Sustainable Governance of European Cadastre and Land Registry Agencies

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Abstract
The World Bank experience from 20 years and 16 land registration projects in the Europe and Central Asia (ECA) region suggests that organizational setups (unified or separate cadastre and land registry agencies) and business models (fee financing, state budget financing or their combination) are the keys for sustainable governance of cadastre and land registry agencies. Single agencies that combine the cadastre and registration service and collect their income from service fees have been seen more efficient and less costly than public budget funded dual agency systems. Yet also alternative models seem to work when the operational environment is enabling, predictable and sustainable. Actually, the financial and organizational model may not matter most, but rather the governance checks and balances and their impact on the business model that are keys to success. Consequently, this paper seeks to define the keys for sustainable governance of cadastre and land registration agencies through a limited literature review of the international best practice of public sector governance, and case studies on European cadastre and land registry agencies of the Netherlands, Lithuania, Finland, Romania and Greece. The paper establishes that European land agencies tend to have proper business models, remuneration policies, checks and balances, reporting, planning, fee setting, profit sharing and client interaction in place and may still struggle if their operational decision making is compromised. The paper concludes that the keys to sustainable governance of cadastre and land registry agencies lie in ensuring a clear division between management and supervision bodies of the agency and allowing a high degree of operational autonomy to the agency’s management.

Key Words: Cadastre, Land Registry, Public Sector, Governance
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1. Introduction

This paper seeks to define sustainable governance models for Cadastre and Land Registration Agencies through a limited literature review of the international best practice of public sector governance and case studies on European Cadastre and Land Registry Agencies of the Netherlands, Lithuania, Finland, Romania and Greece. The Dutch, Finnish and Lithuanian cases feature well known and established agencies with differing governance models and the Romanian and Greek agencies are in process to improve their performance. The paper starts by defining a framework of public sector governance and then compares the case study findings within the framework. The paper ends with insider self-evaluations of the governance of each involved agencies and draws generic conclusions on keys to sustainable governance.

2. Principles of Good Public Sector Governance

The World Bank’s ECA experience is that successful cadastre and land registry agencies are often operated as a business rather than as a traditional public sector service. It is thus appropriate to look first at the principles of corporate governance, which are also much more featured in literature than public sector governance. OECD’s Principles of Corporate Governance from 2004¹ define models for effective corporate governance framework with shareholder, stakeholder and board duties, rights and treatment, and rules for disclosure and transparency. Among others, the principles call for clarity of the operational framework, responsibilities and duties; full and timely disclosure of information; and norms for a strategic guidance, monitoring of the management; and accountability of the Board. An Australian Stock Exchange publication from 2003² on Corporate Governance notes that best practice evolves and many models can work, but lists clear owner, management and board roles; skills, balance and independence of board members; integrity and transparency of reporting; identification and attendance of risks; and inclusion of stakeholders as among the fundamentals of any corporate governance structure. This paper adopts the view that the principles of good corporate governance modified to local conditions and a service in question are applicable to public sector services. The similarity of corporate and public sector governance principles is confirmed for example in OECD’s 1999 publication on Public Sector Governance³ that targeted ECA countries. According to the publication, public sector governance builds on the rule of law and clear regulatory framework and features predictability; transparency; accountability and efficiency; as well as technical and managerial competence; organizational capacity and citizen participation as the key features of a well governed public sector agency. In the public sector governance (versus the corporate

governance) shareholders become the government and stakeholders citizens, but the principles remain the same. The case is even stronger in a monopoly service case where an agency administers a key national asset such as land and can generate virtually unlimited revenue flows. Recognizing the need to control such income flows, a recent European Parliament publication\textsuperscript{4} touches the delicacy of fee setting of EU’s fee financed agencies. This is directly relevant to cadastre and land registry agencies that are often fully or partially fee financed. The publication stresses that such a business model (in particular) requires full transparency of the cost of the service provided and treatment of surpluses, and clear public checks and balances to avoid accumulation of wealth and maintain balance between service standards and actual needs. Finally, a United Nations good governance guidebook\textsuperscript{5} promotes the corporate type of governing to Public-Private Partnerships, which is also a relevant business model to cadastre and land registration agencies\textsuperscript{6}. Apart from the usual principles of governance, the guidebook adds fairness (that rules apply to everyone) and decency (that management does no harm to people) to the principles of good governance and links the efficiency principle among others to the avoidance of corrupt practices.

Thus, based as much to the World Bank’s ECA experience than to the latter analysis, this paper investigates the sustainability of governance of Cadastre and Land Registry agencies in the following best practice framework:

- Regulatory and institutional framework
- Owner guidance and supervision
- Management
- Stakeholder and partner participation
- Reporting and disclosures
- Financing and staffing models

For the following, the authors representing the Dutch, Finnish, Lithuanian, Romanian and Greek cadastre and land registry agencies analyzed their own agencies in the framework and provided insights to strengths and weaknesses of their agencies’ governing models.

3. **Clarity of regulatory framework**

The clarity of framework, mandates and subordination are crucial for both establishing operational and efficient organizations, but also for enabling appropriate checks and balances. The Cadastre, Land Registry and Mapping Agency (Kadaster) is the legal land registry and cadastre of the Netherlands established as a non-departmental public body. The governance framework and structure is stipulated in


the Civil Code and in the Kadaster specific, and public sector generic, legislation and norms. The Centre of Registers is the legal land registry and cadastre in Lithuania established in law as a State Owned Enterprise (SOE) liable to taxation and vested to the Ministry of Justice. Its governance is further established in a number of internal rules that define work procedures, staff policies and codes of conduct, and relations between the employees and the Centre of Registers. In 2010, the Finnish cadastre, the National Land Survey of Finland, became also the legal land registry taking over land books from the Ministry of Justice. The National Land Survey is the legal land registry and cadastre of Finland and established in law as a budgetary State Agency under the Ministry for Agriculture and Forestry. Due to historical reasons the law also allows municipalities to carry out cadastral surveys and update the cadastre records kept by the National Land Survey. In Romania, the National Agency for Cadastre and Land Registration (ANCPI) is a public legal entity under the Ministry of Regional Development and Public Administration and its services are not subject to value added taxation. It is the legal land registry and cadastre of Romania and its governance and services are stipulated in the Civil Code and in a sectorial law, government ordinances and administrative orders. ANCPI’s regulatory framework is not fully coherent due to a history of frequent legal amendments since its establishment in 2004, many of which have changed its governmental affiliation, financial arrangements and activities. Thus, a new sectorial law is being drafted in part also to harmonize the sector legislation with the recently renewed Civil Code. Finally, the Cadastre of Greece is a legal cadastre (i.e. inclusive of the legal land registry) established as SOE and vested to the Ministry of Environment, Energy and Climate Change. Until 2010, the Cadastre held a status of a private company that did not adhere to the rules and policies of SOEs. The change to SOE status narrowed its administrative and financial autonomy.

In conclusion, the governance framework of European cadastre and land registry agencies is stipulated extensively in laws and regulations and reflect the legal tradition in each country. The Netherlands and Lithuania rely on a very detailed stipulation of the governance system, Romania works on to clarify its detailed, but incoherent framework, and Finland and Greece seem to trust to less detailed stipulations.

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8 Resolution No 742 of 08-07-1997 “On Establishment of the State Enterprise Centre of Registers”; the Constitution; Civil Code; Law on State and Municipal Enterprises of the Republic of Lithuania; and ministerial orders.
9 Administration’s rules; Rules of Procedure; and Collective agreement.
10 Real Estate Register Act: https://www.finlex.fi/fi/laki/ajantasa/1985/19850392?search%5Btype%5D=pika&search%5Bpika%5D=kiinteist%C3%B6rekiste_rilaki; Real Estate Code https://www.finlex.fi/fi/laki/ajantasa/1995/19950540?search%5Btype%5D=pika&search%5Bpika%5D=maakaari; Land Information System and Related Information Services Act https://www.finlex.fi/fi/laki/ajantasa/2002/20020453?search%5Btype%5D=pika&search%5Bpika%5D=laki%20kiinteist%C3%B6tietoj%C3%A4rjestelm%C3%A4%20kiinteist%C3%A4
11 Civil Code 2011; Law on cadastre and land registration no. 7/1996; multiple Emergency Ordinances; Government decisions and internal orders.
12 Established in 1995 by a Decision of the Minister of Economy and Finance and the Minister of Environment, Physical Planning and Public Works. Since 2010, the company has been included in the public enterprises of the Greek State, meaning that it has lost, to a great extent, its administrative and financial autonomy.
Notably none of the sample countries operate cadastre and land registers as simple budgetary departments, but all have established agencies with a level of autonomy. Legal status of the cadastre and land registry agencies vary from the Finnish, Dutch and Romanian public legal entity statuses to the SOEs of Lithuania and Greece.

4. **Owner guidance and supervision**

![Organigram of the Dutch Kadaster](image)

Large organization management arrangements depend on clear structures of strategic guidance and supervision arrangements that establish a functional hierarchy, but do not encourage excessive political interference. The Kadaster of the Netherlands is subordinated to the Ministry of Infrastructure and the Environment and governed by a two tier board structure with Supervisory Board (of 3 – 5 members) overseeing the Executive Board that consists has 2 Board Members and 4 Directors (See Picture 1 for the Organigram of the Kadaster). The Executive Board reports to the Minister for Infrastructure and Environment and it literally has executive powers over the management of the Kadaster exercising the rights and obligations of the Ministry. The 2 Board Members are appointed by the Minister of Infrastructure and the Environment based on a nomination by the Supervisory Board. The Lithuanian Centre of Registers has a Board of 7 members that reports to the Ministry of Justice (that owns the Centre). The Board members and chairman are appointed and dismissed by the Ministry of Justice and the Board includes also the Director General of the Centre. Similarly, the Romanian ANCPI is managed by a Board that is chaired by the General Director and 8 members representing public and private sectors. The members are appointed by the Prime Minister based on professional competence criteria selection as recommended by the Ministry of Regional Development and Tourism to which ANCPI is subordinated. The Board members are liable for the management decisions of the agency. ANCPI’s subordination has...
changed frequently during the past years and there have been serious problems with maintaining predictable financing with the constantly changing governmental hosts. The Greek Cadastre’s Board of Directors is appointed by the Minister of Environment, Energy and Climate Change for three years. The Board is chaired by the President of the Cadastre and it has 7 members with limited management powers. The budget and human resource policy decisions are retained to the Ministry of Environment, Energy and Climate Change, as well as to the Ministry of Finance. The Finnish National Land Survey is subordinated to the Ministry of Agriculture and Forestry and it does not have a board (See Picture 2 for the Organigram of the Finnish National Land Survey). Instead, the National Land Survey is represented and managed by the Director General. The Dutch Kadaster, Romanian ANCPI and Greek Cadastre prepare multi-annual strategic plans and annual action plans, which are recommended by the Boards and approved by the Ministries. The Lithuanian Centre of Registers agrees on the targets and results with the Ministry of Justice on an annual basis and the Finnish National Land Survey has a multi-annual agreement with the Ministry of Agriculture and Forestry, which is updated annually and monitored semi-annually.

In conclusion, the European cadastre and land registry agencies are owned by, or subordinated to, a Ministry. Only the Dutch Kadaster separates the supervisory and executive powers to two boards while the Lithuanian, Greek and Romanian agencies have executive boards and the Finnish National Land Survey does not have a board. The boards are appointed by a Minister, who also approves the strategies and plans submitted by the boards.

### 5. Management

The managerial decision making capability is an indicator of good managerial structure. The Kadaster of the Netherlands is literally managed by the Executive Board and the Greek Cadastre is formally managed by the Board, which however delegates executive powers to its members and the General Manager. The Director of Centre of Registers in Lithuania, the Director General of the National Land Survey and the General Director of Romanian ANCPI manage their agencies with sole powers. In Dutch, Finnish, Lithuanian and Romania agencies the agency’s Director is appointed by the owner/host Ministry and in Greece the General Director is appointed by the Board.
In conclusion, the management responsibility of European cadastre and land registry organizations is generally vested to a Director with an exception of the Netherlands and Greece where the Boards manage the agencies. The Directors report to their host/owner Ministries either directly (Finland), via a two tier board structure (the Netherlands) or via a board (Greece, Lithuania and Romania). In the case of Romania and Greece, the Director leads the agency’s board, which seems to integrate (if not mix) the management and supervision functions to a same body.

6. Stakeholder and partner participation

Cadastre and land registry services are responding to true needs and more generally successful organizations monitor the needs systematically and regularly. The Kadaster of the Netherlands maintains a law stipulated Users’ Council as a part of its formal governance structure. The Council is a broad user group of about 15 representatives and it advises the Executive Board of the Kadaster on policy (such as on the open data), strategy and fees. The council meets 4 times a year and has an independent chair. The Kadaster interacts also with other formal User Councils and organizes non-stipulated consultations with private sector, municipalities and notaries nationwide. Notaries are the Kadaster’s key partners and the Kadaster and the Royal Dutch Association of Civil-law Notaries have agreements over the land registration processes, information sharing and fees. The Kadaster’s other key partners include financial institutions that use cadastral information, bailiffs, and public bodies, and local governments that extensively use cadastral information for their tasks and who may execute cadastral surveys under certain conditions.
The Romanian ANCPI has a legal obligation to collaborate with administrative-territorial units, courts of law and public notaries and the relationship is formalized through collaboration protocols that establish modes of collaboration and associated fees etc. The public notaries are the key partners being in daily contact with ANCPI’s local offices, but also municipalities are important partners especially in systematic first registration. ANCPI cooperates also with a number of governmental and non-governmental organizations meeting them regularly and providing online access to electronic land books to the key users. Cooperation on land registration with other state institutions administering land (such as with the Department of Forestry) has been identified as an area requiring enhancement. This issue has centered on the cost of first registration, which other public agencies have not agreed to share with ANCPI.

The Centre of Registers of Lithuania does not have a formal consultation obligation, but it obtains user feedback through its website where it posts advice and information concerning its services. The Centre also maintains a customer help desk. It may also organize public consultations along a generic SOE rule. The main partners of the State Enterprise Centre of Registers in the property registration chain are notaries and private sector surveyors that carry out most cadastral surveys (See Picture 3). The Centre has an integrated data management strategy and its databases connect and exchange data with practically with all main state information systems.

![Picture 3. Services of the Real Property Register in Lithuania.](image)

13 The Centre of Registers operates a dynamic information system for Real Property Register that utilizes latest information technologies (such as Oracle and Java Server Pages) allowing simplified data administration, fast data transfers and service delivery, and high security. The Centre’s ICT expertise is recognized and it has taken over the administration of several non-land related key eRegisters of Lithuania.
The Finnish National Land Survey does not have a public consultation obligation and its key partners include other government agencies, municipalities, utility network companies etc. The National Land Survey records are widely interlinked with other public sector spatial data providers. Some municipalities also maintain the national cadastre records in collaboration with the National Land Survey.

The Greek Cadastre does not have a formal forum for stakeholder consultation, but it is obliged to present regular progress reports at a parliamentary Production and Trade Committee and it maintains stakeholder working groups to address specific goals or problems. Private sector cadastral surveyors are the key partners of the Greek Cadastre in the land registration value chain. Their work is funded from individual registration fees and state land registration fees. Also notaries are important partners and some transactions involve also lawyers for title chain investigations.

In conclusion, European cadastre and land registry agencies operate in close interaction with multiple stakeholders. The Romanian and Dutch agencies have stipulated obligation for stakeholder consultation and the Dutch Kadaster maintains a formal Users’ Council. Lithuanians, Greeks and Finns are more needs based in their stakeholder consultation practices and the Greek Cadastre maintains a close contact with the parliament. Key partners in the value chain include often notaries and private surveyors in countries where these services are not provided by the agency itself. European land register and cadastre agencies commonly interlink and exchange data electronically with dozens of other public sector spatial data providers and users.

7. **Reporting and disclosures**

Reporting and disclosure norms are the key for good governance in any organization. The Dutch Kadaster’s planning and control cycle includes a long-term policy plan that contains the strategy, goals and a financial plan; and an annual report and an annual financial report, which are all published. An independent parliamentary review of the Kadaster’s activities is obliged for every five years. The Kadaster has also an ISO 9001 and 27001 accredited risk management system. The Lithuanian Centre of Registers publishes an annual report and an annual Financial Statement (presenting the balance sheet and an explanatory note, and statements on the income/loss, changes in equity and indirect cash flows) and submits an annual plan to the Ministry of Justice’s approval. The Centre adheres to national business accounting and disclosure standards and performs an annual independent audit. Romanian ANCPI’s Board has a legal obligation to submit an annual activity report and plan to the Prime Minister and it is also published with a balance sheet, a budget report and a report on received complaints. ANCPI has an internal performance standard control and risk management system covering all activities. The agency has

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16 As stipulated in the Accounting Law, Law on Financial Statements of Entities and Business Accounting Standards of the Republic of Lithuania.
also adopted a charter of internal audit and an audit is performed every three years by the Court of Accounts. ANCPI also adheres to the quality management standard ISO 9001/2008. The Greek Cadastre submits a quarterly budget execution report, an annual budget report and a public investment program with a four-year reach (and an annual update) to the Ministry of Environment, Energy & Climate Change. Quarterly and yearly balance sheets\(^{18}\) (certified by accountants) are provided to the Greek Statistical Authority and the Ministry of Finance, and the yearly balance sheet is published. Finally, the Finnish National Land Survey has a multi-annual (annually updated) contract with the Ministry of Agriculture and Forestry defining target production levels (cadastral surveys, registrations …), registration fee level and the public budget allocation share. The contract performance is monitored semi-annually by the Ministry. In addition, the National Land Survey publishes an annual activity report and a financial statement\(^{19}\) and performs internal legality and quality audits.

In conclusion, the European cadastre and land register agencies agree their annual targets and investments with the government in a form of either rolling multi-annual plans or contracts (the Netherlands, Greece, Finland) or annual plans (Lithuania, Romania), and publish activity reports, financial statements and independent audits annually.

8. **Core tasks, financial and staffing models**

Predictable and adequate financing arrangements (or lack of such) translate directly to a level of governance in public sector agencies. The Kadaster of the Netherlands is financed through fees on a cost recovery basis. The fees are agreed annually with the Ministry having considered the advice of the Users’ Council and the Supervisory Board. In addition, the Kadaster receives about 15% of its funding from the State Budget as a project financing mainly related to the work within the eGovernment\(^{20}\) concept. The Kadaster’s core tasks and production levels in 2013 were land registration (278 000 deeds and 232 000 mortgages); cadastre updating and surveys (66 000); information services (19 000 000 responses by the Kadaster online); coordinate system maintenance; topographic mapping; data dissemination on addresses, buildings, large scale topography, public restrictions and zoning, real-estate values and cables/pipelines (520 000 responses on utilities); and land consolidation (200 000 hectares in process and 19 000 hectares finalized). The turnover in 2013 was 226 million Euros and the Kadaster made an operational loss of 10 million Euros reflecting the downturn in real estate transactions. Kadaster’s total operating profit was 3.4 million euros in 2012 with the total income of 242.1 million euros. The Kadaster can retain a structural equity and an economic reserve equity to help the Kadaster to overcome the impact of economic downturns. Exceeding the equity limits\(^{21}\) results to decrease of the fee levels. The Kadaster’s Annual Report publishes detailed information on its performance from financial efficiency The Kadaster employs 1 705 personnel and the salary level is agreed in its own collective labour agreement with relevant labour unions.

\(^{18}\) The Greek Cadastre’s Balance Sheet of 2013 (in Greek) [http://www.ktimatologio.gr/aboutus/Documents/ISOL%202014.pdf](http://www.ktimatologio.gr/aboutus/Documents/ISOL%202014.pdf)


\(^{20}\) The cadastre constitutes one of 12 key registers of the eGovernment in the Netherlands.

\(^{21}\) The maximum total reserve equity in 2012 was 86 million euros and the Kadaster had 59 million euros.
aiming to match with public sector average in the lower level and private sector average at the highest level.

The Centre of Registers administers the Real Property Cadastre and Register, the Address Register, the Register of Legal Entities of Lithuania. The Centre also publishes legal literature and provides electronic signature services. The Centre also keeps the bailiffs’ information system; information system of cash limitations; and an e-health services and collaboration infrastructure system. It also operates a mass property valuation system and provides analytical real estate value and property taxation data and reports. It is established as a SOE allowed to provide commercial services that do not hinder achievement of social and political goals established by the government. It is financed from fees and programmatic funds allocated by the Ministry of Justice from the State Budget. 82-84% of income comes from non-commercial services (register keeping of which 70% come from real estate transactions) and 13-16% from commercial services (cadastral surveys, valuations …) and 2-3% from the State Budget. The Centre is to be operationally profitable and save 5% of its annual profit to an obligational reserve fund until its value reaches 1/10 of its capital value and max another 5% to a loss and damage reserve until it reaches 1/20 of the capital value of the Centre. In 2014, the Centre had 1 577 staff and 29.36 million Euro income. The Centre’s management salaries are defined in a government resolution22, and other staff is compensated on a competitive basis and incentivized by bonuses, premiums and other benefits.

The Finnish National Land Survey administers the cadastre and land registry and performs cadastral surveys in the territory outside master plan areas, where the surveys are performed by municipalities or by the National Land Survey based on an agreement. Since the beginning of 2015, the agency has hosted also the Finnish Geodetic Institute and also the (former) Information Centre of the Ministry of Agriculture and Forestry. The National Land Survey is established as a not-for-profit state agency with 50 million Euro state budget financing and 70 million Euro fee income in 2013. The adoption of an open data policy in 2013 reduced fee income and new efficiency measures are continuously applied. The National Land Survey’s 1 800 employees (2014 headcount) are located in 37 service points across the country and the two new institutions added another 200 staff. The National Land Survey performs more than 20 000 cadastral surveys and 250 000 title and mortgage registrations annually. A major salary reform 10 years ago changed salaries from being based on a job position and benefits accrued through service years, to private sector level salaries that consist of a fixed part and a variable part (up to 45%) based on performance. The salary reform was possible due to increased efficiency gained through staff reduction through retirement and investments in automation and process reengineering.

Romanian ANCPI maintains the integrated cadastre and land book system in Romania. It coordinates and controls cadastral surveys that are conducted by the private sector, and maintains a geodetic network and topographic maps, an address register, and is the leading agency in Romania in the fields of geodesy, cartography, photogrammetry and remote sensing, and the designated agency for the implementation of the INSPIRE directive of the European Union. ANCPI is also responsible of developing legislation for the land and property sector. ANCPI is partially state budget funded and partially fee financed, but the financial structure and arrangements have fluctuated during the past years. The agency was created in 2004 as a self-financing agency integrating the previous cadastre with the court based land book registers.

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In 2009, ANCPI became state budget funded. While the initial self-financing period had been a period of growth and investment, the return to the state budget agency status had a halting impact as new investments became scarce, wages were significantly reduced, bonus systems canceled and the total number of ANCPI employees decreased due to the resignation of staff. During this period ANCPI did not receive funding for staff training, recruitment was restricted and the staff performance was affected. In September 2014, ANCPI became a partially self-financing agency with a right to retain fee income as well as to receive state budget financing. The fee retention is conditioned to financing of a National Program for Cadastre and Land Book, which is a country wide systematic first registration program that is expected to take 20 years to completion. It is notable, that the registration tariffs are collected by public notaries on behalf of ANCPI and against a fee negotiated between ANCPI and the National Union of the Public Notaries. The registration tariffs are set, amended and updated through the order of the General Director of ANCPI, based on a proposal of the ANCPI Board and a prior approval of the Ministry of Regional Development and Public Administration. ANCPI has 2,880 employees and an annual turnover about 90 million Euros. In 2014 it registered 6.1 million service applications, which of 2.1 million were for land book extracts, 0.990 million for certificates identifying a cadaster / topographic number; 0.741 million for registration of transactions; 0.309 million for first registration of property; 0.136 million for registration of mortgages; and 0.538 million for notations in the land book. ANCPI salaries are defined according to civil servant legislation defined by a job position classes and wage levels and annually accrued benefits. ANCPI’s gross salary average is 37% above the national average, but it is still in a modest level compared to other EU countries.

The Greek Cadastre is a SOE financed mainly by fees and programmatic financing from the Public Investment Budget. The Cadastre maintains legal cadastre records, maps and information systems, forest maps and topographic base maps while the local operations are carried out by the interim cadastral offices currently under the Ministry of Justice. As most technical work is outsourced the Cadastre thus has only 366 staff, which of 50% support the activities of building cadastre records and 50% support cadastral maintenance. The Cadastre’s annual turnover is 18 million Euro. The salaries have decreased recently by over 35% due to the austerity program in Greece and the current salaries are not considered competitive when compared to the required skills, education and job responsibilities. There is no reward scheme, no salary supplements and earlier staff benefits are gradually diminishing.

In conclusion, the European cadastre and land registry agencies maintain cadastre and registry records and maps and often also produce core topographic maps of the country. In addition, many other services are provided varying between countries, but in all cases legal land registration and/or cadastral surveys generate the main duty and source of income. In the stable and predictable operational and financial environment the agencies are able to pay competitive salaries and operate an efficient infrastructure and services, but in unstable circumstances progress stalls, benefits fall behind and staff performance and service levels suffer.

23 221 working in the ANCPI headquarters, 2557 in local offices and 102 in the National Centre of Cartography. 42.5% of staff work on land registration; 30.3% on cadastre; 1.82 in IT; and 25.4% in administrative support.
24 The Greek Cadastre currently implements a State Land Registration program, which is partly financed by public funds.
9. Self-evaluation remarks

The following represents the authors’ insider self-evaluation of the state of governance in their own cadastre and land registry agencies in Europe. The Kadaster of the Netherlands is praised for its modern combination of both vertical (i.e. hierarchical) and horizontal (i.e. user and society) accountability of its governance. The Kadaster enjoys also a proper balance between operational independence and strong legal basis for all activities. The Kadaster is increasingly operating in external networks (eGovernment, the real-estate market …) and it is recognized that the Kadaster’s governing principles will have to evolve together with the network society while always safeguarding the trust in the land administration system. The change in governance is inevitable, but the nature of change will have to be seen.

The Centre of Registers in Lithuania meets its legal obligations, the expectations of its owner Ministry and its own strategic objectives and targets very well. The governance structure is defined by the division of responsibilities between the Ministry of Justice (strategic guidance, control) and the Centre of Registers, and the sectorial legislation and it is considered to function well and allow efficient operations. The Centre is a target of constant new expectations and tasks, and it continuously invests in its ICT systems to meet the demand and improve services. The Centre’s organization and functions are stipulated in laws, regulations, agreements, national and international norms to a high degree of accuracy. Nothing is left ambiguous, everything is regulated, organized and monitored. The governance structure ensures efficient operations, but also protects the owner and stakeholder interests and prevents management from conflicts of interest.

The Finnish National Land Survey has successfully implemented continuous reforms (process-orientation, system unification nationally and thematically, organizational optimization, human resources policies …) since its operational environment dramatically changed in the aftermath of the early 90’ies economic recession (the first in Finland since the Second World War) and public budgets plunged. Since those days the agency has reformed its remuneration and incentive structure totally turning to reward competence and performance instead of a position and a length of service. Key specialist staff’s retention issues of the past have been overcome and remuneration level now compares with the private sector. The head count has reduced steadily since the 90’ies and the Agency has managed the change through soft incremental measures (through retirement mainly). The salary reform was possible as staff efficiency and production norms have increased substantially by systematic investment to automation and technical solutions, process and service re-engineering and repeated organizational reforms that have flattened hierarchies, moved services from offices to cyberspace, and removed repertory functions. The evolution of the National Land Survey since 1990’s has been a successful institutional reform of a type that all cadastre and land registry agencies need to go through when moving from manual to digital era and when public budgets slim down. The evolution and reforms are never ending and the National Land Survey’s current focus lies in service and process streamlining and development including a new 3D land registration process.

Romanian ANCPI has experienced ten years of governance structure changes in a complicated and volatile political and economic environment and its survival demonstrates that it is fundamentally a strong

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25 Key governance defining features of the Centre of Registers: Comprehensive sectorial laws, collective labour agreement, rules of procedure for the management, themed regulations, staff regulations and other guidance; and service orientation, staff loyalty, job satisfaction, best practice accounting/control/reporting, full transparency etc.
agency with a healthy business scheme, knowledgeable personnel and vast clientele and it has a high reward potential for institutional development and modernization. ANCPI has the advantage of being the sole authority in cadastre and land registration in Romania and its combined financing model of partial self and state budget financing will restore the predictability of financing, stability and functionality that is needed for progressing its mission to register all land titles in Romania. ANCPI has now a right to retain its fee income in full for the benefit of the National Program for Cadastre and Land Book that aims to finalize first registration of all properties in Romania by 2023. The hybrid financing model also helps to sustain the impacts of changing real estate market volumes (i.e. fee income from land registry transactions). ANCPI has a fully digital cadastre and land registry system and network covering all offices and a new law of integrated system for cadaster and land book is being drafted. ANCPI’s remaining challenges relate to the limitations in operational freedom and in particular related to staff remuneration and benefit schemes, which compromises its ability to retain skilled specialists (such as in the field of ICT) and hire needed external support. In terms of long term aims ANCPI plans to review its business models extending online services; reform its management structure to ensure a dynamic leadership in relation with internal staff and external partners; revise its strategies on human resources and ICT; upgrade its ICT system and interconnectivity; and restore its staff training and capacity building programs. Finally, ANCPI will focus on sharing and linking its digital data via Geoportal\textsuperscript{26} in line with the EU’s INSPIRE Directive.

The Greek Cadastre used to be a (standard type) company with full administrative and financial autonomy having both a clear task and means to achieve its goals. The adoption of an SOE status exposed it to multiple supervising bodies that apply to all SOEs in Greece and the Cadastre lost a dedicated owner guidance. This relates to the on-going austerity programs and it is foreseen that new changes to the governance structure are needed in order to restore the Cadastre’s operational capability. The key lies in establishing clarity to the supervisory and control roles of the several authorities involved in its operational framework\textsuperscript{27}. The way forward starts from an adoption of a new sectorial strategy and a realistic business plan for the cadastre. The raw truth is that the body responsible for developing and managing the Cadastre should also have resources and capacity to meet the challenge.

\section*{10. Conclusions}

This paper shows that the European Cadastre and Land Registry agencies enjoy from fairly extensively stipulated regulatory frameworks, which establish clear responsibilities and operations to the agencies. However, depending on the broader governance context, the extensive frameworks may also add complexity and dependency to external decision making and hinder agencies’ operational autonomy, which is seen as a key for sustainable governance regardless of the agency’s institutional status or model. European cadastre and land registry agencies are subordinated to (or owned by) line ministries and the ministries’ strategic and appointment powers are well established. However, in weaker governance settings the supervisory and owner guidance can leap towards political interference and power games that

\textsuperscript{26} \url{http://geoportal.ancpi.ro/geoportal/catalog/main/home.page}

\textsuperscript{27} Currently, the Ministry of Environment, Energy & Climate Change, the Ministry of Justice, the Cadastre, registry offices, as well as the Ministry of Finance and the Ministry of Development, all have duties and responsibilities in the Greek land administration system hindering the decision-making process.
halt decision making and in particular investments and development programs. Most cadastre and land registry agencies have governing boards, but with varying executive and supervision powers. While all agencies have appointed Directors they often split their powers with a board. The clear division between managerial and supervisory responsibilities is seen better for ensuring operational efficiency and avoiding conflicts of interest. Notably, European cadastre and land registration agencies keep close contact with their clients and public and private stakeholders through stipulated forums and more casually. Their registration value chain often includes private sector partners (such as notaries and private surveyors) and agencies manage the chain through legal agreements with professional associations, which are delicate transactions given associated vested interests. Internally within the government and the public sector, cadastre and land registry agencies operate multiple ICT and spatial data systems that incrementally get interlinked with multiple public networks, systems and eGovernance services. All European agencies have similar duties on multi-annual or annual planning, activity reporting, financial statements and audits in terms of reporting to their supervisors or owners. Such reports and plans are also disclosed. Also, registration fee setting and treatment of operational surpluses are well regulated and monitored. Most agencies share similar duties of cadastre and land registry maintenance and base mapping. Their business models are capable of maintaining an able labour force with competitive remuneration policies, if the agencies continuously modernize their automation, technologies, organizational structure, functions and incentive structures and provide efficient services based on actual needs.

European experience shows that the sustainability of governance of cadastre and land registry agencies reflects the overall maturity of the public sector governance in the country. Cadastre and land registry agencies thrive in enabling environments and struggle in weak governance settings. Contrary to the World Bank’s earlier ECA findings, sustainable governance of land agencies does not seem to depend on their financing model (fee financing, state budget financing or their combination) or the transparency of their operations. In fact, European land agencies tend to have proper business models, remuneration policies, checks and balances, reporting, planning, fee setting, profit sharing and client interaction in place and may still struggle if their operational decision making is compromised.

In conclusion, the keys to sustainable governance of cadastre and land registry agencies lie in ensuring a clear division between management and supervision bodies of the agency and allowing a high degree of operational autonomy to the agency’s management. Unfortunately, in weak governance settings the supervision and political control powers can be misused and result to a political interference with frequent management changes, complicated decision making and hindered progress.