

MINISTRY
OF
FINANCE

MASAK
ECONOMIC CRIMES

DASK
EARTHQUAKE INSURANCE

UNDERSECRETARI
AT OF TREASURY

MINISTRY
OF JUSTICE

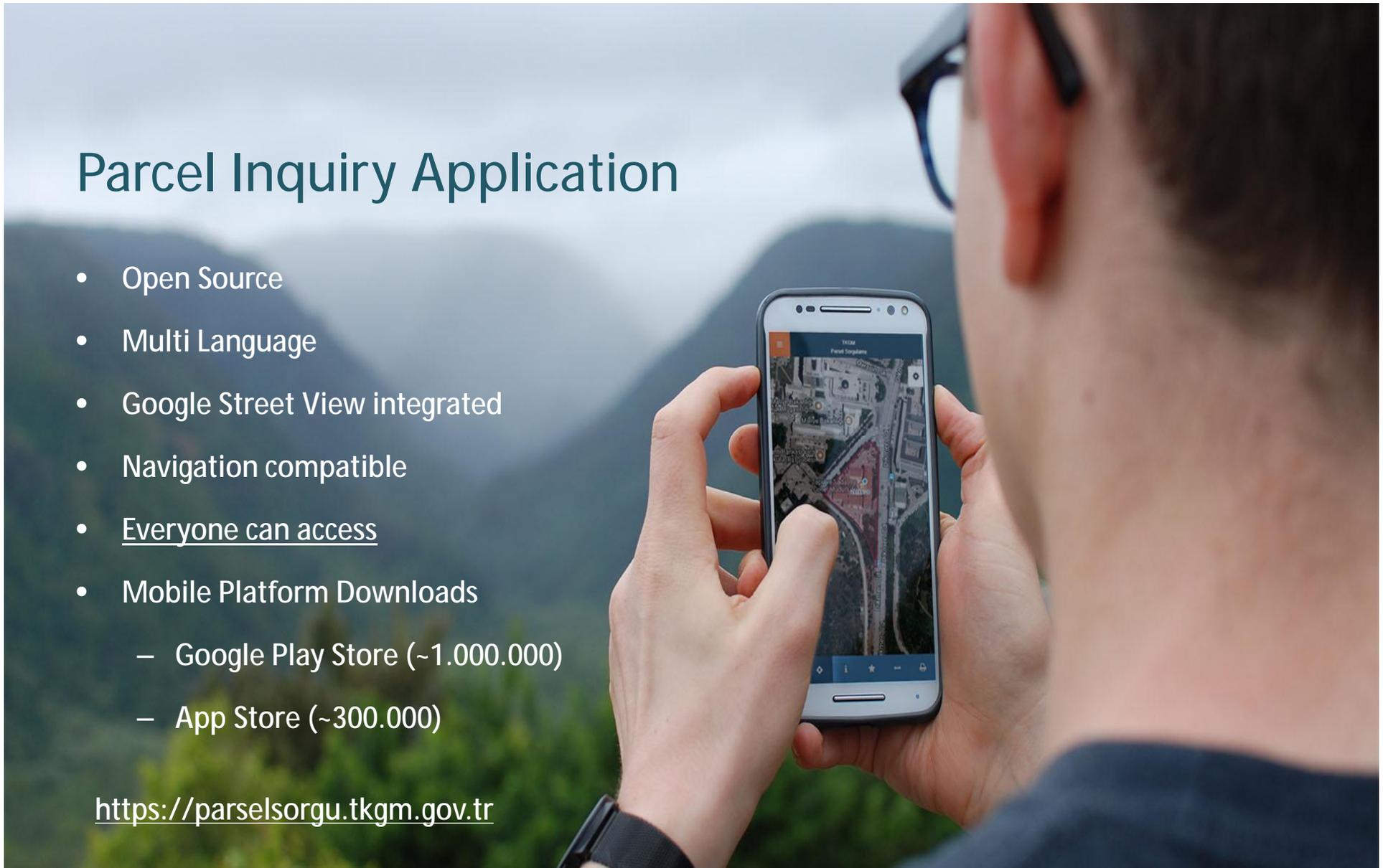
PROPERTY DATA
LAND REGISTRY-CADASTRE

Data sharing with ~ 1.000
institution !!!

Parcel Inquiry Application

- Open Source
- Multi Language
- Google Street View integrated
- Navigation compatible
- Everyone can access
- Mobile Platform Downloads
 - Google Play Store (~1.000.000)
 - App Store (~300.000)

<https://parselsorgu.tkgm.gov.tr>



THANKS...

