

# **The Need for a Multi-Disciplinary Approach to Land Administration Projects**

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## **Abstract**

A number of political and economic factors are creating a need for Land Administration in many jurisdictions around the world. Many countries with centrally planned economies are privatizing land use rights. Other countries are rapidly developing more sophisticated economies, requiring modern land conveyancing and securitization systems. In all parts of the world, environmental and other land administration issues are requiring modern land administration development. Governments, often with the support of international funding agencies, are defining various land related projects, sometimes as part of broader projects, such as privatization and economic restructuring, or as a specific type of land administration.

The development of modern land administration demands a combination of a number of traditionally separate disciplines. These usually include mapping and photogrammetry; surveying; information systems; GIS; GPS; real estate law and title registration operations; and an understanding of the particular organization served and the institutional setting in which it is found.

Traditional firms tend to specialize in one or only a few of these areas. A mapping or photogrammetric firm tends to be focused on its primary field with limited capability in information systems. An information systems or systems integration firm usually knows nothing about the technical aspects of photogrammetry. Neither of these types of firms are generally knowledgeable of the institutional or legal issues involved. While in recent years a few academic departments have recognized the need to address these multiple disciplines, the execution of these projects require private sector firms with the right focus and disciplines.

This paper describes the multidisciplinary approach to implementation of land administration projects and how management, technology, information systems, legal framework, and institutional components need to be integrated. This approach insures that all critical components of these projects are adequately addressed and the cultural and economic objectives of land administration projects can be achieved.

## Land Administration Trends

There is currently a great demand for the development of modern, automated systems for land administration in a number of regions around the world. This demand is being driven by a number of factors.

Political changes that are extraordinary in their magnitude have taken place in recent years. Transitional economies, such as the countries of the former Soviet Union, have begun to convert command economies into free market economies. Real property owned and controlled by the government must now be transferred to private parties. However, the complex of institutions that allow the private ownership of real estate to form an economic and democratic foundation for a society are not created by the mere transfer into private hands. The historical absence of privately held property necessarily has resulted in an absence of law, financial instruments, organizations and even social attitudes required to make a free market in real estate function.

Regions of the World that were once considered underdeveloped, such as the Southeast Asia, are becoming economic powerhouses. These regions have dynamic and increasingly sophisticated populations that demand the social incentives and economic securitization that private real estate ownership provides.

Central and South America economies are finally coming out of international debt, inflation is easing, and they are maturing as free enterprise democracies. Land reform and land title regularization are particularly important in this area of the world, so that land ownership and human rights and dignity are closely linked.<sup>1</sup>

The Summit of the Americas, Miami, 1994, was held in recognition that Central and South America were entering a new era. "For the first time in history, the Americas are a community of democratic societies. Although faced with differing development challenges, the Americas are united in pursuing prosperity through open markets, hemispheric integration, and sustainable development."<sup>2</sup> The North American Free Trade Agreement (NAFTA) is representative of this new era and is law that puts irreversible pressure on the modernization of these societies.

The Summit of the Americas Plan of Action sets out a number of principal initiatives. While these tasks are more general than the development of land administration systems, cadastral systems or land registration systems, most of them clearly related and require such systems. For example, the list includes:

- Strengthening Democracy
- Capital Market Development and Liberalization
- Telecommunications and Information Infrastructure
- Partnership for Biodiversity

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<sup>1</sup> See, e.g., de Soto, Hernando, *The Other Path*, Harper and Row, 1990.

<sup>2</sup> Summit of the Americas, "Declaration of Principles, Partnership for Development and Prosperity: Democracy, Free Trade and Sustainable Development in the Americas," Miami, Florida, Dec. 9-11, 1994.

- Partnership for Pollution Prevention<sup>3</sup>

Indeed, these needs are general to all of the regions of the world we have mentioned. Land information is needed to support these initiatives and cadastral systems form the foundation of all regulatory-related land administration.

The need for more sophisticated real estate tenure and conveyancing mechanisms has been recognized by both government officials and by international funding agencies, such as USAID and the World Bank. Of particular importance to governments are a number of related information infrastructure components related to land to support a wide range of governmental functions. These include ownership of land, taxation of land, land use regulation, utility maintenance and construction, environmental compliance, and many others. The technologies that support such functions are complex and rapidly changing. They involve a number of disciplines, ranging from law to global positioning systems.

## **The Russian Environment**

The political changes that gave rise to land administration reform in the former Soviet Union occurred very suddenly, as suddenly as does an iron curtain fall. The U.S. Agency for International Development (USAID) has been a major funding source to assist the transition of the former Soviet countries. USAID issued in 1993 and 1994 RFP's for technical assistance in support of the privatization and economic restructuring program for Europe and the New Independent States of the Former Soviet Union.<sup>4</sup> The RFP's were divided into five major functional areas:

- A. Transactions
- B. Financial Sector Restructuring
- C. Privatization Advisory and Training Services and Support
- D. Capital and Financial Markets
- E. Public Information

A number of contractors were awarded contracts in these very broad functional areas. Actual project assignments were made by more specific tasks defined over time within these general functional areas. A major task order, REIS (Real Estate Information System) was issued with the objective of supporting privatization of land and the development of a private real estate market in by providing access to relevant real estate information to as broad a range of interested parties as possible, to be implemented in selected Russian cities.

The environment Russia in which these systems were to be developed was complex, almost beyond imagining. The law in Russia affecting land and registration of land rights was in a constant state of flux. A 1993 decree by the Russian President was always in doubt as to its legal efficacy, and it was soon displaced by the 1994 Civil Code. The Civil Code provided for:

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<sup>3</sup> Id, "Plan of Action."

<sup>4</sup> USAID RFP No. FA/OP/CC/N-93-01 and RFP NO. OP/CC/N-94-2.

- Mandatory registration of property rights
- Creation of a single system of registration throughout Russia
- Creation of a system that unifies registration of all land and structures
- Creation of a strong legal presumption of the validity of rights entered into the record
- Wide public access to information, subject to rights of privacy and trade secrets
- Establishment of registration as a public, nonprofit function, and
- Close coordination between title registration and physical cadastre

The responsibility for land registration was given to the Ministry of Justice.<sup>5</sup>

These provisions of the Civil Code would have dictated a registration scheme very much along accepted international norms. They were to be specifically implemented in a subsequent law entitled, "On Registration of Rights to Immovable Property and Transactions with It," but this law was rejected by the Russian Dumas in 1995. The absence of a law on registration left the various funding agencies and contractors without a basic plan upon which to develop a design. All of the major institutional issues were left open.

Russian agencies at the federal and local levels were left to compete as the situs of registration. Agencies already associated with land and buildings included:

- Bureau of Technical Inventory (BTI) -- responsible for all transactions involving buildings (so called "immovables"). The BTI was established 80 years ago;
- Land Committee (KomZem) -- responsible for all transactions involving land (including the land under buildings recorded at the BTI. The KomZem was created in 1991 and is a federal entity with a presence in each oblast and rayon;
- Property Committee (KI) -- responsible for municipal buildings. The KI is also a federal entity (GKI), which has overall responsibility for privatization in Russia; and
- City Architect's Department -- responsible for city planning and the Geodesy Department which maintains the map data.

One of the reasons the competition among these departments was likely to be intense is that title registration was seen as revenue producing. There is a world-wide trend toward cost recovery in information agencies in government, and the Russians were poignantly aware of this potential. Further, privatization of the functions of such agencies is happening in many countries. In Russia, the prospect of privatization prompted government officials to jockey to take advantage of possible privatization business opportunities.

Compounding the problem were ideological differences. It is generally perceived that the Land Committee is more conservative in its approach to private property ownership than the GKI, the national committee organized to carry out privatization of real estate in

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<sup>5</sup> See Butler, Stephen B., "Registration of Real Property Titles in the Russian Federation," *GIS Law*, Vol. 3, No. 2, 1996.

Russia. From the point of view of funding agencies such as the USAID and the World Bank, lodging title registration in the Land Committee might ultimately result in the ownership rights in real estate being too restricted .

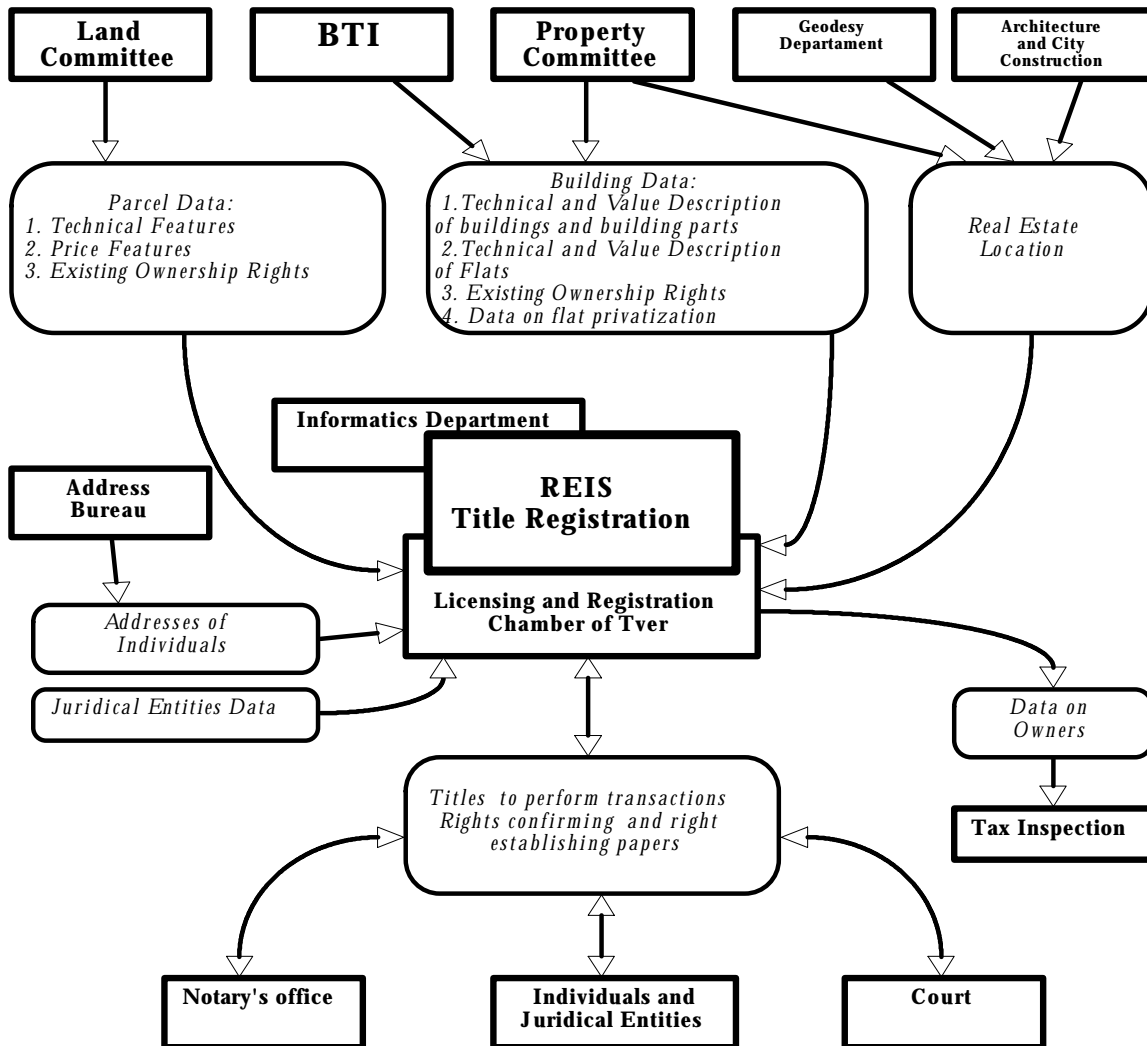
Like cities in the U.S. and elsewhere, the Russian cities were interested in the kind of technology that would most help them in running their cities, which went beyond the primary aims of USAID, namely, the development of a private real estate market. They certainly had an interest in GIS and complete mapping of their jurisdictions. If USAID and the contractors were not thoroughly informed, the cities might be persuasive in their arguments that GIS and extensive mapping was necessary to support the private property system. In other words, there was a danger that the cities would distort the program into one that fit their priorities, but not necessarily those of USAID.

The complexity of the situation in Russia is well illustrated by the figure, “Institutional Relationships and Flows”, which was developed for the City of Tver, Russia, as part of the USAID REIS project.<sup>6</sup> The diagram shows the redundancy of departments and land information functions that somehow had to be integrated into the REIS.

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<sup>6</sup> Zuniga, Ralph, “City of Tver Real Estate Information System Project Technical Briefing,” American Cadastre, Inc. Internal Report, February 12, 1996.

## Institution Relationships and Data Flows



### Land Administration Consulting

Land administration projects, such as land title registration systems development, are multidisciplinary. The various disciplines are not usually found together (e.g., law and systems engineering). Several of the disciplines, such as surveying, photogrammetry, are outside the computer systems integration expertise applied to most information systems projects today. The GIS industry does not bridge the gap, either, as it lacks an understanding of title registration systems both of the U.S. and internationally. Also, in both the GIS and systems integration industry, there is a lack of understanding of the social policies sought to be achieved by proper land administration, such as privatization and regularization of property interests.

The Russian example is useful to review, because it is extreme, in the sense that almost all of the institutional issues were left unresolved. Summarizing the issues in the Russian setting:

- Where would the situs of title registration be lodged?
- In the absence of a land law and registration law, what assumptions should be made as the likely model to ultimately be installed in Russia?
- Should a central office be established, or a virtual office created by networking several existing offices?
- Would the system accommodate traditional land related functions, or assume the new model of a country with a free market in real estate?
- Would the system accommodate only title registration or other land related GIS functions as well?

Judgments on these issues can only be made by a multidisciplinary group that has a broad understanding of projects being developed around the world.

The linkage between economic and social progress and land tenure is likely to continue to influence development in major regions of the world for many years to come. International funding agencies and country governments will continue needing technical assistance in developing programs and systems to facilitate good land administration. The basic disciplines needed to support that development are relatively consistent and form a field that is reasonably definable. The following definition is suggested:

*Land administration consulting:* The design and development of land administration programs, procedures and systems for governments to support governmental functions and reform efforts related to land. Examples of functions are title registration, taxation, land use planning. Examples of reforms are land title regularization and privatization of land. Design and development incorporate institutional, legislative and technical considerations, utilizing a multiple of disciplines, including photogrammetry, remote sensing, GPS, GIS, surveying, land law, public administration and information systems.

Often the use of short term expertise achieves the desired jump start for the implementation of land tenure and administration projects but fail to leave behind the expertise for project success in the long term. To overcome this shortcoming of short term assistance, the project startup phase should incorporate assistance to the educational infrastructure within the projects jurisdiction to insure the viability of the next generation of land tenure and administration professionals. While this adds to the tasks of the consultant expertise, and also adds to the initial cost of the project, it does put in place the educational base for the host government to secure the long term success of the required land tenure and administration infrastructure.

Utilization of commercial or non-commercial organizations that offer as their business service this complement of services by the international funding agencies, prime

contractors, and governmental agencies will eliminate much of the inefficiency in implementation of these important projects in the years ahead.

Three basic entities are available to fill these needs: government agencies such as national survey or cadastral agencies that offer services in the private sector; non-profit organizations usually as part of or with close connections to public universities; and private firms. Governmental agencies tend to offer solutions that reflect their own systems. Since land information systems are developed in government over many years, these approaches may not be state of the art in a rapidly changing technological environment. Academically based organization often do not have the capability to implement large scale systems, and they may not have as much continuity as the other two options. A robust private firm could in theory be the ideal service entity, but in this field they tend to be rare and often lacking in actual operational experience, especially of systems such as title registration systems.

Ideally, expertise from all three entities, 1) functioning government land administration agencies, 2) academics versed in the history and latest research in land administration techniques, and 3) private firms skilled in land administration technology and management, make up the most efficient land administration consulting group. Of the three entities it is the private firm that has the means to pull such a multi-disciplinary team together. Such firms should have a wide variety of consultants from all disciplines available to respond to they varying scope and needs of land tenure and administration projects.

## **Conclusion**

Land tenure and administration projects in emerging economies are more numerous now than in any time in history. Research and experience over the past fifteen years has produced a heightened awareness among government and international development agencies of the importance of land tenure and administration as fundamental infrastructure for a free market economy. Expertise is required for short term assistance for projects intended to jump start the implementation of the land tenure and administration.

Land administration projects are often contained within broader objectives of governmental and international funding organizations. Nevertheless, these projects are multidisciplinary specialties in and of themselves. Companies with the necessary expertise should be used both in the design of projects and in their execution if such technically challenging and culturally sensitive projects are to be successfully completed.

The ideal consultant team to implement land tenure and administration projects should incorporate government agency expertise, academic expertise, and private sector expertise all dedicated to both short and long term success of the project.