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

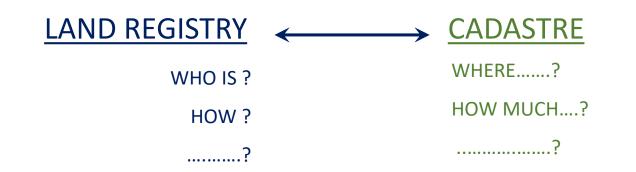# HOW TO BUILD AN IDEAL PROPERTY INFORMATION SYSTEM

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netcad

PROPERTY INFORMATION SYSTEM (PIS)

❄ The Property Information System is a parcel – based Information System.

❄ Cadastral works as technical and title works as legal.

LAND REGISTRY ←——————→ CADASTRE

WHO IS ?

HOW ?

...........?

WHERE.......?

HOW MUCH....?

...................?

PROCESS FOR BUILDING PIS

BASIC COMPONENTS OF PROPERTY SYSTEM →

| GEODETIC INFASTRUCTURE | SPATIAL DATA ARCHIVE | BUSINESS PROCESSES | DATA SHARING |

TRANSITION ↓

TRADITIONAL

| TRADITIONAL GEODETIC NETWORKS | AIR PHOTOGRAPHY & PAPER MAPS& MEASUREMENT & SKETCTH | MANUALY | BY OFFICIAL CORRESPONDENCE AND MAIL |

MODERN

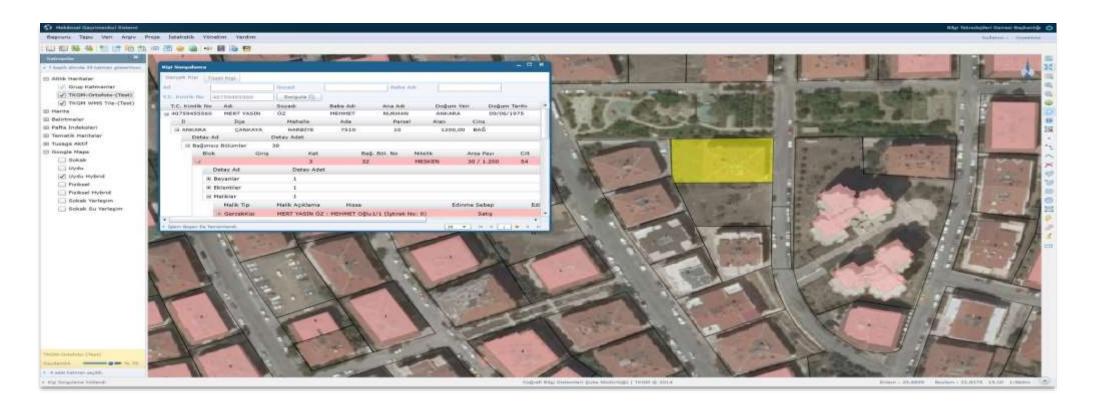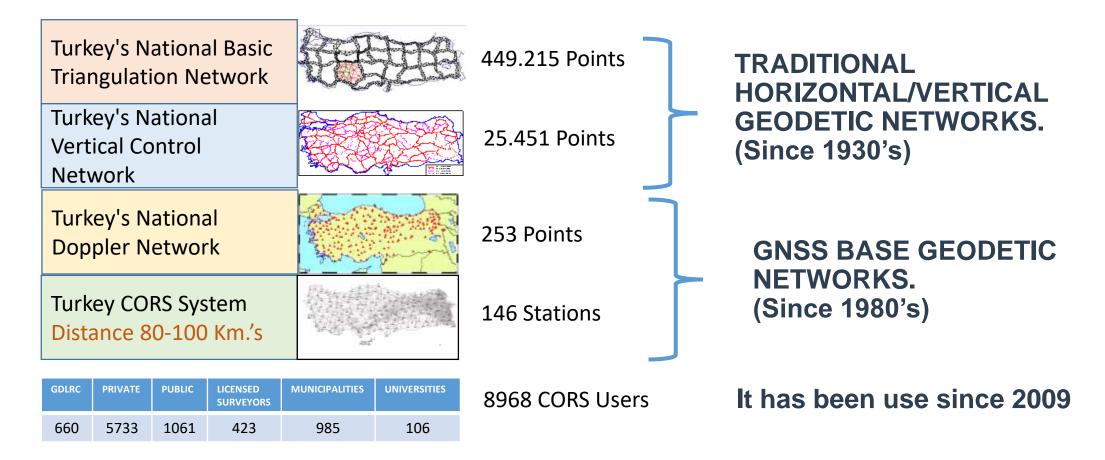| GPS/CORS GEODETIC NETWORKS | ORTHOPHOTO & DIGITAL MAP | FULL AUTOMATION | WEB BASED |

TURKEY'S PROPERTY INFORMATION SYSTEM (TPIS)

- Turkey's Property System has a very old history.
- 1847- First Registration
- 1924- GDLRC was established
- 1990- First computer-aided work was started and staff were trained
- 2003- The process of transition from traditional to digital system
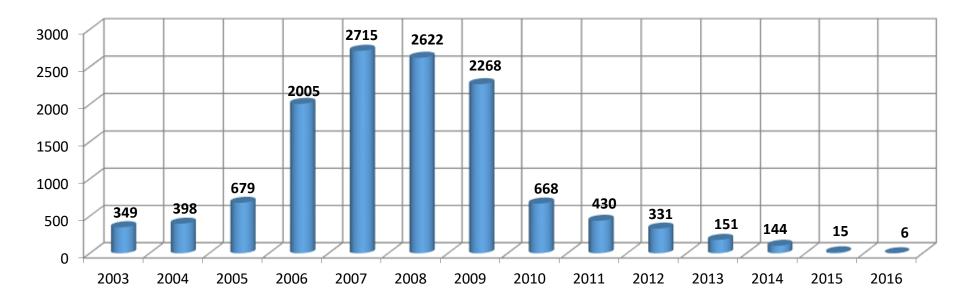
TURKEY'S GEODETIC INFRASTRUCTURE

Turkey's National Basic Triangulation Network		449.215 Points
Turkey's National Vertical Control Network		25.451 Points

TRADITIONAL HORIZONTAL/VERTICAL GEODETIC NETWORKS. (Since 1930's)

Turkey's National Doppler Network		253 Points
Turkey CORS System Distance 80-100 Km.'s		146 Stations

GNSS BASE GEODETIC NETWORKS. (Since 1980's)

GDLRC	PRIVATE	PUBLIC	LICENSED SURVEYORS	MUNICIPALITIES	UNIVERSITIES
660	5733	1061	423	985	106

8968 CORS Users

It has been use since 2009

CORS (Continuously Operating Reference Stations)

CADASTRAL DATA…

INITIAL CADASTRE OF TURKEY (CURRENT)				
TOTAL UNITS	**COMPLETED BEFORE 2003**	**2003-2015**	**IN PROGRESS**	**PROBLEMATIC**
52.049	**38.796**	**12.781**	**107**	**365**

* This table was taken Mert Yasin Öz's presentation in Conference on NSDI - Kyrgyz Republic, June 29-30 2016

LAND REGİSTER & CADASTRE WORKS

INTERNAL & EXTERNAL USERS

WEB

MANAGEMENT

TPS

CADASTRE

TITLE DEED

TPS CENTER

(DATA INFRASTRUCTURE)

LAND REGİSTER&CADASTRE OFICCES

(PROCESS AUTOMATION)
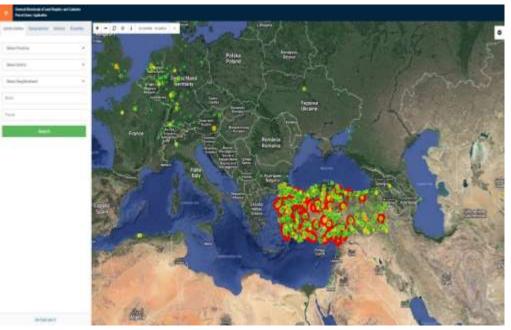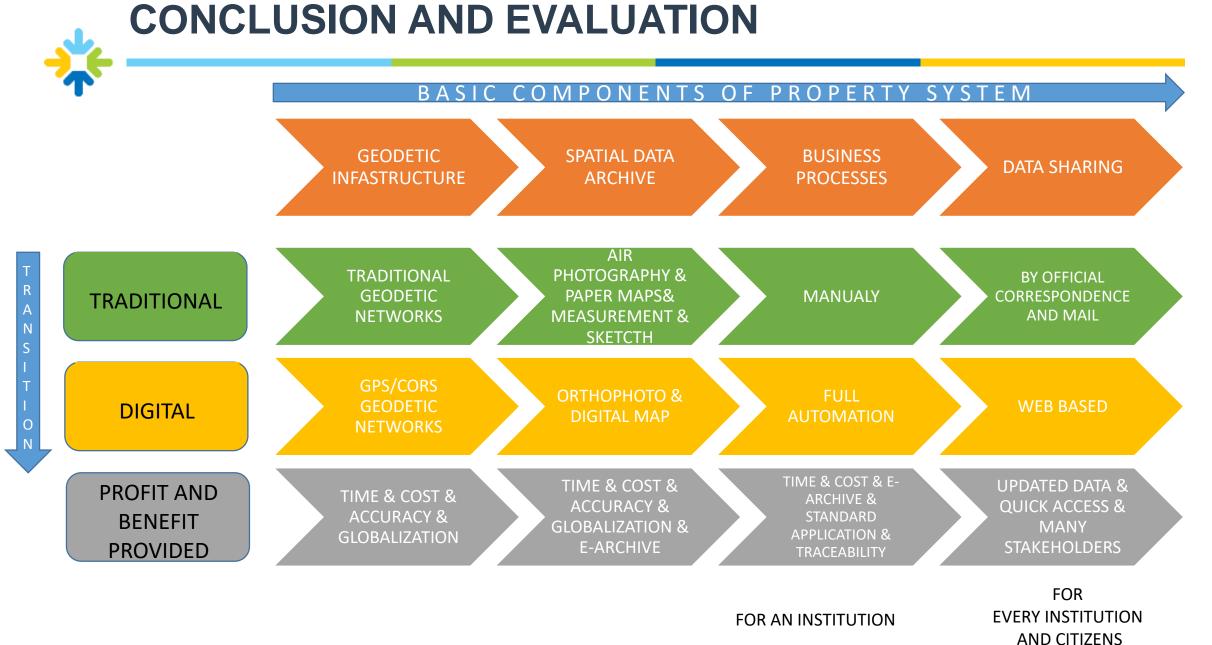
PROPERTY DATA SHARING SYSTEM IN TURKEY

✦ Over 8 million land registry transactions in 2017

✦ 1000 external stakeholders…

✦ Title Deed and Property Query Service is ranked as 7th by usage.

✦ 750,000 users on the Google Play Store and 300,000 on the App Store.

✦ There are 1 million queries per day on the mobile platform.

* This data was taken Mert Yasin Öz's presentation in Conference on NSDI - Kyrgyz Republic, June 29-30 2016
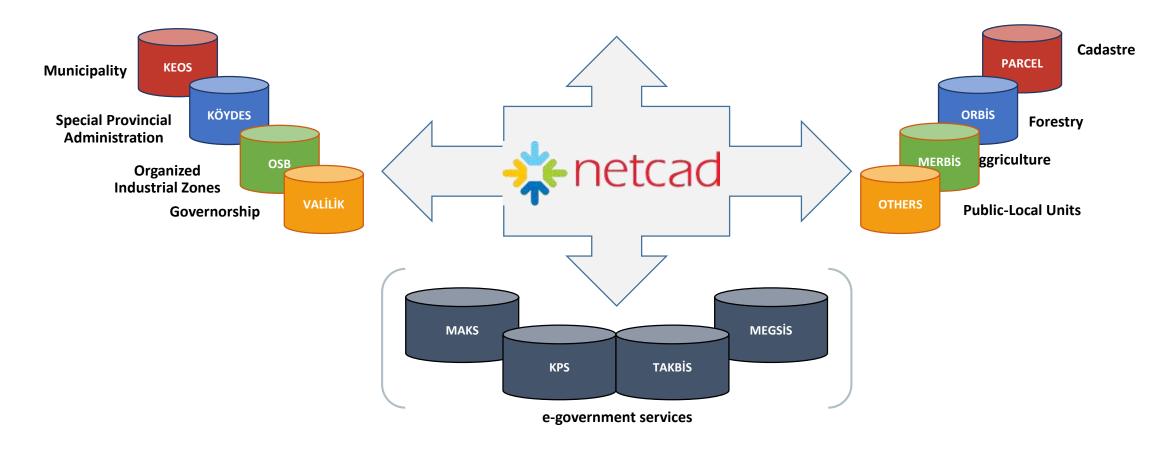
CONCLUSION AND EVALUATION

BASIC COMPONENTS OF PROPERTY SYSTEM

	GEODETIC INFASTRUCTURE	SPATIAL DATA ARCHIVE	BUSINESS PROCESSES	DATA SHARING
TRADITIONAL	TRADITIONAL GEODETIC NETWORKS	AIR PHOTOGRAPHY & PAPER MAPS& MEASUREMENT & SKETCTH	MANUALY	BY OFFICIAL CORRESPONDENCE AND MAIL
DIGITAL	GPS/CORS GEODETIC NETWORKS	ORTHOPHOTO & DIGITAL MAP	FULL AUTOMATION	WEB BASED
PROFIT AND BENEFIT PROVIDED	TIME & COST & ACCURACY & GLOBALIZATION	TIME & COST & ACCURACY & GLOBALIZATION & E-ARCHIVE	TIME & COST & E-ARCHIVE & STANDARD APPLICATION & TRACEABILITY	UPDATED DATA & QUICK ACCESS & MANY STAKEHOLDERS

TRANSITION

FOR AN INSTITUTION

FOR EVERY INSTITUTION AND CITIZENS

NECESSARY FEATURES FOR AN IDEAL PIS

#	REQUESTS	NEED	TPIS
1	The cadastral data should be produced in the country dimension.	Must	✅
2	Land registry and cadastral operations should be integrated online.	Must	✅
3	Starting from a certain date, all operations should be done in computer environment as standard.	Must	✅
4	Transactions should be done in local offices, data should be archived online in the center	Must	✅
5	Transactions must be locally independent.	Must	✅
6	Title deed and cadastral data should be presented on the web	Must	✅
7	Instant statistics can be generated	Must	✅
8	Cadastral data should be related to address data.	Peferred	✅
9	The parcel data should also include "land value" information.	Peferred	❌
10	Transition to 3D cadastre	Peferred	❌

NETCAD SOLUTIONS…

1000 Public Units, **800** Municipalities, **5.700** Private Sector Firms,
92 Universities **694** Departments

THANK YOU

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