

Designing for transparency and participation in the Hellenic Cadastral Project

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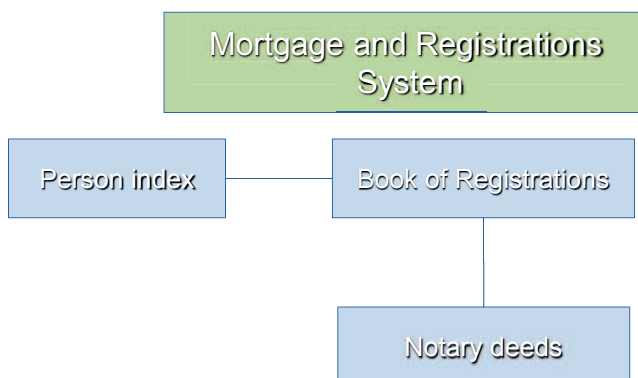
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- National Cadastre and Mapping Agency S.A.
- The Hellenic Cadastre
- Progress of the project
- Challenges
- Conclusions



Background

- Since the early 19th century Greece operates under the system of Registrations and Mortgages, as a paper-based public register of real property owners and the deeds that they have been involved in.



Shortcomings of the system of Registrations and Mortgages

- ensures the publicity of transactions but not legal security
- cannot identify or accurately describe individual real properties (position and boundaries)
- is not complete (e.g. the rights of the State are not registered),
- does not allow the identification of the existing owners of a property



Typical Mortgage Office



Why to develop Cadastre in Greece

The lack of Cadastre results in:

- No security in real estate transactions
- No security in investments in real estate
- No basis for sound:
 - land policy
 - protection of the environment
 - utilization of natural resources
 - real property taxation



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Our Company

- **Hellenic National Cadastre and Mapping Agency S.A.** (former Ktimatologio S.A.) is a Legal Entity of Private Law and its mission is the study, development and operation of the Hellenic Cadastre.
- The sole shareholder of the company is the Ministry of Environment and Energy.
- Staff: ~370

<http://www.ktimatologio.gr/ktima/EN/index.php>



NCMA's mission

- Develop the Hellenic Cadastre
- Support its operation
- Produce forest maps
- Provide reference datasets to the State administration
- Provide geodetic reference



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The Hellenic Cadastre

- The Cadastral project was initiated in the mid 1990's by the Ministry of Environment, Physical Planning and Public Works, aiming to replace the existing system of Registrations and Mortgages as a:
 - a uniform and always up-to-date system of registrations, which consist of the geometric description and the ownership status of all the real properties of the Country, overseen and guaranteed by the State.
- The new system combines **Cadastrre and Land Registry**.



Cadastral/Land Registry System

Land Parcel / Real Property

Persons Register

Rights-Restrictions-Responsibilities

Deeds



Procedure for developing Cadastre in Greece

- The contractor develops a preliminary cadastral map based on orthophotos, administrative acts and information collected on site.
- Beneficiaries are invited to declare their real property in the area, submitting their legal documents and verifying (or modifying) the position and the boundaries of their property.
- The contractor processes in cross-reference the declarations, the deeds, the geometric characteristics on the deeds, the actual property on the ground and information from the mortgage offices in order to develop the preliminary cadastral database (cadastre + land registry combined).
- The preliminary cadastral database is publicly presented and people are invited to inspect and request corrections if needed.
- Objections on the ownership are decided by an external independent administrative committee presided by a judge.
- Commencement of the operation of the Cadastre



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First generation of Cadastral projects

- ❑ The first generation of the cadastral projects (mid 1990's) covered ~340 municipalities throughout the Country, but these projects were completed with considerable delays and budget overruns.
- ❑ Main reasons:
 - ❑ Lack of experience,
 - ❑ unclear scope,
 - ❑ insufficient planning.



CSFIII Major Project “Data and IT Infrastructure for a modern Cadastre”

- Change in the management of the Project (following an 80 million euro Major Project co-financed by the E.C):
 - Achieve economies of scale
 - Ensure optimum contract management
 - Ensure maximum cost savings due to the use of advanced technology.
 - Focus on quality control and quality assurance
 - Ensure optimum use of existing data



Major Project outline

- A data and IT infrastructure for developing a modern Cadastre in Greece:
 - The Hellenic Positioning System (HEPOS)
 - Forest delineation
 - National coverage of orthoimagery
 - Coastal zone delineation
 - Digitization of land consolidation and land redistribution acts
 - IT infrastructure and web services for cadastral surveys



IT infrastructure and web services for cadastral surveys to enhance participation and transparency

- Web-services to submit declarations electronically from anywhere around the world (participation)
- Central real-time collection of the submitted declarations from all the cadastral survey offices around the Country (transparency)
- Web-services to inspect the cadastral database during public presentation and after the completion of the cadastral survey project (participation, transparency)
- Controls of all registrations for errors that can be automatically checked and random sampling for in depth quality control of registrations (transparency)



Achievements following the implementation of the CSFIII Major Project

- Since 2008, the Cadastral projects capitalize on these elements:
 - Improved quality (objections against cadastral registrations <3% vs >20% in the past)
 - Effective management of the contracts' time schedule
 - Implementation of projects without budget overruns
 - Considerable reduction of the average unit cost (€ /right)

1996	2008	2011	2013*	2015*
53	33	30	29	23

*budget cost before discounts



4 generations of cadastral projects

Programs	Type of area	Period	Area (km ²)	Rights
1 st generation (pilot)	Scattered areas around the Country	1996-2005	8.700	6.600.000
2 nd generation	Urban centers	2008-2015	3.500	7.300.000
3 rd generation	Rural and peri-urban areas	2012-2018	33.900	6.700.000
4 th generation	Remaining parts of the Country	2016-2020	83.500	16.500.000
Special areas	Dodecanese cadastre		1.800	800.000
TOTALS			~131.400	~37.900.000



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Summary progress report of the Cadastral Project

With respect to the existing real property rights (~37.900.000):

- 25,3% has been completed
- 22,3% cadastral survey projects under development
- 50,3% cadastral surveys tendered await contract awarding
- 2,1 % cadastre operates based on an old legal framework which needs to be migrated to the new system.



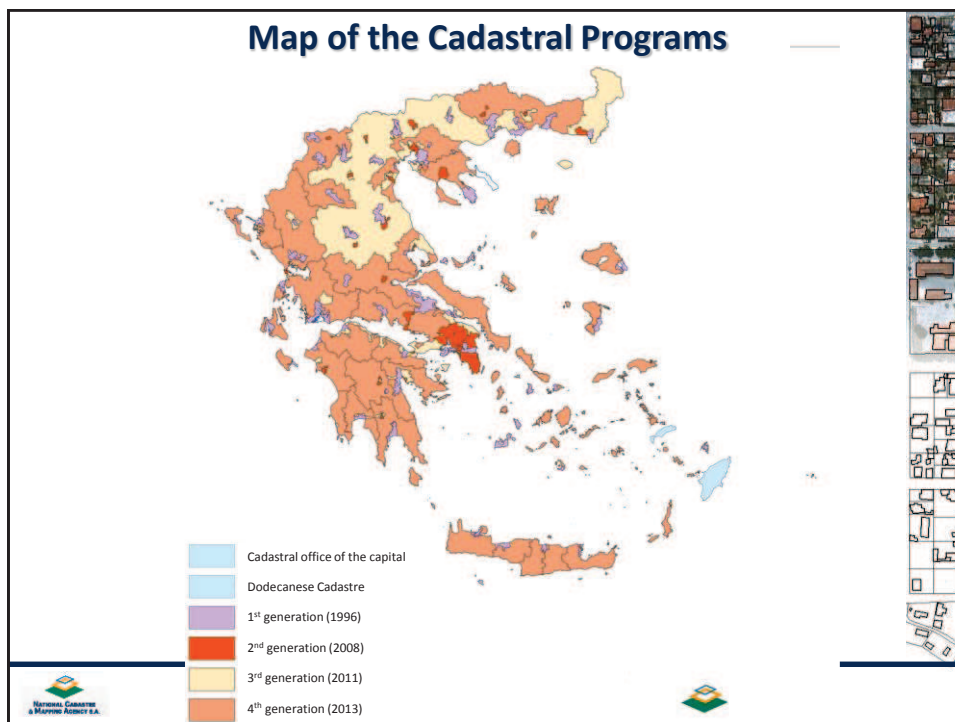


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NATIONAL CADASTRE & MAPPING AGENCY S.A.

Challenges

- Securement of the financing of the completion of the cadastral survey of Greece
- Built up the necessary capacity in NCMA S.A.
- Set up the definite structure and operation of the cadastre
- Extend collaboration for reducing time and cost and for improving efficiency and effectiveness



Securement of funding for the completion of the cadastral survey of Greece

- The project is mostly self-financed:
 - Fees during cadastral survey
 - Fees during cadastral operation
 - Fees for extracts, certificates and services
 - Funding from the State for the registration of its rights



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 - Fees during cadastral survey
 - Fees during cadastral operation
 - Fees for extracts, certificates and services
 - ~~Funding from the State for the registration of its rights~~
- Discussions for co-financing by the European Commission.



Challenges

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Built up the necessary capacity in NCMA S.A.

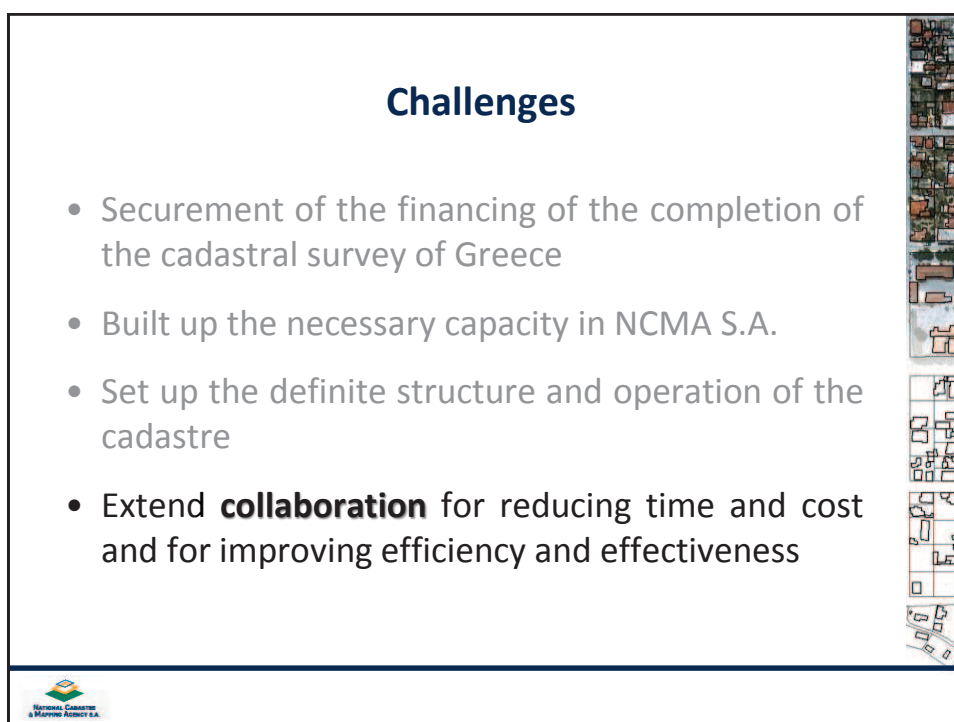
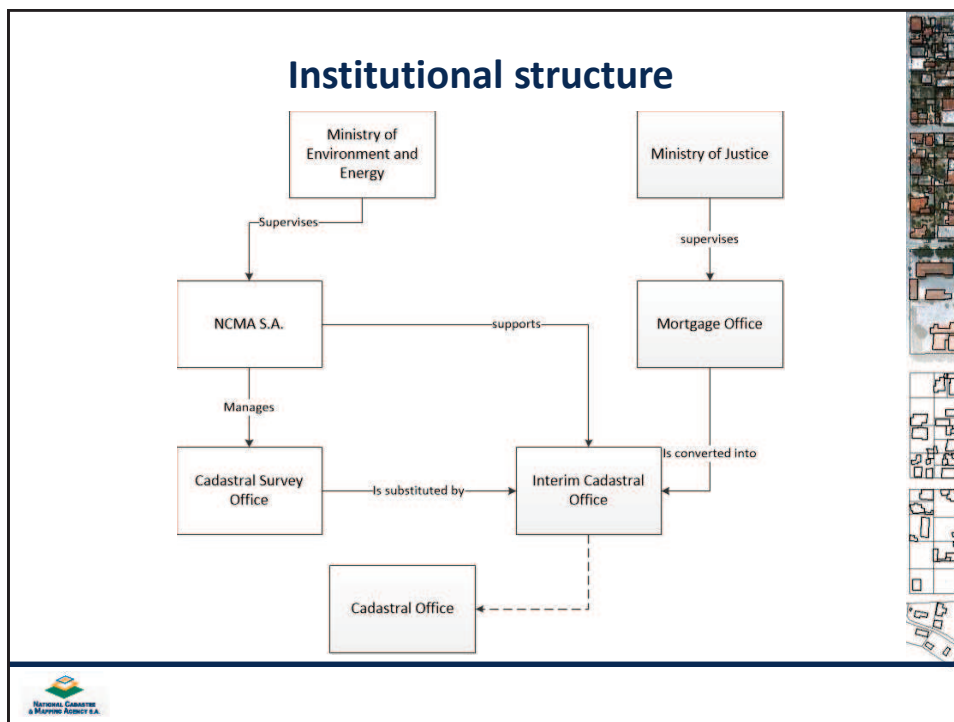
- NCMA faces a huge challenge (cover over 50% of the country in 4 years)
- It is impossible to complete the project in time, cost and quality with the current operational status
- The operational status of NCMA should provide for increased management capacity, flexibility, efficiency and effectiveness.



Challenges

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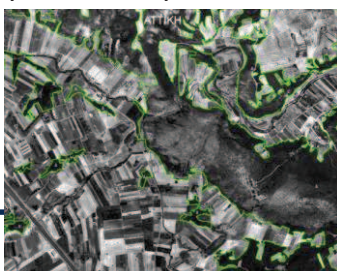
Extend collaboration for reducing time and cost and for improving efficiency and effectiveness

- Forest maps
- Coastal zones
- Web services exchanging data with the taxation of real property of the Ministry of Finance
- Collaboration with the Ministry of Justice for the institutional framework for the final cadastral offices



Forest maps - 1

- Forested areas belong by default to the State.
- Forest maps have been instituted in order to assist the State to find its real estate property.
- A forest map consists of the union of photo-interpreted forested areas in recent and 1945 imagery plus administrative deeds.
- The produced forest map is checked by the local forest services, publicly presented and reviewed, corrected if needed based on objections and finally certified by them.



Forest maps - 2

Current status of forest map projects:

- Completed: ~55% (certified ~1%)
- To be tendered: ~45%

- A new law voted in May 2016 prescribes the public presentation of the completed forest maps in the second half of 2016 by the local forest services.
- Need to pace the two procedures (development of cadastre and forest mapping) in order to: a) reveal and protect effectively State property, b) resolve conflicts based on all the available information (property rights and land cover)



Coastal zones - 1

- The stretch of public land towards the seafront
- Responsibility for the official delineation of the Ministry of Finance
- Legal framework for officially delineating coastal zones since 1940's by ground surveys
- Currently officially delineated ~15% of the coast length of the Country
- The official coastal zone limits private real properties towards the sea.



Coastal zones - 2

2007-2009 NCMA produced:

- high accuracy orthophotos (25 cm resolution) and detailed DTM (1 meter resolution) for a width of 300m for the 16.000 km of the Greek coast
- Preliminary delineation of the coastal zone for the whole Country using objective criteria



Coastal zones - 3

- Since 2014, the legal framework has changed in order to use NCMA's preliminary delineation of the coastal zone instead of ground surveys
- Local land services of the Ministry of Finance have to check the preliminary delineation of the coastal zone, correct it and certify it in order to take it into consideration in the context of the cadastral projects of the 4th generation



Exchanging data with the real property taxation authority - 1

- Since the beginning of the cadastral project, there was no connection between the project of developing cadastre and the taxation of real property
- The data between the two registers have not been cross-referenced
- As outcome of this:
 - The real property taxation system is not based on the cadastral DB
 - The cadastral procedures ignore the information that already exists in the taxation authorities and collect it from scratch



Exchanging data with the real property taxation authority - 2

Redesign of the cadastral procedure:

- The citizen can electronically file the cadastral declaration using the taxation authority credentials
- The citizen can approve the use of his/hers real property taxation information to be used to pre-complete the cadastral declaration
- Outcome:
 - Linked records from the beginning of the cadastral survey process
 - Location associated with real property taxation records
 - Completeness of cadastral registration



Challenges

- Securement of funding for the completion of the cadastral survey of Greece
- Recovery of sufficient administrative and financial independence of NCMA S.A.
- Securement of funding for the completion of the forest maps of Greece
- Definite structure and operation of the cadastre



System of Registrations and Mortgages Structure



There are **398 Mortgage Offices (MO)**, distributed around the country with specific areas of pertinence

Under the Ministry of Justice:

- ✓ **Salaried** (Public-service) (18)
- ✓ **Unsalariated** (Private-service) (380)



New draft law of the Ministry of Justice (August 2016):
Merge the 398 MO into 77 public service MOs



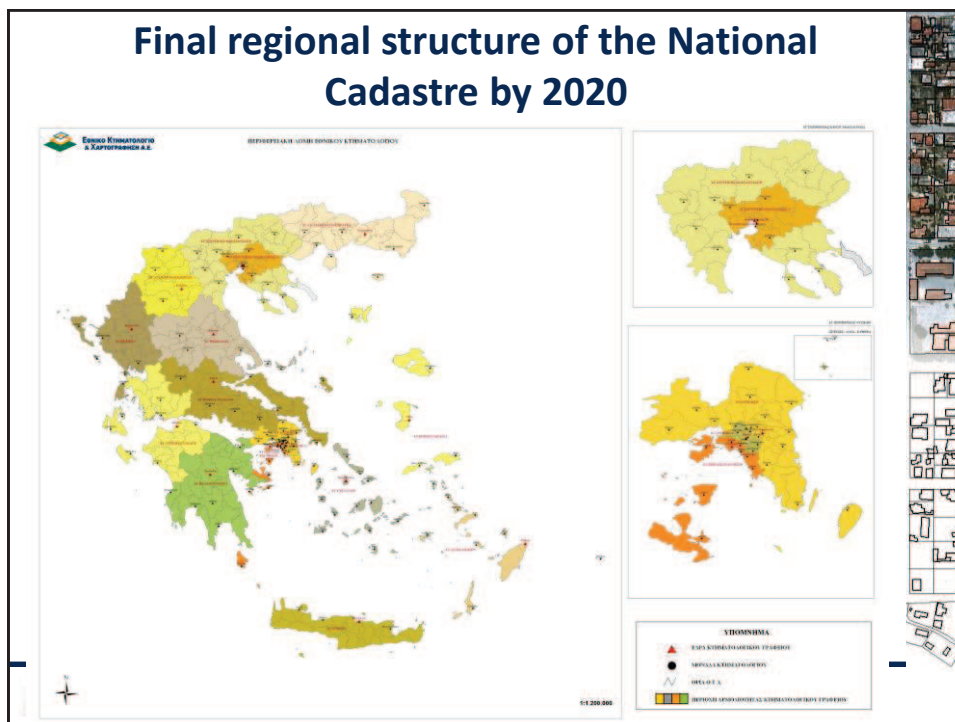


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The slide contains a "Table of Contents" with six bullet points. On the right side, there is a vertical strip of detailed cadastral maps showing individual plots and buildings, similar to the one in the first figure.

Conclusions

- The Greek Cadastral project is one of the most important reforms undertaken by the Greek State.
- It brings to the surface many of the problems that resulted from the lack of sound and consistent land governance for over a hundred years.
- The key principles for this transition are participation and transparency
- However, collaboration can become the key driver for speeding up the completion of the project and ensure multiple benefits for all the stakeholders involved.



Thank you very much for your attention!

