Unified Land Administration for a Better Spatial Infrastructure

Gyula IVÁN

Institute of Geodesy, Cartography & Remote Sensing

FÖMI

(HUNGARY)

Open Symposium

30th Korean Cadastral Seminar & FIG Commission 7 Annual Meeting 2007

„Good practice in Cadastre & Land Registry”

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HUNGARY

- Total area : 93 000 sq kms
- Population: 10 million
- No. of settlements: 3 167
- No. of staffs in Land Administration: 4 000
- No. of properties managed by LA:

10 million

The unified Hungarian Land Registry and Land Administration Sector

Department of Lands and Geoinformation at Ministry of Agriculture and Rural Development

Overall supervision of LA Sector

19 County Land Offices &

Land Office of the Capital

118 District Land Offices

National Cadastral Program Non-profit Company

- Great cadastral mapping projects

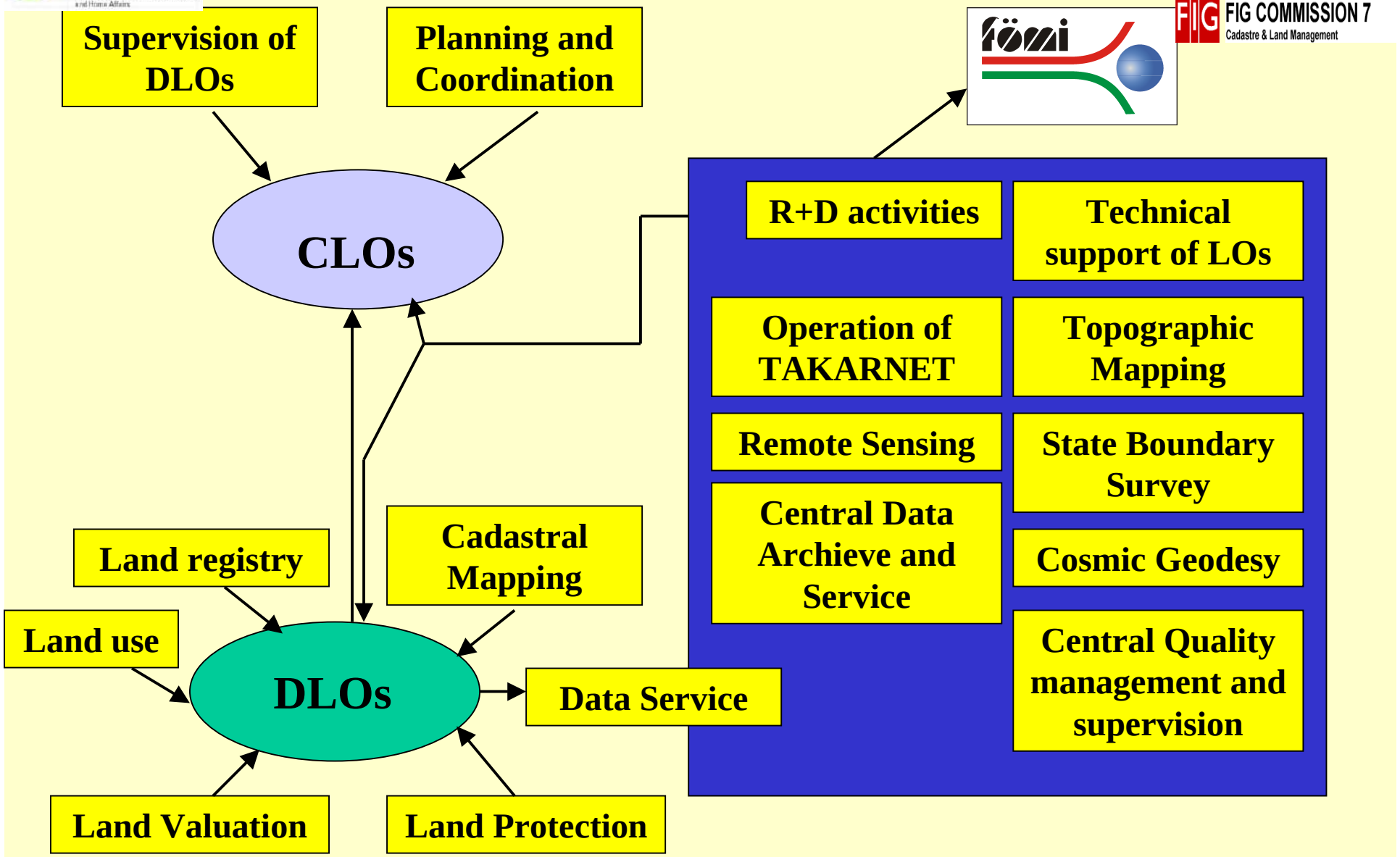
- This structure was established in 1972
- We have 35 years experiences

Contents of Land Registry

- Land parcels+Subparcels (based on type of cultivation within a land parcel) Cadastral map
- Land use
- Land value
- Buildings
- Appartments
- Condominiums
- Ownership rights
- Other facts and rights (easements, mortgages, land use rights, restrictions etc.)

Hungarian State guarantees the titles registered in Land Registry

Operational Structure of Land Administration



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TAKARNET network

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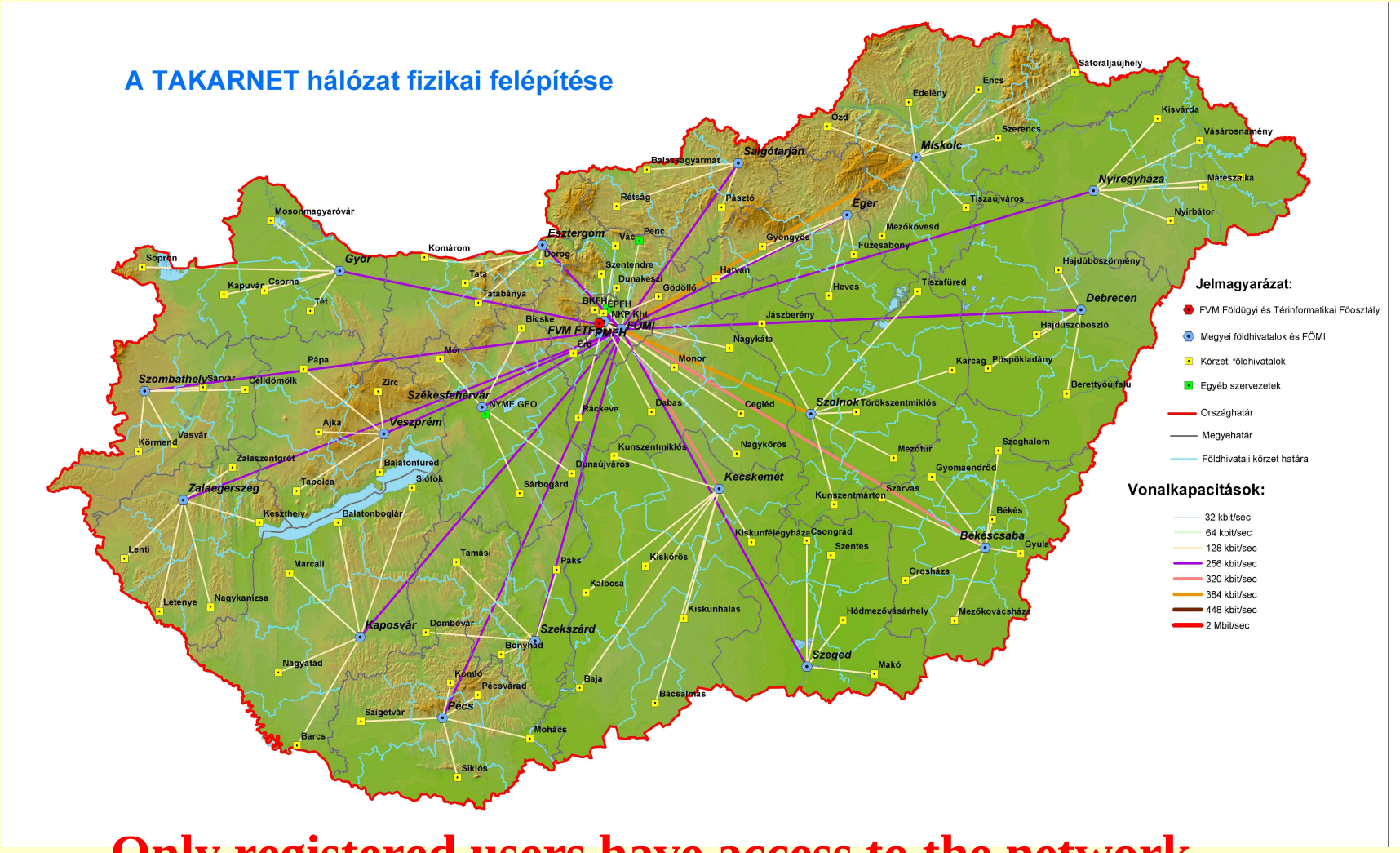
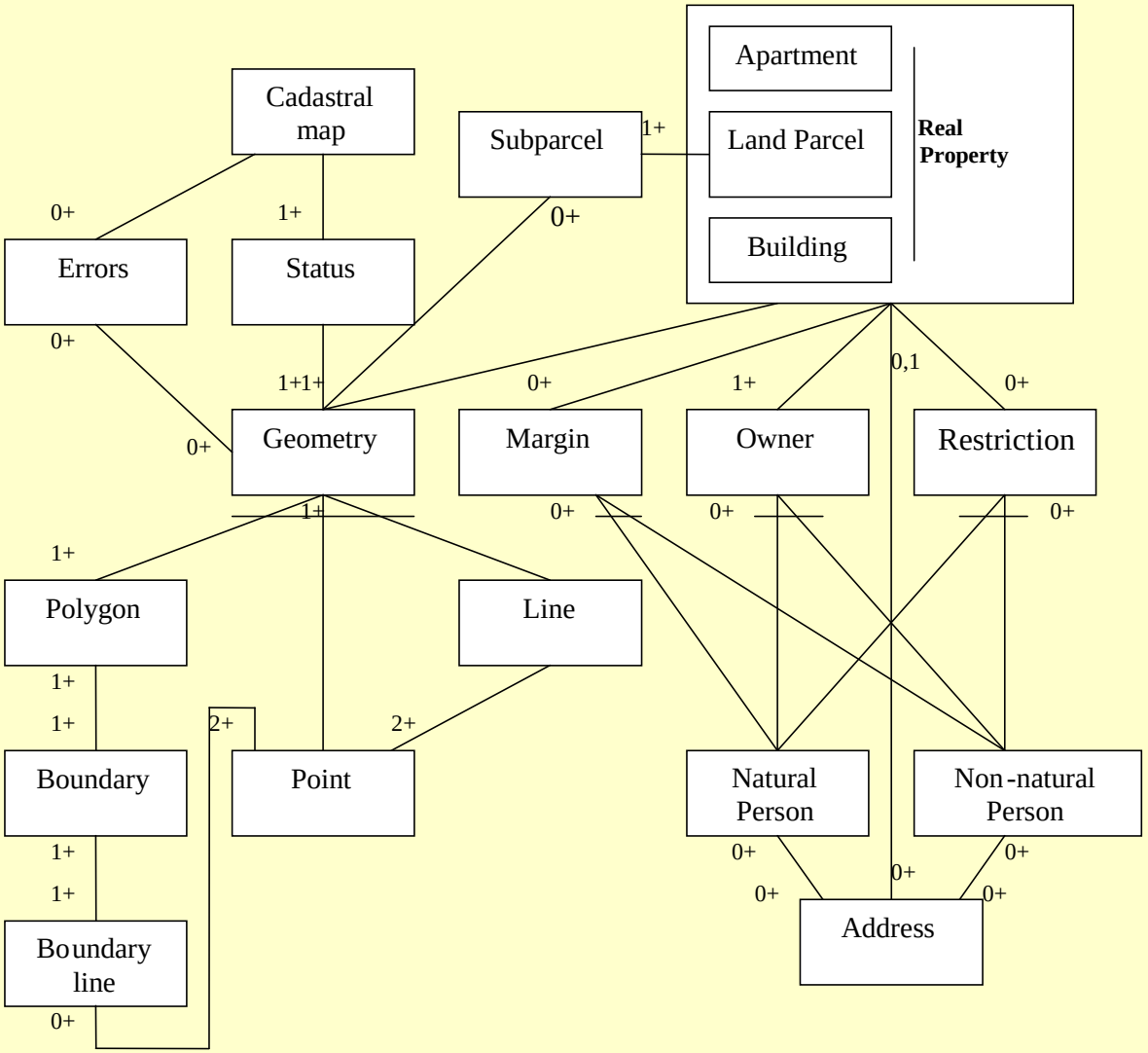


Only registered users have access to the network

Standardized Cadastral Domain Core data model of DATR

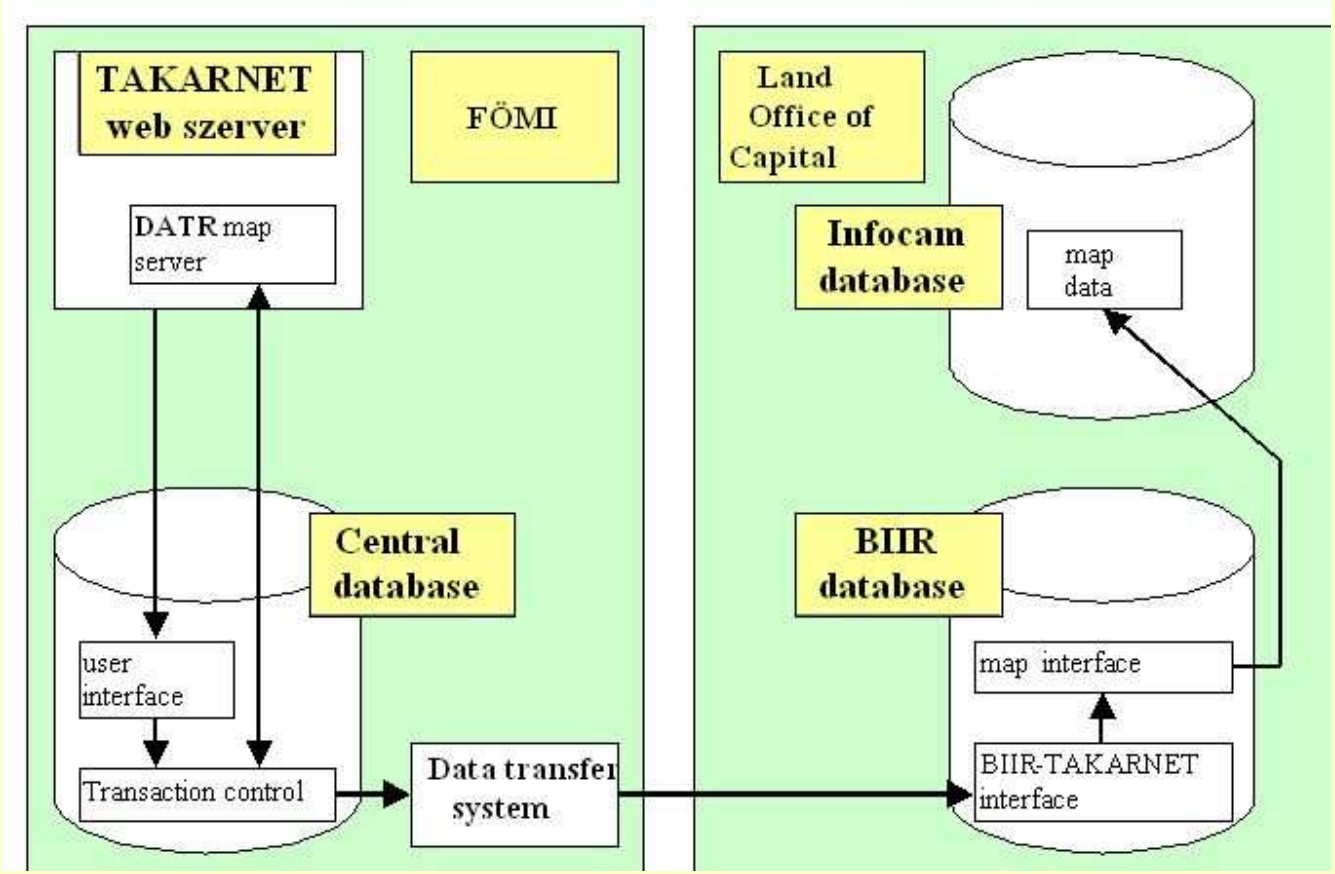


The core data model of DATR is conformed with the Cadastral Domain Model defined by our Dutch Colleagues

TAKARNET services

- **Services:**
  - Copy of Land record of any real property countrywide
  - Copy of cadastral map (if available in digital form) of any real property countrywide
  - Billing information
  - Downloadable standardized documents for applications
  - countrywide queries based on ownership (only for authorized bodies, Tax Office, National Intelligence Agency)
  - Land record change monitoring (on e-mail or SMS)

Integrated map services from Budapest Land Office



Graphic engine is DATR

Integrated map services with orthophotos I.

- Digital Orthophoto Database of Hungary (MADOP 2005)
  - Technical characteristics:
    - Original photos' scale 1:30 000
    - 0,5m ground resolution
    - 24 bit color depth
    - rectified by the high resolution (5m) DEM of Hungary, produced by FÖMI
    - available in 1:10 000 scale topographic sheet unit (6km x 4km)
- The services are under construction and testing

Services for built-up areas (1:1 000)

SZOMBATHELYI KÖRZETI FÖLDHIVATAL
Szombathely, 9700 Szél Kálmán utca 31-33.

Térképmásolat

Helyrajzi szám: SZOMBATHELY, belterület 5208 Megrendelés szám: 9000/886/2006

Méretarány: 1:1 000 Terület: 545 m²

Előzetes telekhatár: — · — · Előzetes hrsz.: 1/37

Services for built-up areas (1:2 000)

SZOMBATHELYI KÖRZETI FÖLDHIVATAL
Szombathely, 9700 Széll Kálmán utca 31-33.

Térképmásolat

Helyrajzi szám: SZOMBATHELY, belterület 4947/1 Megrendelés szám: 9000/886/2006

Méretarány: 1:2 000 Terület: 185 m²

Előzetes telekhatár: — · — · Előzetes hrsz.: 123

Services for rural areas
(1:4 000)

SZOMBATHELYI KÖRZETI FÖLDHIVATAL
Szombathely, 9700 Széll Kálmán utca 31-33.

Térképmásolat

Helyrajzi szám: SZOMBATHELY, belterület 0818/15 Megrendelés szám: 9000/896/2006

Méretarány: 1:4 000 Terület: 6 856 m²

Előzetes telekhatár: — · — · Előzetes hrsz.: 128

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Some Statistical data….

- **Number of properties:**
  Approx. 10 million
- **Number of property transactions:**
  Approx. 3 million / year
- **Number of Certified Property Sheet copy: Approx. 3 million / year**
- **Network queries on Land Records:**
  Approx. 2 500 000/year

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Benefits by the usage of TAKARNET

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Benefits for Land Offices 2006:

Number of queries of external users: 2 023 081

Man-power expenditure at LO:

5 min issue+5 min cash-desk = 10 min

5 hours/day -> 225 day/year

Means 300 staffs/year man-power save

Benefits for external users:

Travel expenses: 10 USD/Land record

network usage: 2,5 HUF/Land record.

All in all more than 15 million USD/year

Time saving of external users:

0,5 day/land record -> **means 4 495 manday / year**

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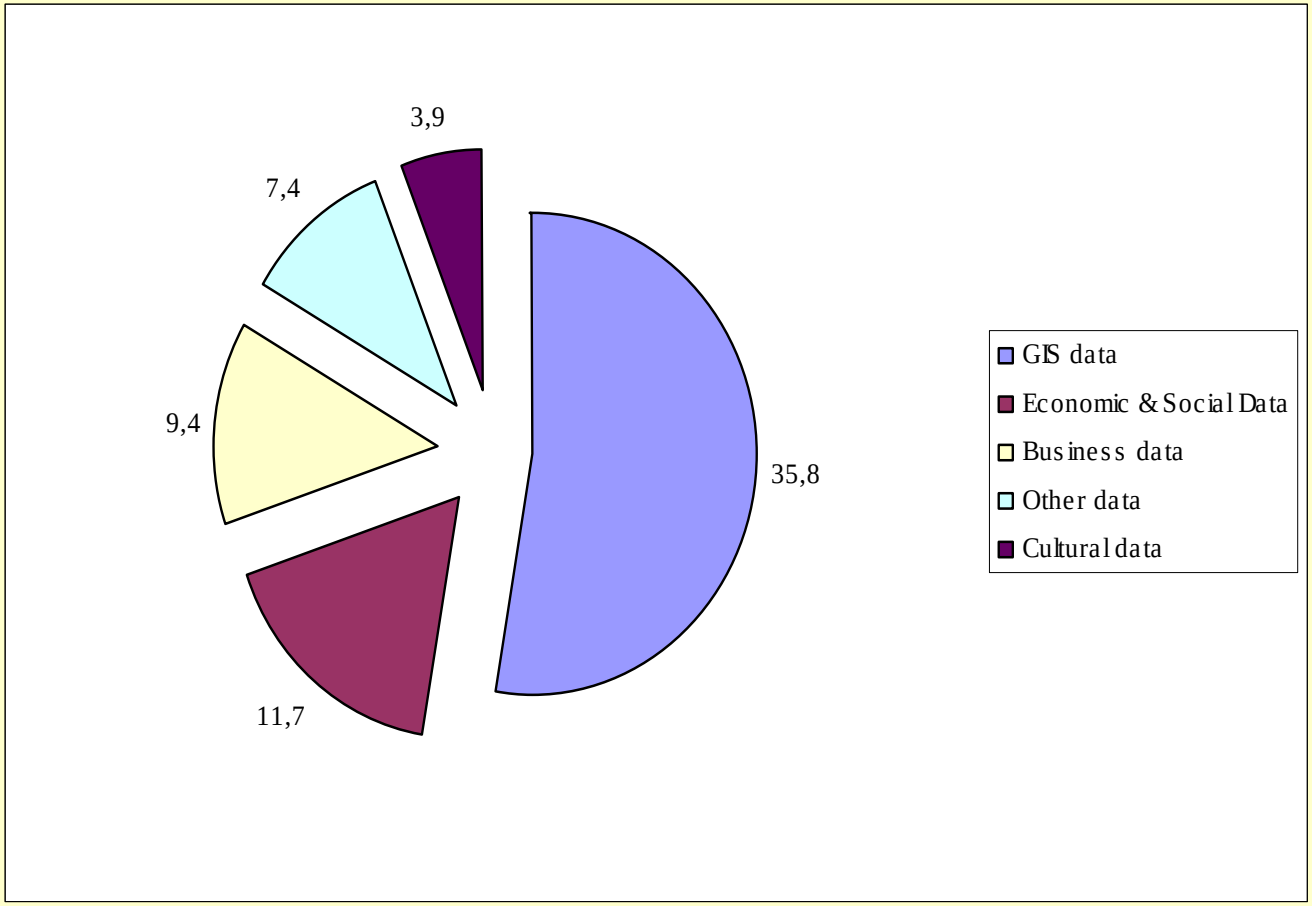
New developments

- Vectorization of 1:10 000 scale topographic maps has been finished (4098 sheets within 2 years)
- Uploading vector format 1:10 000 scale topographic maps into a unified geodatabase
- Establishment a geoportal, which based on the same geometric frame, the unified geodatabase (3m resolution) for the whole country
- Our partners (mainly from public sector) can upload their own data to this unified geometric frame
- Unified geodata service for external users, based on the unfied GIS database, including all data available in the Unified Hungarian Land Administration

Need for the project



52,4% of data value are GIS data!

Value of data, arised in Public Sector in European Union (billion Euro, 1999)

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Economic and social effects of the project

- With the execution of the project a base framework and GIS data infrastructure will be built, which has many advantages on National economic level
- Establishment of a moderner public administration, harmonization of GI data of public sector, data sharing among the public authorities grounds the decisions of decision makers on an objective and easy way. Good governance and decisions benefit sustainable economic growth and decrease the number of unemployed people

Conclusions

- Standardization in Cadastral Domain is one of the most important condition for an effective land information services, and fortunately this task is proceeding, thanks for the activities of our Dutch Colleagues
- The Hungarian unified land registry and land administration provides a flexible background to implement integrated services for a better spatial infrastructure
- Our solution (DATR), which is operating on the standardized Hungarian Cadastral Domain, shows that the full integration of land registry and cadastral maps goes to the best results
- Amplifying and integrating of „raw" land administration data with other GIS datasets (e.g. DEM, orthophotos, satellite images) results in a better services and recognition of land management sector

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Thank you for your attention

ivan.gyula@fomi.hu

See you at: http://www.fomi.hu