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**Review and Analysis
of (seven selected) Real Property Registration
and Cadastre Systems in Europe**

prepared for the World Bank

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Disclaimer

Although careful research was undertaken and reliable sources were used by the team of authors, no liability can be assumed for correctness or completeness.

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1. EXECUTIVE SUMMARY

This Review and Analysis of Real Property Registration and Cadastre Systems in Eastern and South-Eastern Europe is an analysis prepared for the World Bank. In conformity with the Terms of Reference to this analysis the cadastre and land registration systems of seven European countries (Austria, Bulgaria, Croatia, Germany, Hungary, the Netherlands and Serbia) have been compared (see Chapter 3) and assessed (see Chapter 5).

The results of the analysis show different developments, similarities and differences between the national systems examined here, show the different economic development of Western and Eastern European countries and finally show the strengths and weaknesses of the various systems. This assessment – based on good practices (see Chapter 4) – ends with recommendations for the individual countries.

Good practices identified show that to be in line with international standards a sustainable cadastre and land registration system should fulfil the following requirements: accessibility; fairness; completeness; transparency; security; cost-effectiveness; and efficiency. These requirements must not be seen isolated, but interlinked with each other.

Good practice with regard to accessibility includes that the number of offices is such that it guarantees equitable access to all users / customers: hereby increasing computerisation needs to be taken into account. The balance is between decentralisation on the one hand and one-stop-shop on the other side, the latter being the final aim to be envisaged for provision of services in cadastre and land registration.

Good practice with regard to fairness includes that equitable access is available for disadvantaged sectors of the society as well as minorities and foreigners. No additional cost should occur to these sectors of society (e.g. in terms of legal representation), when using the cadastre and land registration system.

Good practice with regard to completeness includes that information from the cadastre and the land register is up to date, available for a whole national territory. Registration shall have constitutive effect.

Good practice with regard to transparency includes clear and transparent processes, supported by a functioning inter-relationship between the cadastre and land registration. Guaranties for proper process and liability for errors are part of the system as are quality management mechanisms (including information on customer satisfaction).

Good practice with regard to security includes that measures are foreseen to protect security in terms of (i) technical security with regard to parcel identification, but also physical security; (ii) legal

security with regard to ownership, which is finally expressed in the number of disputes and (iii) market security with regard to functioning land and mortgage markets, and attraction of investment.

Good practice with regard to cost-effectiveness includes that the total cost of the system such be as low as possible and close to being cost recovering. Decisive criteria like input of personnel and development costs (especially for IT) are in relation to the costs (fees) of services to the individual user and the overall funding of the system.

Good practice with regard to efficiency includes that the land administration system of a certain country performs its designated functions with minimum consumption of resources, i.e. with a minimum of cost and personnel. Important key indicators for this are the quantity of products, efficiency of cost and of staff as well as average turn around times for transactions.

The following table that is summarising the results of the study is only to be interpreted together with comments in Chapter 3-4 and in the country assessments.

	AT	BG	HR	DE	HU	NL	SR
1. Overall Effectiveness							
Relative Size (see 3.1.3, table 5)	high	n/a	high	medium	medium	high	low
Accessibility (see 3.2.)	high	low	low	medium	medium	high	medium/ low
Fairness (see 3.3)	high	low	low	high	medium	high	low
Completeness (see 3.4)	very high	low	low	medium/ high	medium/ high	very high	low
Transparency (see 3.5)	high	low	low	medium/ high	medium	very high	low
Legal Security (see 3.6)	high	low	low	high	medium	high	low
2. Cost Effectiveness							
on cost basis (see 3.7.1)	medium	n/a	medium/ high	low	medium/ high	medium	n/a
on staff capacity basis (see 3.7.2)	very high	n/a	low	low	high	medium	n/a
on user cost basis (see 3.7.3)*	high	n/a	medium	low	n/a	high	medium
on cost recovery basis (see 3.7.4)	medium	n/a	n/a	low	n/a	high	n/a
3. Efficiency							
Cost Efficiency (see 3.8.2)	high	n/a	low	low	high	medium	n/a
Staff Efficiency (see 3.8.3)	high	n/a	medium	medium	high	medium	n/a
Time-efficiency (see 3.8.4)	medium	medium	low	medium	low	high	medium

Table 1

* indicators strongly impaired by missing data and comparability problems.

Explanation: very high = exceptionally high figures compared with the other examined countries; high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries; very low = especially low figures compared with the other examined countries.

2. INTRODUCTION

The following Review and Analysis of Real Property Registration and Cadastre Systems in Eastern and South-Eastern Europe was commissioned to the Center of Legal Competence (CLC) Forschung & Consulting GmbH by the World Bank. Its **purpose and rationale** is the review and comparison of the real property registration and cadastre systems in seven European countries, namely Austria, Bulgaria, Croatia, Germany, Hungary, the Netherlands and Serbia (excluding Montenegro and Kosovo), thereby identifying “the optimal institutional arrangements (in terms of cost-effectiveness, efficiency and equity) for the provision of registration and cadastre services. The arrangements should enable these countries to optimise benefits to users and minimize administrative costs.” Recommendations make specific reference to the current legal/institutional frameworks.

The selection of **countries** was predefined in the Terms of Reference to this project. It comprises a variety of European countries, in all of which the land registration and cadastre system took a different development. Nevertheless similarities can be found between countries from Western Europe and Eastern Europe, between countries with long traditions in land registration and cadastre and such with very young traditions, between countries with well developed property markets and such without. These similarities have their reason either in common historical roots or in the fact that some features of the land registration and cadastre system necessarily can only be implemented in the one or the other way. Whereas in Austria and Germany the so called mid-European type of land book is well developed, in the Netherlands and Bulgaria the deeds registration system is applied. Whereas Croatia, Hungary and Serbia have historical relations to Austria especially also in the area of the land book, this Austrian/German system in its pure (dual) form is today only applied in Croatia. Hungary decided for a unified system as did Serbia. Bulgaria has a dual system, too.

In order to make compliance with the Terms of Reference possible, i.e. in order to make comparison and analysis of efficiency, effectiveness and cost-effectiveness and of the provision of registration and cadastre services in different countries possible, it is important to identify the assumptions and pre-conditions which necessarily have to apply if such a comparison shall be most objective. This comparative Analysis and Review of the land registration and cadastre systems in seven different European countries is therefore based on the following main assumptions:

1. Focus of comparison and analysis: Focus of this comparison and analysis is the *real property object*. Land registration and cadastre systems analysed here are considered primarily from the viewpoint of their core tasks in relation to the real property object, which is defined by a minimum of essential data (as location, size, general use), as a part of a comprehensive geo-information data system, and necessary for the provision / acquisition of real property rights of a natural or legal person related to it.

In accordance with the UN-ECE/WPLA Guidelines on Land Administration and the UN-ECE/WPLA Guidelines on Real Property Identifiers – in this analysis – the term *parcel* is defined as a closed polygon on the surface of the earth in unique ownership and with homogeneous real property rights. *Title* is the evidence of a person’s right to property and refers to the *basic property unit (BPU)*, i.e., the extent of land that is in one homogeneous unit of ownership and is recorded as such in a land register. A *plot* is understood as the smallest unit that can be identified for the purposes of land resource management.

2. State of development of national land registration and cadastre systems: The analysis focuses rather on the targeted state of the envisioned development of the real property registration and cadastre systems, than on transitional problems on the way thereto. Different levels of development will, however, be adequately taken into consideration.

3. Good governance: All analysed countries are, or will at some point be members of the *European Union*. Nevertheless, no explicit *acquis communautaire* for real property registration and cadastre

exists until today. It is expected that – apart from some exceptions – there will not be a comprehensive *acquis* in the future, as issues of ownership are left to national regulation (Article 295 Treaty Establishing the European Community). It is therefore important to employ other standards.

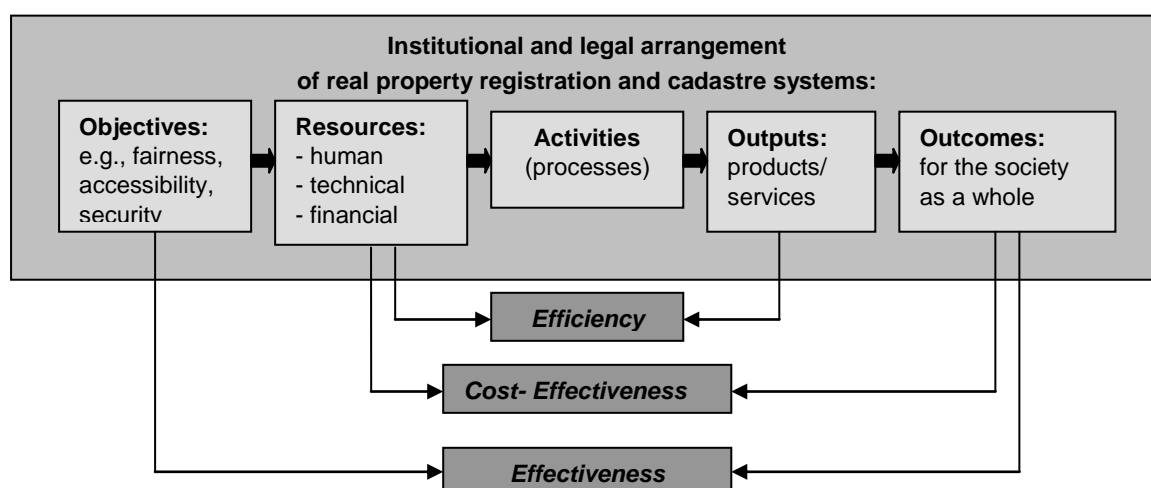
This analysis emanates from the following statement of the *UNECE/WPLA “Guidelines on Land Administration (1996)”*, whereby its mode of implementation is left to the individual countries: “A formal system is necessary to register land and property and hence to provide secure ownership in land, investments and other private and public rights in real estate. A system for recording land ownership, land values, land use and other land-related data is an indispensable tool for a market economy to work properly, as well as for sustainable management of land resources...” A “formal system to provide secure ownership in land” is considered the final objective of a real property registration and cadastre system and is hence a sound basis for comparison in the sense of this analysis.

Within this context principles (developed e.g., by the OECD, the EU, the UN-Habitat and the World Bank, Bathurst Declaration etc.) of *good governance* such as openness and transparency of institutions, fairness and equity in dealings with citizens, efficiency and effectiveness of services etc. are used as yardsticks to measure the performance of the compared land administration systems.

Also the respective (legal and other) *traditions, historical experience* as well as *cultural developments* need to be taken into account as they are appreciated as high values by the society of a specific country and are generally important criteria for acceptance of a system in the public. For the development of land registration and cadastre systems in Europe it can be said that from a historical point of view two things are important to note: (1) The continental approach of a “civil law”-system which requires the legal orders of countries to have general rules and procedures fixed by laws/codes, is a common basis for all the countries analysed in this paper; (2) the Napoleonic Code Civile which in the 18th century in the then French countries (including for instance the Netherlands) provided for land survey for taxation reasons. It was taken up as a good example by other governors, such as Franz I for the Austrian Monarchy at the beginning of the 19th century, who continued efforts made already earlier by Maria Theresa and Joseph II, and thus had heavy influence on the development of land registration and cadastre systems in Western and Central European countries. Its influence continues to be of importance in the Eastern European countries which incorporated different elements of these mentioned systems into their own systems.

Regarding **methodology** the OECD “Best Practice Guidelines for Evaluation” (1999) was used as a starting point, where it is stated that a clear and policy-specific evaluation framework based on a wider performance management framework is essential for cross-comparative evaluations.

The evaluation framework applied to this analysis is therefore strongly connected with the **internationally established “3-E” framework of performance management (Efficiency, Effectiveness and Cost-Effectiveness)**. This concept was adapted to fit the peculiarities of land administration systems, the methodological main assumptions presented before and the specific focus of the current analysis. It puts the central evaluation criteria as demanded by the World Bank (e.g., resources, efficiency, cost-effectiveness, effectiveness) into a comprehensive framework:



A comparative evaluation of real property registration and cadastre systems must emanate from the beneficiaries of land administration systems, whereby distinction is made between **society as a whole** and the **direct users/clients of the system**.

Society as well as the different kinds of users and their satisfaction with the system are the ultimate point of reference. The level of satisfaction is determined by the quantity, quality and price of the system's core products. Whereas the client's/user's satisfaction with the system is primarily related to the quantity and quality of the products and services, society as a whole has much broader outcome-related interests (well functioning land market, justice, sustainability, value for money).

Both products and outcomes strongly depend on the existing institutional and regularization arrangements of land administration. Therefore their effectiveness (related to principles of good governance), cost-effectiveness and efficiency will also be analysed.

The method developed by Commission 7, International Federation of Surveyors (FIG) in its study "Benchmarking cadastral systems" is further relied on, especially with regard to the areas of comparison. The findings of this study have been adapted to the needs and objectives of the current project.

This Review and Analysis consists of two main parts: (1) Comparative Review and Analysis of the countries included in this project followed by a chapter on Good Practices in the field; and (2) Individual country assessments of the seven countries involved. For in depth, but balanced collection of information on the countries' systems a guideline was developed considering the Terms of Reference that was completed by and together with national experts. In addition already existing data and literature in the field was used. Difficulties with using reliable data for the work was faced by collection of numerous and structural information on statistical data from high-ranking national experts in the field as well as from other stake holders of the individual systems.

The project leader, *Otto Oberhammer*, and *Ninel Jasmine Sadjadi* took responsibility for the design of this analysis as well as the co-ordination and quality management, strongly supported by *Gerhard Hammerschmid* and *Markus Höllerer*. The following experts completed the project team: *Helmut Auer*, *Julius Ernst*, *Reinhold Wessely* (Austria), *Lilija Simeonova* (Bulgaria), *Željko Bačić*, *Tatjana Josipović* (Croatia), *Wilhelm Zeddies* (Germany), *László Jójárt*, *Bela Markus* (Hungary), *Paul van der Molen* (The Netherlands) and *Ilija Babić*, *Daniela Jetzinger*, *Stevan Marošán* and *Ratomir Slijepčević* (Serbia). *Peter Dale* supported the analysis with valuable comments.

The results of this Review and Analysis shall allow the World Bank team and project staff in the ECA region to have better information for its many real property registration and cadastre projects currently under preparation, implementation, or in the pipeline.

3. COMPARATIVE ANALYSIS

It needs to be noted that the availability of accurate financial and other information regarding real property registration and cadastre systems is in many cases rather limited due to lack of statistical appraisal. **Data therefore must be treated very cautiously.**

The data that could be collected from the seven national systems can be divided into seven areas: 1) General System Information; 2) Accessibility; 3) Fairness 4) Completeness; 5) Transparency; 6) Security; 7) Cost-effectiveness; and 8) Efficiency whereby the areas 1) to 6) can be regarded as different aspects of system effectiveness.

Country abbreviations: Austria (AT); Bulgaria (BG); Croatia (HR); Germany (DE); Hungary (HU); The Netherlands (NL); Serbia (SR).

3.1 General system information

3.1.1 General national data

This data set is important in order to understand the principal differences of the examined countries with regard to size, gross domestic product (GDP), number of transactions etc. If not indicated differently, all data refers to 2003, amounts are given in Euro (EUR).

	AT	BG	HR	DE	HU	NL	SR
Area (in sqkm)	83,871	110,994	56,542	357,027	93,030	41,526	77,474*
Population (in millions)	8.2	7.9	4.5	82.5	10.1	16.1	7,95**
Population per sqkm	97.8	71.2	79.6	231.0	108.6	387.7	102,6
GDP (in millions)	218,300	17,400	25,700	2,118,000	65,900	444,700	10,021
GDP per capita (in thousands)	26.6	3.9	5.7	25.7	6.5	27.6	1.3

Table 2

* The total area (in sqkm) of Serbia & Montenegro is 102,173; thereof: Serbia (including Vojvodina): 77,474; Kosovo: 10,887; Montenegro: 13,812.

** The total number of population of Serbia & Montenegro is 10,600,000; thereof: Serbia (including Vojvodina): 7,950,000; Kosovo: 2,000,000; Montenegro: 650.580.

The countries analysed are of relative size and population number with the exception of Germany. Population density is comparable in most of these countries with the exception of Germany and the Netherlands. It is important to note that Germany is a conglomerate as far as land administration is concerned, based around its 16 *Länder*. GDP data reveals great variations mirroring the different development status of the EU countries Austria, Germany and the Netherlands in contrast to the Eastern European countries analysed here. Especially these differences regarding population density and wealth have to be taken into consideration when interpreting the following results.

3.1.2 Size of the cadastre and land registration system

The number of cadastral parcels and the number of titles are the indicators for the size of a country's cadastre and land registration system.

In millions	AT	BG	HR	DE	HU	NL	SR
Total no. of parcels (in millions)	10.5	8.7**	22,5	62.2	7.6	8.08	19
Total no. of titles (in millions)	3*	5.1**	2.4	35	10	8.08	1.2
No. of strata titles	n/a	n/a	n/a	14	2.5	0.9	1.3
Average size of parcel (in sqm)	7,990	12,760**	2,510	5,740	12,240	5,140	5,380
Number of parcels per title	3.5	1.7**	4.7	1.3	0.76	1	7.6
Number of parcels per person	1.28	1.10**	5.0	0.75	0.75	0.55	2.30

Table 3

* Strata titles are included in this figure; it is not possible to count strata titles separately as in case of e.g. a flat building one title could contain several hundred strata titles.

** Data from 2002, but not verified.

Table 3 shows the national differences with regard to the land registration and cadastre system in the examined countries. **Germany** has clearly the largest number of parcels, which of course corresponds with the country's size. In **the Netherlands** the number of parcels and the number of titles is the same with about 3.9 million right holders. **Austria** on the other hand shows a rather different picture, the total number of titles being about 1/3 of the total number of parcels. **Croatia** and **Serbia** show a similar relation between the number of parcels and the number of titles: The latter being approx. 10% of the total number of parcels. The number of registered strata titles amounts to 2.5 million in Croatia and 1.3 million in Serbia. It is apparent that the number of parcels in Croatia is very high. No sufficient data is available for **Bulgaria**. However, according to estimations made in "FAO, land fragmentation: Bulgaria" (2000) "the number of parcels in Bulgaria was 8.007 million in 1997/98. So the number was near to the number in 1897 – 7.98 million. Since 1999 the process of subdivision of land between heirs has accompanied the restitution process and now the number of parcels is greater. If the agricultural policy continues to be indifferent to this problem, the number of parcels will increase very much and surely will exceed the level of 12.2 million reached in 1946." 10.1 million agricultural parcels were in the Bulgarian Agricultural Land Information System (ALIS) at the end of 2003.

Further also the value of land as such and the value of mortgages in the individual countries are relevant indicators of comparison.

	AT	BG	HR	DE	HU	NL	SR
Estimated total market value of land (in millions)	510,000*	n/a	n/a	7,140,000	n/a	7,037,000**	n/a
Estimated total value of mortgages (in millions)	9,000	n/a	61,000	900,000	n/a	390,000	n/a
Value of mortgages in % of GDP	4	n/a	237	12,6	n/a	87,7	n/a

Table 4

* Land value only; improvements, i.e. buildings, assets, etc not included.

** Total land value including all improvements, i.e. buildings, assets, etc.

Data concerning market value of land and value of mortgages needs to be looked at very cautiously, as it is based on rough estimations: In **Germany** and **the Netherlands** the market value of land is clearly highest, whereas the total value of all mortgages in the Netherlands is relatively higher than in

Germany. The estimated total market value of the registered land in **Austria** compared with the Netherlands and with Germany is much lower (it needs to be considered however that a high percentage of the country is covered by mountains and forests), also the mortgage market is not that vivid, although well functioning. In **Hungary** the value of mortgages is very low, and it can be assumed that it is even lower in **Croatia** and **Serbia**, where the mortgage market is in its early development. In Serbia it is not possible to determine the value of land, however, for example during the past two years, Raiffeisenbank has granted about 450 mortgage loans to individuals, and only 350 corporate loans are secured by mortgages. In "Stari Grad" cadastre municipality (Belgrade downtown area) there are 27,290 total strata titles and only 2,350 mortgages. For mortgages see also 6.G below.

3.1.3 Land market activity

According to the following indicators a first picture of the effectiveness of the national systems can be gained. Due to possible minor differences in the databases only a categorical assessment is given.

	AT	BG	HR	DE	HU	NL	SR
Annual right transfers per 100.000 population	very low	n/a	high	medium	very high	low	low
Annual parcel divisions per 100,000 population	high	n/a	high	medium	medium	high	low
Annual extracts per 100,000 population	high	n/a	medium	low	medium	high	low

Table 5

Explanation: very high = exceptionally high figures compared with the other examined countries; high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries; very low = especially low figures compared with the other examined countries.

The annual transfer of rights shown in table 5 depends on the general development of the countries' land market which explains the lower results for the well established land markets in **Austria**, **Germany** and **the Netherlands**. Regarding the Eastern European countries analysed here the data indicate comparatively low dynamics of the land market in **Serbia**. In overall the **Netherlands** show the most dynamic system followed by **Austria**. The size of the mortgage market is relatively high in **Netherlands**, **Austria** and **Croatia** whereas especially **Serbia** seems to have the least developed mortgage market (see also below 6.G).

3.1.4 Registration system

A land registration system can be either a title system where the rights (title) to property are registered, or a deeds system, where the property deeds as such are registered.

	AT	BG	HR	DE	HU	NL	SR
Land Registration system	Title	Deeds	Title	Title	Title	Deeds	Title
Unified System	No	No	No	No	Yes	Yes	Yes
Dual System	Yes	Yes	Yes	Yes	No	No	No

Table 6

Table 6 clearly shows that there is not necessarily a connection between the system of land registration in a country and the fact whether land register and cadastre are maintained within one institution (so-called unified system). Whereas in **Austria** and **Germany** the so called mid-European type of title

registration under the authority of two institutions (so-called dual system) has developed, in **the Netherlands** the deeds registration system is applied in a unified way. **Croatia, Hungary** and **Serbia** have historical relations to Austria especially also in the area of land registration, as the Austrian land book was in force in these territories until the 1930s. Hungary decided already in the 1970s for unification of the activities of cadastre and land registration, and within the frame of former Yugoslavia also did Croatia and Serbia in the 1980s. Only Croatia has reversed again its decision in the 1990s, and today the title registration system is applied there in its pure (dual) form, i.e., land registration is within the competence of the courts. **Bulgaria**, a deeds registration country, has decided for a dual system.

3.2 Accessibility

Within the constraints of national cultural peculiarities, legal and privacy issues of the system should be capable of providing efficient and effective access to all users. This includes providing equitable access to the system through for example decentralised offices, simple procedure, and reasonable fees (cp. FIG, 1995). The number of offices, the opportunity for online access/e-government and the one-stop-shop principle are relevant in this context.

3.2.1 Number of offices

Decentralisation in terms of local offices must be suitable to circumstances and national specifics, whereby not only traditional developments play a role, but also the size of the country and the communication systems available (mail, e-mail, telephone, inquiry services etc.). With increasing computerization there is a trend towards more centralization and away from decentralised organisation.

	AT	BG	HR	DE	HU	NL	SR
Cadastre offices	41	28	113	405	136	15	161
Land registration offices	145	114	106	1,300			
Average area covered by cadastre office (sqkm)	2,046	3,964	2,827	882	684	2,768	481
Average area covered by land book office (sqkm)	578	974	505	275			

Table 7

Generally it can be said that the number of cadastre offices and land registration offices are similar in all the examined countries. It has to be noted up front that the number of offices (especially with regard to extracts) does not reflect reality, because extracts can also be made by other professionals (such as notaries). The relatively high number of offices in **Germany** is due to the size of this country: 700 land book offices and 320 cadastre offices are on federal *Länder* level and 600 land book offices and 85 cadastre offices on municipal level. In **Bulgaria** the Municipal Technical Services hold the cadastral maps on urban areas for each municipality. Additionally there are 233 so-called land commissions which provide restitution of agricultural and forest land and keep and update materials and data, control surveying companies and issue documents. Also in **Croatia** there are 92 local branch offices to the cadastre offices in addition to 21 county offices. The low number of offices in **the Netherlands** corresponds to the relatively small size of the country with regard to the other countries analysed here. It has to be noted that the number of offices in the course of administrative reforms for instance in **Austria** was significantly reduced during the last years.

3.2.2 Public access

Public access is understood as the possibility of the general public to get information from the land registration and cadastre system.

	AT	BG	HR	DE	HU	NL	SR
Public access	yes	yes	yes	legitimate interest	yes	yes	yes
Online access	yes	no	no	partially	partially	yes	no
One-stop shop principle realised	partially	no	no	no	yes	yes	yes

Table 8

Access is public in most of the examined countries. Only in **Germany** individuals need a so called legitimate interest, e.g., in case they plan to buy land and do not know who is the owner etc. In Germany direct access, if available, e.g. via internet to the real property cadastre is only possible for authorized persons (e.g. publicly licensed surveyors or notaries). Access via internet is only partially available: The surveying authorities on the one hand and the land book authorities on the other hand are in general linked via IT on federal *Länder* level, but neither with regard to the cadastre nor with the land book a nation wide network exists.

In **Hungary** access is possible by order at counter or through data warehouses and internet, although there are no detailed data available about the percentage of online access. Order by telephone or fax is not possible. Cadastre data can also be accessed through about 400 other agents/institutions. In **Austria** direct access for inspection to data of the land book as well as the cadastre – at the respective offices or via internet – is public and open to all authorised users (counties, notaries, banks, engineering consultants for surveying, advocates) and to individuals except search by name of the owner, which due to data protection reasons is restricted (also via the internet). Short and oral information on the state of the land book and the cadastre is also given for free. There are altogether (and as a result of a public tendering procedure) seven payment service providers (Verrechnungsstellen) who offer their services via the internet (see www.bmj.gv.at) and against fees (court and cadastre fees plus additional transport costs; the latter are regulated by the free market; no rules exist as to their amount).

In **the Netherlands** (cadastre and land registration) data can be accessed at 15 regional offices and through 1,500 other agents/institutions, by order at counter, by phone and fax, through data warehouses and through internet (95% online access). All municipalities (town halls) and notary offices provide relevant information. Access to the cadastre is possible also through internet (real property register, cadastral map). On line access through intranet for professionals was realised in 1993 and through internet for professionals and citizens in 2003.

In **Croatia** cadastre as well as land book data (which contains the basic cadastre data) are open to public inspection without restriction. In the future, access to these data will be made available electronically. Also in **Serbia** cadastral data are open to public inspections. Every party and interested individual is free to inspect the data and request copies of surveying data. Access is, however, possible by order at counter only. The offices are not sufficiently well equipped with computer and internet technology. There is no opportunity for the users to receive information via the internet or in electronic means. Also in **Bulgaria** data are open to public inspection. No nation wide information system is, however, available yet.

It is generally accepted that the **one stop shop** principle serves the customers in the way that inquiries / applications for registration can be handled at one place, and time consuming collection of doc-

uments from different institutions is avoided. A difference must be made between the request for extracts (on the full legal and factual situation of the requested parcel) and the request for registration/changes in the registers. Implementation of this principle is also largely related to the state of digitisation. Realisation of this principle is neither related to title / deeds registration nor to a dual / unified system (see Table 6).

The one stop shop principle is fully realised in **Hungary, the Netherlands** and in principle also in **Serbia**. It has to be observed, though, that due to insufficient technical equipment, a large part of the registration process in Serbia is handled manually and, thus, parties have to refer to different departments within the same office. Also the municipal courts have to be approached separately for authentication of documents.

In **Austria** the one stop shop principle is realised insofar as access via the internet, which is open to every one, leads to extracts with entries of both institutions. Concerning requests for registration, most of the applications do not require cadastral changes and are therefore filed only to the land book, whereby electronic transmissions are provided for the next future. Due to the complicated structure of its *Länder* this principle is not implemented in **Germany**, and also not in **Bulgaria** and in **Croatia**.

The optimum realisation of this principle would be to receive information also on facts that are in the responsibility of the municipalities (e.g., use rights such as planning restrictions etc.); with regard to the countries analysed it can be said that such extensive linkages do not yet exist in any of them. **The Netherlands** are currently working on the renewal of their cadastral systems, which in future shall also contain full information regarding all public restrictions on real property.

3.3 Fairness

In development stage and in operation, the cadastre [and land registration system] should be both fair and perceived as being fair. As much as possible, the cadastre [and land registration system] should be seen as an objective system separated from political processes, such as land reforms, even though it may be part of a land reform program (cp. FIG, 1995).

3.3.1 Access in terms of equity

The term "equity" needs special attention as (esp. in the UK) it can have a different meaning. In this context the definition of the World Bank is used: *"institutions should be built and developed to help all citizens in a particular society and, specifically, to include the more disadvantaged sectors of the population. These sectors of the population should gain access to affordable and appropriately located land information services as well as adequate security of title and/or occupation. Unless specific attention is given to inclusiveness, important segments of society risk being excluded from the benefits of cadastre and registration systems. The failure to address the interests of all stakeholders may cause the formation of an unequal and ineffective institutional structure."*

Following this definitions accessibility of the cadastre and land registration system has a further dimension with regard to access for disadvantaged sectors and whether access to real property registration and cadastre is open for everyone, or is restricted to certain sectors of the population. Questions of reduced access, costly legal representation by a lawyer, availability of special services / advice for the formulation of applications and requests and / or reduced fee models provided for the disadvantaged sector play a role.

With regard to specific European Union legislation in place for securing access also for the disadvantaged sectors of population, it can be held that the Member States of the European Union, **Germany**,

Austria and **the Netherlands**, have all measures in place that secure access (in terms of physical access to the offices) also by e.g., handicapped people. Implementation of the latest EU-provisions on access via the internet for blind people is in the stage of preparation. The same can be expected for **Hungary**, it being a new Member State. No evidence could, however, be found for this. The same holds true for **Bulgaria, Croatia** and **Serbia**, where it is assumed that such measures have not yet been implemented.

In **Austria** the land book is maintained only in the German language. For members of the six ethnic minorities respected by law specific rules exist according to which they are allowed to form their applications in their mother tongue. The collection of documents is kept bilingual; registration in the land book is made in German. There are also specific bilingual courts. Every district court offers free information on legal matters on one working day per week. Everyone can ask for information there on land book related questions, too. Provisions in **Germany** and **the Netherlands** are similar: The registers are open to everyone, but applications to the land book and cadastre have to be submitted in the German / Dutch language. Fees or charges are the same for everyone. No barriers could be perceived for disadvantaged sectors. The same is stated for **Bulgaria, Croatia, Hungary** and **Serbia**. The fact that in Bulgaria within the "Cadastre and Property register" project a program for consultations in the formulation of applications and requests for people in a disadvantaged position is foreseen, shows a need for improved access for the disadvantaged sectors. In Serbia application forms (for any kind of entry) are available at the counters of the Serbian offices, which contain instructions for filling in the forms, so personal advice is not required. No further specific assistance or service is provided for application or access to the records.

3.3.2 *Foreigners*

Access to land registration by foreigners is explicitly regulated by EU-provisions: In principle EU citizens are allowed to settle down in any other EU-Member State, which also includes the possibility to buy / own real property. This is true for **Germany** and **the Netherlands**. In **Austria** restrictions exist with regard to agricultural land in so far as a pre-emption right is given to those who already possess agricultural land. Restrictions are not based on the nationality of the buyer.

Hungary has been granted by the European Union a transitional arrangement for five years after accession (in 2004) during which it may maintain its national provisions on the acquisition of secondary residences and for seven years after accession with regard to the acquisition of agricultural land (above 6,000 sqkm). EU nationals who want to establish themselves as self-employed farmers and who have been legally resident and active in farming in Hungary for at least three years continuously are excluded from the scope of this transitional period. Furthermore, a safeguard clause for additional three years has been introduced on request by Hungary, based on serious disturbances in the land market. Also **Bulgaria** was granted transitional periods concerning the acquisition of land for secondary residences by EU citizens (for a period of five years after accession) and the acquisition of agricultural land, forests and forestry land (for seven years after accession). Self-employed farmers who want to establish themselves and reside in Bulgaria are excluded from the scope of the transitional period.

Neither **Serbia** nor **Croatia** have yet reached the formal status of an EU-candidate country, therefore no transition periods have been negotiated with them. It can be said that acquisition of ownership rights on buildings, or parts of buildings (apartments) is allowed for foreigners. Yet there are hurdles in terms of necessary administrative approvals.

3.3.3 Involvement of legal professionals

Mandatory involvement of legal professionals (notaries / lawyers) and the level of their involvement – because of the costs incurred – is another factor of accessibility of the system: Roughly three kinds of involvement of the legal sector can be distinguished: (1) no involvement; (2) authentication of signatures; (3) full involvement in drafting legal documents. The mandatory involvement of notaries in the land registration system is likely to increase direct costs to the customers, because the (usually significantly high) notary fees have to be added to the registration fees. On the other hand their involvement increases legal security.

	AT	BG	HR	DE	HU	NL	SR
Mandatory involvement (Notary/advocate)	Authentication of signature only*	Full obligatory involvement	Authentication of signature only*	Obligatory involvement	Authentication of signature only	Full obligatory involvement	No obligatory involvement

Table 9

* Can be substituted by court authentication.

In **Austria**, for registration in the land book, authentication of the parties' signatures on the documents and – in case the parties are natural persons – also of their dates of birth by a notary or a district court is required. Only in special cases a notarial act is required (e.g., spouses). Involvement of notaries is, however, common. The same holds true for **Croatia** and for **Germany**, in the latter country the notaries are the only profession allowed to authenticate signatures. In **Serbia** no involvement of professionals is required; the profession of notaries does not even exist. In **the Netherlands**, in the opposite, involvement of notaries is mandatory for drawing up the notarial deed. In **Hungary** since 1994 documents containing transfer of title to real property – with the exception of notarial documents – have to be countersigned by an advocate. In **Bulgaria** the contracts for the transferral of ownership or for the establishment of other property rights over immovable property must be made with a deed. The notary form is a precondition for their validity. All countries analysed here have enacted laws on electronic communication and the use of electronic signatures. The implementation of these laws in the field of land registration is currently being prepared in Austria and in the Netherlands.

3.4 Completeness

The system should provide up-to date information in a timely fashion. The system should also be complete; that is all parcels/titles should be included in the system (FIG, 1995).

3.4.1 Coverage

The percentage of coverage of the territory by cadastral maps / plans and the percentage of registered land are of importance for the development of a functioning land market as well as for the taxation by the state.

	AT	BG	HR	DE	HU	NL	SR
Land covered by cadastral map	100%	n/a	83%	100%	100%	100%	100%
% of cadastral data held in digitised format	100%	5%	10%	75%	80%	100%	5%
Land registered in the	100%	n/a	90%	100%	100%	100%	45%

land register							
% of land registration data held in digitised format	100%	n/a	10%	60%	100%	100%	35%

Table 10

In **Austria**, **Germany** and **the Netherlands** as well as in **Hungary** the cadastre system is complete with 100% of the land being covered by cadastral plans (in the Netherlands this includes the 3-12 miles nautical territorial zone). Also 100% of the real properties that have by law to be registered are covered by the system. Even if the scale of the maps might differ in urban / rural / remote areas, the percentage of digitisation in these countries is 100%. In **Austria** this includes public as well as private land. Similarly in **Germany** the cadastre includes technical data on parcels and buildings thereon in written as well as in graphic (map) form for the whole territory of Germany i.e., for public as well as private land. All parcels are generally also registered in the land book, except parcels in state ownership, which are not part of the normal land market e.g., streets.

In **the Netherlands** no full information regarding all public restrictions on real property is available at this time, but an amendment to the cadastre law regarding this issue is currently pending. Public registers of deeds are kept in paper, but information / excerpts are available from the digital cadastre, which also covers the key data of deeds. In **Hungary** the land register covers a 100% of the properties also in digital form, whereas cadastre information is available in digital form only for about 80%. 0.1% of all data is available only on paper and not based on a national coordinate system. The system covers urban and rural land and properties of private and public ownership. Reportedly also the territory of **Serbia** is a 100% covered with cadastral maps: 4% are on paper and not based on a national coordinate system, 92% are on paper (data are in numeric format with boundary points surveyed, coordinated and based on a national coordinate system, but cadastral map on paper), and 5% are digital. Information like control points, property units, buildings, area of parcel, contour lines and heights are included in the cadastre system. The Real Estate Cadastre (REC) covers only 45% of the land parcels that have by law to be registered, whereof 35% of titles are held in digital form. Until the end of 2004 it shall raise up to about 66%. The percentage of still existing land books in Serbia has already decreased to approximately 19-17% (25% when starting the REC in 1992). Although different legal provisions apply to agricultural land and building land, no legal difference is made in registration between public and private lands.

In **Croatia** 100% of the land is covered by cadastral plans/maps, whereof 62% are on paper and not based on a national coordinate system, 21% are on paper (data in numeric format with boundary points surveyed, coordinated and based on the national coordinate system, but cadastral map on paper), and 17% are digital. No reliable data on the percentage of coverage could be gained from **Bulgaria**. However, within 5 to 15 years the computerized form for keeping of cadastral data should be 100% if the cadastre and property register project is implemented well and precisely. In the existing map material and in the cadastre currently being developed all types of ownership over immovable property are included – state and municipal property – private and public, as well as property of co-operations, legal entities and citizens. All books and registers are kept on a paper carrier. The deeds continue to be registered at the same time on paper and information carriers. With regard to rural and forest areas digital records are stored in files by settlements for all 4750 settlement units in Bulgaria. These digital records consist of information for rural and forest properties. They contain graphical data on administrative boundaries, delineation of parcels, permanent boundaries on the terrain etc., and in database format data on land use, ownership types, restitution type, owners, restriction types, documents, publishers, property rights etc.

3.4.2 Up-to-datedness

For a functioning property market it is important that the data is not only complete, but also accurate and up-to-date.

This is true for Austria, Germany and the Netherlands. In **Austria** land book extracts are always up to date, historical data is available separately (register of deleted items). The system in Austria – especially by means of the Real Property Database (run centralised at the Federal Computing Centre) – provides on countrywide basis up-to date information on real property and is therefore considered to be complete. Because the actual registration of a right in the land book effects the immediate and unconditional acquisition, conveyance, restriction or annulment of ownership or other real rights, the information provided by the Real Property Database is necessarily up to date and accurate. In **the Netherlands** all deeds are filed as they come in, day by day. The cadastre system is updated on a daily basis, using the essential data from the notarial deeds. The public register of deeds – until now kept in paper – is always up to date by nature. The notification of acceptance by the Registrar indicates the legal delivery of ownership, as that is one of the requirements of a legally valid delivery.

The **Croatian** system however to a large degree does not reflect the actual situation with regard to cadastral and rights data, due to previous abolishment of property rights, wars and lack of resources. Major efforts (supported by international projects), though, are under way to update and harmonize the records. Also in **Serbia** – especially within urban areas – the data contained in the land books (as far as they exist) and the data contained in the land cadastre in most cases do not match as the entries in the land books have not been updated over a long period of time, and, the new actual status (e.g. new parcel numbers) has not been registered with the land books. Due to the disharmony between land book data and land cadastre data, the work on comparing the land books with the land cadastre is extensive.

3.4.3 Principle of registration in the land register

The principle of registration in the land register means that a respective real right is only acquired by registration in the land register. This principle has different purposes. The principle of registration serves the completion of the land registration system as by this the land register will become (more and more) complete. Also it serves up-to-datedness of the system as each change of data needs to be registered and thereby the land register is kept updated. The principle of registration is also a means of higher legal security (see 6. below), because it follows from this principle that non-registered transactions are invalid.

	AT	BG	HR	DE	HU	NL	SR
Registration is causative for validity of transaction	yes	no	yes	yes	yes	yes	yes

Table 11

In **Austria** the land book is deemed right and complete, i.e. everyone inspecting the land book can trust in the rightfulness and completeness of the information given by the land book. Cadastral data is of informative value (unless a real property is registered in the fixed boundary cadastre). The same is true for **Germany** and **the Netherlands**. Also in **Hungary** and **Serbia** registration is of constitutive character. In **Bulgaria** property ownership exists also without registration, but it cannot be opposed to third persons who have registered a deed on the same real property in good faith.

3.4.4 Accuracy

In **Austria** parcel boundaries are surveyed precisely by measurement and the result is recorded in a surveying document and in the digital cadastre map, no topographical map is used for this. Boundary points have an accuracy estimation of +/- 0.15 metres (measured points) up to +/- 1 metres (graphical points). In **Germany** the rules for accuracy and reliability of cadastral data depend on the situation in the different *Länder*. E.g. in Lower Saxony the accuracy of cadastral measurements done since 1986 should not exceed 4 cm. For measurements in other areas the accuracy may be lower (e.g. depending on the length of the boundary or the reliability of the used data – numeric or graphical). In **the Netherlands** the geometric construction should not be more accurate than the requirements of relative precision of $\sqrt{2} \times 20$ cm for urban areas and $\sqrt{2} \times 40$ for rural areas, otherwise the survey is considered to be too precise and therefore too expensive. In **Serbia** on the other hand – according to a study of the University of Belgrade – the precision of measurements is in the range of a few meters, and introduction of further technical means will be necessary (esp. also digital orthophotos).

3.5 Transparency

The system should be clear (e.g., clear competences) and simple to understand to encourage its use by administrators and the general public. Complex forms, procedures, and regulations will slow down and discourage its use. Simplicity is important to ensure that costs are minimised, access is fair and the system is maintained (cp. FIG, 1995).

Processes for real property registration and cadastre shall be transparent and clear. There shall be guaranties for proper processes. Quality of the system is essentially influenced by inter-relationship between cadastre institutions and land registration institutions. Whether a system with single or with dual institutional structures, with or without court involvement, clear and clearly attributable competences are important, i.e. transparent internal co-ordination is an important issue.

3.5.1 Clear processes / competencies

	AT	BG	HR	DE	HU	NL	SR
Clear processes	high	low	low	medium	medium	high	low
Court involvement	yes	yes	yes	yes	no	no	partially

Table 12

Explanation: high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries.

The Netherlands have certainly the most transparent system, because all services are provided through one institution. All work processes are ISO certified, including production-standards and quality standards, i.e., all processes are exactly described, together with standards for quality and production. On a monthly basis quality indicators are measured, and reported, and form part of the accountability of the regional managers. Legal security indicators are targeted at no mistakes (zero tolerance), nevertheless mistakes are made. Delivery times are fixed and published on a periodical basis. In **Austria** each of the institutions has its own laws, regulations, manuals and standards which not only provide for a common standard of quality of processes, but also for clear distribution of powers and for hierarchies in the systems. The Real Property Database, which is a common database of cadastre and land book, is seen as a big advantage, which overcomes the idea of unification of systems. Unification from a technical point of view is achieved. All activities of the public sector in Austria are subject to strict legal regulations regarding internal and external audits securing the well-

functioning of the system. Within the cadastre system audits are part of the quality management system and every office is subject to such audits once a year.

Due to the fact, that responsibilities for real property registration and cadastre are split between the federal state and the 16 *Länder* and that as a result of this there are 16 different systems of real property registration and of cadastre the **German** land book and cadastre system does not fulfil the general criteria of being clear and simple to understand. Nevertheless the administrators of this system know their competences very well and work well with the system. Also the general public is aware about the functioning of the system. Improvements are under way to make the system clearer and simpler. Inter-*Länder* bodies (working group of *Länder* survey agencies) ensure uniformity of the property cadastre. For the reasons of quality management each individual working process and procedure is described in special regulations. All offices are working with these unified regulations. Although there is a lack in development of IT, the systems have good reputation among the users as well as the administrators. Standards developed within the institutions and state liabilities for errors by its officials guarantee proper and transparent processes. In **Serbia** the process of registration in the GGA system is understandable, not always, however, clear and simple. Problems occur since there are no clearly defined work flows and competencies often are not clear. Another problem is the multiple evidence of real property.

Processes in **Hungary** are very clear as the customer for any matters related to land simply has to approach the competent district land office. It is reported however, that due to the organisational structure of the Hungarian land administration system and due to potential political influences there is potential for overlaps, discrepancies or conflicts between cadastre and land registration. In **Croatia** competences are clear by law, but often not followed in practice, so for instance because the interaction between the cadastre and land registration systems is inadequate, in part due to the lack of electronic equipment and linkage between the institutions. With regard to **Bulgaria** competences have been relatively clear so far. It seems however that with the legal amendments of spring 2004, the functions related to the creation of the property register are becoming more unclear. Uncertainty is given as to how they are going to be partitioned between the registration offices under the Registration Agency and the registration offices under the district courts.

3.5.2 Interrelationship between cadastre and land registration institutions / coordination

	AT	BG	HR	DE	HU	NL	SR
legal	yes	yes	yes	yes	no	yes	yes
technical	common database	no	no	no	common database	yes	yes
organisational	no	no	no	no	yes	yes	yes
financial	yes	no	no	no	no	yes	yes

Table 13

The only country with full functioning and transparent interrelationship between cadastre and land registration system is **the Netherlands**, where the public register of deeds as well as the cadastral registers and maps are kept and maintained by one Agency and share the same legal framework and technical facilities. These registers and maps are supported by integrated work processes, facilitated by an integrated IT architecture. No gaps in information exchange between the public registers of deeds, the cadastral real property registers and the cadastral map therefore occur. This is also partly true for **Serbia**, where the linkage between the cadastre and land registration system is legally fully realized, too. Within the GGA, it is a mere task of inter-organizational coordination. The co-operation with other public entities, however, might be suffering from the lack of data exchange mechanisms through electronic means. Also in **Hungary** the relationship between real property registration and

cadastral maintenance takes the form of a work relationship between two specialised organisational units of the same land office.

In **Austria** inter-organisational co-ordination mainly works over the Real Property Database, which is a common database for cadastre and land book. The respective institutions have full access on information to all data stored in the Real Property Database and power to change data within the frame of their competence.

In **Bulgaria** until now the interrelation between the Cadastre Agency and the Registration Offices, in the future the Registration Agency under the Minister of Justice is only legal. Technically it will be fulfilled – in terms of a common database – after the development of the information systems. Also in **Croatia** the Land Registration Act requires mutual updating of cadastre and rights registration data, in practice, however, is rather weakly developed so far due to the fact that many land registries are still kept manually or on local computers not linked to the cadastre counterpart. The introduction of a centralized Land Registry Data Base is in the development stage; in several locations there are electronic local linkages between the cadastre offices and the land book offices (e.g., in Zagreb). Only full computerized networks will provide a high quality standard for coordination. In **Germany** cadastre and land book are kept with two different institutions, which are obliged by law to interact. The cadastre offices receive information about changes in the Land book by paper. A link – although not fully institutionalised – exists between the cadastre and the land book only regarding legal aspects. Duplication collection and maintenance is therefore necessary with regard to certain data (e.g., personal details of the owner). Also due to the fully decentralised system of *Länder* autonomy inter-organisational co-ordination among the states is only minor.

3.5.3 *Errors in the course of registration*

Guaranties for proper processes are foreseen in all the examined countries. The important factor is, however, where the liability for damages lies – either by the state or by institution entrusted with cadastre and land registration activities – as a consequence, how high the likelihood of compensation will be.

In **Austria** damages that occur due to wrong acts stated by representatives of the state are compensated according the State Liability Act which in specially regulated cases may recover damages caused by a civil servant. In addition there exist state guarantees for technical failures caused by using electronic data processing. Processes are also guaranteed by the possibility to take legal action by the parties concerned, for instance damages that occur due to transfers in good faith have to be compensated between the parties according to civil law rules. Similarly the **German** system is guaranteed by the Federal State by way of the principle of public liability for activities of public bodies, i.e., if such a public body makes a mistake the state will be liable. Processes are also guaranteed by the possibility to take appeal or legal action. In **the Netherlands** the state is fully liable for discrepancies between the data in the notarial deeds as registered in the public register of deeds and the cadastre (real property register and cadastral map) because updating the cadastre while reading and analysing the notarial deeds by the employees of the Agency is an administrative activity. The state is not liable for the correctness of the deeds (this solely rests on the obligation of the notary concerned). Also, the Republic of **Croatia** shall bear objective responsibility for damages caused due to errors in maintaining the land book by means of electronic data processing, but exclude from this responsibility any damage falling into the responsibility of judges and officials of court. Similarly, in **Bulgaria** the cadastre and land registration system is guaranteed by the state, which bears liability for errors made. In **Hungary**, for damage caused in the procedure of real property registration (e.g. by errors in filing; a legally wrong decision; etc.) the responsibility for the actions of a land office executive is laid on the employer, that is, the land office (i.e., the state). The prerequisite for establishing liability is that the

damage cannot be remedied in the available ways, and the offended party has previously employed the available ordinary sources of remedy, respectively.

Only in **Serbia**, because neither the courts, nor the GGA are required to check whether the underlying contract complies with substantive legal requirements, upon which registration of ownership or other rights are registered, the state cannot be held liable for mistakes that might occur. Liability for potential errors lies with the GGA. No specific procedures, though, exist for compensation of damages.

Further in all the examined countries private legal professionals involved are obliged to have liability insurances.

3.5.4 Customer satisfaction

The awareness of customer satisfaction can be determined through regular reviews and customer surveys. The ability of users to demand better services (e.g., through complaints) is an important feedback feature for the quality of the system.

	AT	BG	HR	DE	HU	NL	SR
Regular customer surveys	no	no	yes	no	no	yes	no

Table 14

With relation to customer satisfaction it appears that most of the countries are neglecting the important task of providing evidence on this topic. Mainly only assumptions exist, but no regular surveys are carried out.

Only in **the Netherlands** the cadastre and land registration system is investigated along a country wide investigation by an independent opinion poll bureau. Data regarding the results of these surveys were not made available, but relatively high customer awareness can be expected. Apart from that, the regional offices organise their own surveys regularly for regional users. In **Croatia** it is reported that customer surveys are carried out every three years for the cadastre as well as land registration system, this data, however, could not be verified. In **Bulgaria** funds are foreseen under the “Cadastre and Property Register” project, but no detailed surveys have been conducted yet.

In **Serbia** customer surveys and feedback / monitoring mechanisms are not regulated on a mandatory or statutory level. Customer survey and feedback has been introduced in 2003 by way of issuing questionnaires for users at the counters of GGA offices. Users and interested citizens are asked to suggest possible improvements and comments, and to give statements on the work performed by the GGA employees. Since 2002 a media campaign is pursued for the reason of making the fairly informed users of the system familiar with the responsibility of the GGA and the fact that courts are not (or will not be) in charge of real property registration any more.

In **Hungary** neither for the land registration nor the cadastre system customer satisfaction surveys or other regular feedback mechanisms have been undertaken. The same is true for **Austria**. The surveys that have been undertaken there sporadically until now, and the public opinion, however, show, however, excellent results. In **Germany** customer surveys have been carried out by some cadastral authorities, but it is unknown, whether the same has taken place or will take place in the land books. The results in general are very positive for the surveying authorities.

For demanding better services the customers in **the Netherlands** may approach the so-called User Board, which is established at Agency level and comprises representatives of umbrella organisations of users, such as notaries association, real estate agents association, mortgage banks association, consumer organisations etc. Furthermore regular contact between the stakeholders of the system at each level (federal, regional) exists. In **Austria** the customers may (a) bring in a petition for adminis-

trative review or a claim for fixing a period for decision, (b) forward the case to the respective Ministry or (c) in the case of cadastral issues ultimately to the so-called Volksanwalt. Similarly in **Germany** the customers have the opportunity to file a petition for administrative review of a specific registration case or against a specific person involved in the regularisation process. In **Serbia** besides the opportunity to appeal a decision of the GGA office within administrative structure and in a second step at court the users have no such opportunities. No data is available from **Croatia, Hungary** and **Bulgaria**, but a similar situation can be assumed.

3.6 Security

The system should be secure so that a land market can operate effectively and efficiently. There should be certainty of ownership and parcel identification. Financial institutions should be willing to mortgage land quickly, foreign direct investment shall be attracted and the system of credit securities developed (functioning mortgage markets). The system should also be physically secure with arrangements in place for duplicate storage in case of disaster (established backup procedures) and controls (e.g. data protection) to ensure that unauthorised persons cannot damage or change information (cp. FIG, 1995).

3.6.1 Certainty of ownership

	AT	BG	HR	DE	HU	NL	SR
Certainty of ownership	high	low	low	high	medium	high	low

Table 15

Explanation: high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries.

In **Austria, Germany** and **the Netherlands** the registration of a right in the land book/recording in the public register of deeds effects the immediate and unconditional acquisition, conveyance, restriction or annulment of ownership or other real rights. The acquisition shall be permanent (even if the registered person is not the rightful titleholder) unless an action for discharge of the entry is filed and decided against the acquirer.

For **Croatia** – due to the fact that the land registers (and also the cadastre) have not been updated since before or immediately after World War II – the accuracy of registration of real property rights in many cases is doubtful, and so is certainty of ownership. The harmonization of cadastre and land registers is being pursued as a high priority, but remains a major cause for concern. The principle of trust in the authenticity and integrity of data in the land registers has hence been postponed until 1 January 2007. Certainty of ownership seems not very high in **Bulgaria** as reportedly only with the currently developed information system prevention of double conveyance situations is aimed. It is better in **Hungary**, nevertheless the still huge amounts of backlogs greatly hamper the system. In **Serbia** the cadastre and rights registration data in the REC system (which represent only a part of all data of the country) can be considered as consistent and reliable. There is, however, a large amount of data in many parts of Serbia (contained in the old systems) which cannot be considered as reliable. The transformation of previous systems creates confusion and causes problems for the general acceptance and trust into the REC.

3.6.2 Acquisition in good faith

Acquisition in good faith is protected in different ways in the examined countries. In **Austria**, and similarly in **Germany** and **Hungary**, a third party that – in a lawful transaction – acquires (for a consideration) ownership is protected by law, if it acted only in good faith of the information given by the land book, but in ignorance of the true legal situation concerning the respective real property (e.g., double conveyance). Damages that occur due to transfers in good faith have to be compensated between the parties according to civil law rules. Also in **Croatia** land registers enjoy public trust. Any acquirer of rights in good faith shall enjoy the protection of his/her rights. Due to significant problems with ownership certainty the legal situation here differs, however, from the factual situation.

In **the Netherlands**, if e.g. in a previous transfer land was sold for which the seller had no right to dispose, because de iure he did not possess it, the subsequent transfers might be void. Here the prescription rules are important: if such a deed de iure might be void, the prescription makes the buyer in good faith the legal owner after 10 years. In **Bulgaria** ownership exists also without registration, but cannot be opposed to third parties who have registered a deed for the same property in good faith. In **Serbia** acquisition in good faith is also protected. However, it needs to be considered that land books and title deed books were not kept properly in the entire territory of Serbia; this, in turn, lead to the fact that courts sometimes passed judgements in favour of a buyer (just) holding the real property, versus a buyer being properly registered as a new owner, provided each of them had paid a price to the seller in good faith.

3.6.3 Superficies solo cedit and apartment ownership

The principle *superficies solo cedit* means that the real property includes ownership of the building thereon. Therefore, a building does not constitute a separate real property, but forms part of the parcel beneath. As a consequence building data is not separately registered.

	AT	BG	HR	DE	HU	NL	SR
Superficies solo cedit applied	yes	yes	yes	yes	yes	yes	no
Right linked to apartment	use right	ownership, use right*	ownership, use right*	ownership / use right	ownership / use right*	use right	ownership / use right*
Right linked to building and land beneath	co-ownership	ownership / use right*	ownership / use right*	ownership / use right	ownership / use right*	co-ownership	ownership / use right*

Table 16

* Depending on whether the building / land is in private or state ownership.

Only **Serbia** has given up the principle *superficies solo cedit*, so that the building does not share the legal fate of the land (piece of land). It may happen that an individual erects a building (or construction) on a real property which is owned by another individual, while between them, no contract was ever concluded. In all other examined countries this principle is applied, however, different forms of lease rights allow for erecting / owning a building on a third person's land. In **Austria** for example the building lease is a right, which is entered in the land book as an encumbrance and allows for separate ownership of the building and the real property beneath. The so-called *superaedificium*, which – under certain circumstances – can be subject of conveyance without the land beneath is not rendered in the land book or the Real Property Database, but in a separate collection of documents. Also in **the Netherlands**, there are certain real rights that break the principle e.g., right of apartment or right to

exploit subsurface minerals. In **Germany** exceptions exist for the *Länder* of the former GDR. It is also possible to register strata titles and condominiums (in condominium registers) or building leases (in land books for building leases). In **Hungary** the title to the building can exceptionally be separated from the title to the land in the case of the so called autonomous building, the proprietor of which is entitled to perpetual servitude.

Apartment ownership is regulated very differently in the analyzed countries: In **Austria**, for example, where the *superficies solo cedit* principle is applied, apartment ownership is construed as a form of ownership where an ideal share (undivided interest) in the co-owned real property is linked with a right of use and a right to dispose in relation to the concrete flat. A flat may be therefore conveyed without the consent of the other co-owners of the real property (i.e., the other flat users in the building) whereas in general co-owned real properties can only be conveyed with the consent of all co-owners (ideal shares in co-ownership may, however, be conveyed without the consent of the other co-owners). In **the Netherlands** the right of apartment comprises a share in the common property with the exclusive right of use of a part of it i.e., the apartment.

German apartment ownership is construed from three parts: the share of co-ownership, the specific ownership and the participation in the association of apartment owners. Apartment ownership in **Serbia** is complex, depending especially on the fact whether the property in question (building and / or land beneath) is in private or in state ownership. Generally in case of state ownership only a permanent right of use can be acquired. It needs to be noted that public construction land (public objects of common interest and public areas in state ownership etc.) cannot be alienated from state ownership. Other (remaining) construction land is allowed in any appearances of ownership. Similar regulations can be found in **Bulgaria, Croatia** and **Hungary**. In Serbia as well as in Croatia there is a large amount of illegal buildings in the outskirts of the cities which have not been registered in the cadastre and real property rights registers as they were erected without building permits.

3.6.4 Number of disputes

The number of disputes in the field of cadastre and land registration is an indicator for legal security of the system and for the functioning of the land market as such.

	AT	BG	HR	DE	HU	NL	SR
No. of disputes with relation to cadastre	very low	n/a	high	very low	high	very low	high
No. of disputes with relation to land registration	very low	n/a	high	very low	high	very low	high

Table 17

Explanation: high = clearly above the average figures of other examined countries; very low = especially low figures compared with the other examined countries.

In **Austria** disputes are very rare, and predominantly occur in rural / garden areas. The number of pure titles disputes is nearly insignificant. It is roughly estimated that there is less than one case per year regarding pure title issues at the land book, and not more than 30 cases per year at the cadastre institutions. About 200 disputes on ownership issues per year are settled at the civil courts. Compared to the total of all annual transactions (see also 8.A below) this is only a very minor portion (0.2% for the rights registration and 0.05% for the cadastral system). The average length of such proceedings at courts of first instance is approximately six months. Also in **the Netherlands** disputes are very rare. It is roughly estimated that there are not more than 30 boundary disputes per year at the courts and not more than 20 cases per year before the Agency. The average length of such proceedings at courts of first instance is approximately one year.

For **Germany** no figures are available, but protests against a cadastral survey take place sometimes, protests against the legal boundary are very rare. A survey carried out by FIG in 1998 estimated that there are about 300 cases per year at the courts and not more than 100 cases per year at the cadastre institutions. Compared to the total of all annual transactions this is only a very minor portion (0.01% for the rights registration and 0.02% for the cadastral system). No figures are available also for the land book offices, but the estimated number of disputes there is very low, too (far below the number of cadastral disputes).

In **Hungary** disputes – especially boundary disputes – are more common than in Western European countries. It is roughly estimated that there are about 4,000 cases with court relevance per year. Compared to the total of all annual transactions this is a relatively high portion (0.4% for the rights registration system). The average length of such proceedings at courts of first instance is approximately six months. Disputes also occur quite often in **Serbia**. It is roughly estimated that there are some 38,000 disputes with court relevance per year for the cadastre and some 1,700 for the land register. Compared to the total of all annual transactions this is high. There is no information available regarding the average length of such proceedings at courts. Also in **Croatia** disputes occur very often. The estimation of some 250,000 disputes with court relevance per year for the cadastre and some 5,000 for the land register could not be verified. Compared to the total of all annual transactions it is in any case a very high portion. The average length of such proceedings at courts of first instance is approximately one year.

3.6.5 Parcel identification

Data can be maintained manually or digitally. The overall importance lies with the implementation of a system for unique parcel identifiers and with linkage of data between cadastre and real property registration (see 5.B. above).

	AT	BG	HR	DE	HU	NL	SR
Unique identifier (cadastre)	yes	no	yes	Yes	yes	yes	yes
Unique identifier (land register)	yes	no	yes	Yes			
Linkage between cadastre and land register	very strong	weak	weak	weak	strong	very strong	strong*

Table 18

* currently only for 35% of the territory.

In **Austria, Germany** and **the Netherlands** there exists a system of unique identifiers for the whole respective national territory for cadastral as well as for property rights data. In Austria the strong link between cadastre and real property registration via the Real Property Database secures that data is collected and maintained only once. In Germany, however, there is no direct interaction between the cadastre and the land book. Depending on the state the cadastral authority provides direct access to the real property cadastre for the land book offices. The cadastre offices receive information about changes in the land book by paper. In the Dutch cadastral registers (based on the content of the deed in the public register of deeds) the cadastral parcel identifier plays a central role. There the name of the owners is linked to the parcel number (subject linked to object through a legal right). All references to the notarial deed in the public registers of deeds are attached. By use of the name of the owners, the parcel number or the address of even coordinates, it is always possible to find the notarial deed, that was the source document for the update in the cadastre. The recently initiated digitisation of the registration of deeds will overcome this media gap. In **Hungary** all types of properties have a unique identifier and are registered separately (land parcel; other independent properties).

Also the **Serbian** REC is supposed to be a unique recordation system of real property for the whole territory of Serbia. It enables to record at one place all data about land, way of using, cultivation and class, objects, rights on real property and holders of these rights. However, only 45% of land in Serbia is registered in the REC so far. The **Croatian** land administration system to a large degree does not reflect the actual situation with regard to cadastral and rights data, due to previous abolishment of property rights, wars and lack of resources. In **Bulgaria** the cadastre office gives the properties a preliminary identification number. This is transformed into a definite unique identification number after the cadastral map is approved.

3.6.6 Foreign direct investment

An indicator for the security of a market is the percentage of foreign direct investment. The following figures give a rough picture on the (net in flow) foreign direct investment into the examined countries during the last four years:

In EUR million	AT	BG	HR	DE	HU	NL	SR
2000	9,595	998	1,089	215,209	1,234	69,307	27
2001	6,615	803	1,561	23,622	2,063	58,029	184
2002	379	876	1,124	38,269	2,514	26,604	594
2003	6,485	1,398	1,956	11,400	2,632	17,128	1,204

Table 19

Source: www.economicresearch.ba-ca.com; www.ba-ca.com.

The Netherlands continue to be one of the leading European nations for attracting foreign direct investment. The country actively promotes foreign investment. Its trade and investment policy is among the most open in the world. Only few restrictions exist. Also **Germany** imposes no permanent currency or administrative controls on foreign investments. There are no restrictions or barriers with respect to capital transactions or current transfers, real estate purchases, repatriation of profits, or access to foreign exchange. Similarly, in **Austria** there is no discrimination against foreign investors. There are no controls or requirements on current transfers, access to foreign exchange, or repatriation of profits. Although the national government no longer imposes restrictions on foreign purchase of land, real estate (see 3.B. above) transactions are subject to approval by local authorities. **Hungary** is very open to foreign investment and is a leader in foreign investment reform. The law does not discriminate against foreign investors, and government approval is not required in most cases. Foreigners may not purchase agricultural land (see 3.B above).

The **Croatian** government is attempting to undo the harm done to foreign investment under the previous regime by taking active measures to welcome foreign investors, privatise state monopolies, and improve the Croatian business environment. Foreign investors have the same rights and status as domestic investors and may invest in nearly every sector of the economy. All foreign direct investments must be registered with the commercial courts, and foreigners may purchase real estate only with permission from the government. Also the foreign investment climate in **Serbia** is improving. However, the short-term political risks remain significant. Corruption is seen by the public as one of the most serious problems facing society today. Payments and transfers are subject to restrictions, and most capital transactions are subject to controls. In **Bulgaria** the law mandates equal treatment for foreign investors, and investors may repatriate 100% of profits. Non-residents may not purchase or own land, and non-residents inheriting land must dispose of it within three years, but ownership of buildings and lease of land are permitted. Bulgaria maintains some restrictions on foreign investment in armament companies, banking and insurance, development and exploration of natural resources, and real estate purchases in certain geographical areas. A well-entrenched bureaucracy remains an obstacle to foreign investment.

3.6.7 Banking systems and mortgage markets

The Netherlands have been one of Europe's financial and banking centers for centuries, and its banking system operates freely with little government regulation. Banks established there may engage in a variety of financial services, such as buying, selling, and holding securities, insurance policies, and real estate. **Germany's** banking system is well-regulated, but dominated by public-sector financial institutions. The combination of increased competition resulting from the opening of European Union markets and unwise speculative financing has put some banks at risk. **Austrian** banks offer services ranging from credit to finance, and the government permits savings banks to perform commercial banking functions, including the brokering of securities and mutual funds. Although the banking system is competitive, the government is involved in the banking sector. The mortgage markets of these three countries are characterised by fixed interest rates. Mortgages have an average loan term of 30 years in the Netherlands, 25-30 years in Germany and 20-30 years in Austria, and the ratio of loan to value is 90% in the Netherlands, 67% in Germany and 60% in Austria. In 2002 the outstanding mortgage debt was for the Netherlands 87,7% of the GDP (as to 50% in 1995); for Germany 12,6% of the GDP (as to 46% in 1995); and for Austria 4% of the GDP (as to 5% in 1995).

In **Hungary** the banking industry is increasingly competitive. Banks are relatively free from burdensome government oversight, and the state's role in commercial banking is minimal. Foreign banks face no barriers to entry into the Hungarian market. In an effort to reduce the government deficit to more manageable levels in 2004 subsidies for mortgage loans were drastically reduced. Interest caps of 5-6% had been in place for several years fuelling a dramatic growth in Hungary's mortgage market and a rapid expansion of housing stock. At the end of 2003 the maximum loan amount for used properties was reduced by 2/3 and interest rates were effectively doubled.

Bulgaria's banking system has undergone major reform since 1997. There are no restrictions on foreign banks, and foreign banks hold approximately 90% of total banking assets. The Republic of Bulgaria has given up all ownership in the banking sector. At the moment a loan to buy housing or for a new housing construction has a rate of approximately 8% up to 15%, during the year of 2001 the credit rate was between 14 and 18%. Some of the banks offer 20 years term of repayment. Until the year of 1998 all attempts to introduce more flexible, alternative debt instruments failed because of the prolonging adverse and difficult to anticipate macro – economic conditions. A favourable credit and state subsidy policy in the housing sector is still not familiar within Bulgaria.

46 banks were operating in **Croatia** as of December 2002, with foreign banks owning over 90% of total bank assets. A law passed by the parliament in 2001 brought banking regulations more closely into harmonization with European Union standards. Mortgage lending in Croatia is dynamic and growing, market-based and increasingly competitive. The basic enabling laws for a primary market in mortgage finance are in place. Concerns remain, however, with certain aspects of the legal infrastructure, especially foreclosure, and with the guarantor and mandatory deposit system that often serves as a substitute collateral for the mortgaged property. In addition, despite longer-term loans being offered, no movement has yet taken place with regard to longer-term funding of mortgages from the capital market. The ingredients for a successful secondary market in mortgages are partially present.

Only **Serbia's** banking system is underdeveloped, inefficient, and undercapitalised. According to the European Bank for Reconstruction and Development, most banks in Serbia do not function properly. Savings rates are extremely low and lending to enterprises is almost non-existent or, at best, on a very limited short term basis. However, the process of residential construction and maintenance of the existing housing fund have very positive effects on the development of the mortgage market and the overall development of the entire economy.

3.6.8 *Physical security*

In order to avoid fraud and to prevent destruction in case of fire copies of documents and records – by means of appropriate technology – shall be held away from the office. Reliable information on this issue was difficult to get. In **Austria**, **Germany** and the **Netherlands** physical security of the system is clearly guaranteed by sufficiently secure back up and storage procedures. The **Hungarian** Central Land Registry Database is stored per county in a dataflex database. Insufficient information was available from **Bulgaria**, but it was indicated that any form of back up or storage procedures are only rudimentary developed. The same can be believed for **Croatia**. In **Serbia** a recently adopted Mid-term Plan for the GGA for 2004 – 2008 provides for a disaster recovery plan etc.

The copyright for cadastral data in **Austria** is owned by BEV. Any user may use the data only for own use depending on the contract with BEV. He is not allowed to pass on the data to third parties. In **Germany** copyright is defined by regulations or laws on *Länder* basis. The **Hungarian** database as well as the maps are owned by the FÖMI, but can be supplied upon agreement in various formats.

3.6.9 *Excursus 1: Hungary – Serbia: Legal ramifications of securing title for countries who recently moved legal registration function from the courts*

Both countries have reversed from a dual system to a unified system several years ago. Hungary was the only of the former socialist countries where the land register (kept and maintained by the courts) has been fully functioning during the whole period of socialism. This country faces also more ideological problems with the fact that today land registration is not carried out by the courts anymore. Serbia on the other hand was and still is characterised by different land registration systems on its territory. The decision for one unified system as a means to overcome land related problems was therefore more readily taken up there.

The legal ramifications of securing title differ between the two countries: In Hungary a written contract over a real property needs to be authenticated by a notary or counter signed by an advocate, which certifies that the document is in accordance with the parties' intentions. In Serbia a notary system does not exist, which is why a written contract over a real property has to be authenticated by the court. The Serbian courts, however, do not check the contracts, but only witness the parties' identities. Irregularities occurring already during contract negotiations are therefore more likely to remain undiscovered in Serbia. In addition to this – due to the fact that data contained in the land books (as far as they exist) and data contained in the land cadastre in most cases do not match as the entries in the land books have not been updated over a long period of time – disharmonies between land book data and land cadastre data is considerable, which makes it difficult to identify the legal situation of a real property.

Registration of the title in the respective land register (constitutive character of the registration) is necessary in both countries in order to acquire a valid title. In Hungary a contract must be registered within 30 days following its date, no similar deadline is known from Serbia. The Serbian civil servant at the registration office has to have legal education. Nevertheless also the latter only makes a formal control of the documents, which results in the fact that the documents are not checked for their legal substance by any professional before being registered in the REC. obviously for the same reason the Serbian state does not provide liability for mistakes occurring through registration. In Hungary the civil servants perform a formal check, too; the combination with the notary system however, provides for higher legal security. Backlogs in the Hungarian land offices are extremely high, which also leads to legal insecurity.

3.6.10 Excursus 2: Hungary – Croatia: review and comparison of land registration rules and procedures. Is streamlining necessary? How? What is the associated impact on transaction costs of registration?

Croatia opted for a dual system of cadastre and land registration. There is a verbal commitment from both, the State Geodetic Authority (SGA) and the Ministry of Justice (MoJ) to build a unified system with one common database in spite of splitting up the cadastre and property books. However, responsibilities and workflow, harmonised data models as well as technical details on the management of the system have not yet been defined. Hungary was the single socialist country operating the land register without any gap. In 1972 the Unified Land Register System was introduced, thus there was a fully operational land register system in 1990 when Hungary introduced market economy. The unified land registration is controlled by the same land office which is also responsible for the maintenance of the cadastre. The cadastral data of the parcel and the related legal records are stored in the same information system.

Although the two countries in fact have different systems of land registration, the procedures for registration do not differ too much. The reason for this is that procedures of land registration in Hungary are in fact still very similar to the Austrian system.

Whereas in Croatia land registration is carried out by the courts which shall guarantee an independent and unbiased decision-taking by the responsible persons, the Hungarian registrars are embedded in the administrative hierarchy of the land offices. Considering the fact that e.g., through instructions certain results of registration can be influenced (which especially is of importance with regard to projects of public / political interest) unbiased decision-taking is therefore under question in Hungary. This is of special importance with regard to fact that real property rights are civil rights that shall be guaranteed by the state. In practice, however, considerable irregularities are reported from Croatia as well as Hungary.

Both countries suffer from a high backlog with regard to registration in the respective registers. The Croatian land administration system moreover to a large degree does not reflect the actual situation with regard to cadastral and rights data, due to previous abolishment of property rights, wars and lack of resources. Art 5 of the Croatian Land Registry Act provides that all procedures in connection with registration of rights lie with the land registrar or any other such land registry officer as appointed by the land registrar under the supervision of the competent judge. The registration itself, though, is a decision of the court. Considering the heavy backlog accumulated in Croatia this procedure needs improvement. Considerable streamlining effects can be achieved by allowing the land registrars to make decisions in the name of the judge. It needs to be considered in this context, however, in how far several steps of approval (registrar, judge) contribute to the overall safety of the system to a higher degree than a registrar who though independently takes materially wrong decisions. This implies the necessity of intense training of the land registrars and eventually increasing the number of staff. Also in Hungary the huge backlog needs to be faced by increasing staff and intensifying training measures.

Associated impact on transaction costs of registration is difficult to establish because appropriate data was not available. For individual comparison of fees and taxes see table 25.

3.7 Cost-effectiveness

The system should be at low cost or operated in such a way that costs can be recovered fairly and without unduly burdening users. Development costs, such as developing establishing offices and the

adjudication and initial survey should not have to be absorbed entirely by the immediate users of the system (cp. FIG, 1995).

The costs and resources of the institutional arrangement are a central factor, but should not be over-emphasized as being the only important factor, as issues of internal organization, management and, over all, the use of IT are as decisive as costs. So for instance the amount of work to be performed remains basically unchanged – except for the duplication of some (not all) overhead costs on all administrative levels – whether within one or within two institutions. **IT** in this context plays an especially important role as it must not be seen as a starting point for the (optimal) institutional arrangement, but as a most important tool serving and supporting the latter. In the context of cost effectiveness also the fact is important that the system especially with regard to IT requires a high amount of investment for (technological) maintenance. This aspect is seen as an important driving force towards full cost recovery.

The comparability of cost and staff information regarding the land registration and cadastre system is limited due to different data bases and limited data availability in most countries. All the following cost-effectiveness indicators therefore should be treated very cautiously.

3.7.1 Total cost of the system

The following data give an overview of the annual total cost of the land registration and cadastre system in the surveyed countries and should only be regarded as expert estimates. Establishment and upgrading costs are excluded for the Eastern European countries as they can be regarded as system transformation costs.

The relation of the total maintenance cost of the system should be appropriate to the size of the system and the country. Annual costs in EUR per inhabitant and in % of GDP and related to total number of titles and parcels indicate the system's overall cost-effectiveness, whereby the lower these indicators the higher the cost-effectiveness.

In some of the analysed countries the state guarantees the rightfulness and completeness of information from the respective land register; this incurs higher total costs of the system. Where the state does not give such guarantees, the total cost of the system are lower, because some of the costs are outsourced like for instance to the notaries in the Netherlands.

	AT	BG	HR	DE	HU	NL	SR
Total annual cost for cadastre (in million EUR)	35.0	n/a	28.1 *	1,296**	24.0***	118	n/a
Total annual cost for land registration (in million EUR)	11.0	n/a	14.0 *	2,512**	48.0***	88.0	n/a
Personnel costs in % of total costs	27.5%	n/a	43.5%	32.1%	n/a	17.1%	n/a

Table 20

* Only total costs given. Assumption: 2/3 are cadastre and 1/3 land registration costs.

** Based on 1997 FIG data (EUR 1 = USD 1.2).

*** Not explicitly stated if any transformation costs included.

Cost-effectiveness indicators:

	AT	BG	HR	DE	HU	NL	SR
Total annual cost per inhabitant (in EUR)	low	n/a	medium	high*	low	medium	n/a
Total annual cost in% of the GDP	low	n/a	high	high*	medium	low	n/a
Total annual cost per title in system (in EUR)	medium	n/a	medium	very high*	low	high**	n/a
Total annual cost per parcel in system (in EUR)	low	n/a	very low	very high*	medium	high	n/a

Table 21

* Based on 1997 FIG data (EUR 1 = USD 1.2).

** calculated on the basis of 3.9 million rights holder.

Explanation: very high = exceptionally high figures compared with the other examined countries; high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries; very low = especially low figures compared with the other examined countries.

The figures given in table 21 reflect the costs only for the institutions involved in cadastre and land registration, leaving apart those of the notaries, surveyors and other professionals. The selected indicators reveal a relatively high cost-effectiveness related to size of country (GDP, population) for **Austria, the Netherlands** and **Hungary**. In contrast **Germany** and **Croatia** show considerably lower cost-effectiveness. No data are available for **Bulgaria** and **Serbia**. The cost-effectiveness related to the size of the system (number of titles and parcels) is highest in **Croatia** followed by **Hungary**. **Austria** and the **Netherlands** are in the middle range and the system in **Germany** has a considerably lower cost-effectiveness based on the data available due to strikingly high maintenance costs for the land registration system.

3.7.2 *Personnel input*

The following data provide an overview of the number of public employees (in full-time equivalents and considering their involvement) within the land registration and the cadastre system and additional employment in the private sector. The numbers should only be regarded as expert estimates. It also needs to be noted that the differing numbers in private sector involvement have impact on the number of public employees.

	AT	BG	HR	DE	HU	NL	SR
No. of staff related to cadastre	275	216*	1,100	20,800	913	1,214	2,888**
No. of staff related to land registration	229	306	1,100	6,900	286	720	
No. of notaries	462	n/a	348	10,000	350	3,505	0
No. of private licensed surveyors	450-500	2,000	645	1,400	5,000	0	123

Table 22

* Only Cadastre Agency. Number of staff in the local offices respectively the land commissions was not available.

** Total number of personnel.

Cost-Effectiveness indicators (only based on staff capacity):

	AT	BG	HR	DE	HU	NL	SR
No. of staff per 100.000 population	low	n/a	very high	high	medium	medium	n/a
Land property titles per person staff*	high	n/a	very low	medium	very high	medium	n/a
Parcels per person staff**	very high	n/a	high	very low	medium	low	n/a

Table 23

* Total number of property titles registered in the system compared to number of public employees in land registration system.

** Total number of parcels stored in the cadastre system compared to number of public employees in cadastre system.

Explanation: very high = exceptionally high figures compared with the other examined countries; high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries; very low = especially low figures compared with the other examined countries.

With regard to the total number of public employees related to land registration **Austria** has 145 judges and 250 registrars, **Bulgaria** has 94 judges (number of registrars not available), **Croatia** has 120 judges and 900 registrars; **Germany** has 2,600 registrars (number of judges not available), **Hungary** has 1,600 registrars (no judges involved) and **Serbia** has 192 jurists (no judges involved).

In **Germany** about 8,400 notaries also work as advocates, only 1600 are full-time notaries (special rules in some parts of Germany); advocates are not involved in the registration process, because only contracts authenticated by notaries may be registered. In **the Netherlands** there are no private licensed surveyors involved in cadastral survey, all surveying work is done by public employees.

The total number of personnel in the field of land administration – both in the state and in the private sector – should be suitable to the size of this system and the circumstances in a specific country. The relation of the public employees should be appropriate to the size of the system and country. Staff employed in the system per 100.000 inhabitants and related to total number of titles and parcels indicate the system's overall cost-effectiveness of personnel resources, whereby the lower the first indicator and the higher the second two indicators the higher the cost-effectiveness based on staff capacity.

The selected indicators reveal high cost-effectiveness related to the size of the country and the size of the system for **Austria**, and **Hungary**. For **the Netherlands** this data indicates an average cost-effectiveness whereas the **German** and the **Croatian** system seem to have a considerable lower cost-effectiveness regarding their staff resources.

3.7.3 Cost of services to the user

A standard transaction shall be available at reasonable cost **in terms of low fees to the user**. For secondary users correct accounting (truth of costs) and payment of services is important.

The fee structure is very difficult to compare because calculations have different bases in the various countries.

	AT	BG	HR	DE	HU	NL	SR
Standard parcel subdivision	EUR 1.500	n/a	EUR 8.4	EUR 1.400	EUR 200	EUR 451	EUR 100
Cadastre extract*	EUR 3**	n/a	EUR 8.4	EUR 15-25	n/a	EUR 2.77	EUR 10

Land registration extract*		n/a	EUR 2.4	EUR 15			
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Table 24

* A typical extract is understood as delivery of one piece of information.

** Extract from the Real Property Database.

In **Austria** no targeted fee reductions exist. Some administrative authorities, however, may be entitled to receive extracts (not copies from original data) from the cadastre map for free, as fee exemptions exist for them. In **the Netherlands** fees are to be paid by all customers, inclusive of government bodies. There is no differentiation between segments of customers. The only differences are caused by different product specifications. The regulating mechanism is the obligation to be 100% cost recovering, within the financial cost-benefit system. There are agreements between the Agency and the Minister on the norm-equity as a percentage of the balance sheet total, which norm-equity includes a so-called fund for cyclical problems. If the norm equity is exceeded, a proposal should be submitted for decrease of the fees. If the norm equity is not met, then a proposal for increase of the fees can be made. The time horizon for consideration is about 5 years. Data for **Serbia** is not highly reliable. In principal, registration and inspection there are to be paid by the party requesting the service. Generally, there are two types of fees: (1) administrative (basic) fee and (2) registration fee (as consideration for GGA's services). Also no reliable data exists for **Bulgaria** as there tariffs for fees for services and extracts in relation to the cadastre and the property register have not been adopted yet. In **Germany** registration fees for the cadastre as well as the land book vary among the 16 *Länder* of Germany. The charge for the cadastral registration is a percentage of the charge of the surveying. All charges are the same for all users.

Average transaction costs in terms of fees **from the user's perspective.**

	AT	BG	HR	DE	HU	NL	SR
Fees for registration (% of transaction price)	1% (+ basic application fee)	0.1%	n/a	0.5%	n/a	EUR 75	EUR 13-50
Fees for registration in cadastre	EUR 50	n/a	n/a	EUR 100-200	n/a		
Cadastral survey	EUR 1.200	n/a	n/a (but relatively high)	EUR 1,500-2,000	n/a	n/a	n/a
Real property transfer tax (% of purchase price)	3.5%	2%***	5%	3,5%	10%**	6%	5%
Notary's fees (% of purchase price)	2%*	max EUR 1,500	1.2%*	approx. 0.7%	n/a	EUR 500	n/a
Real estate agent fee (% of purchase price)	3%*	1.5-3%	2-4%*	3-6%*	1.4%*	n/a	n/a
Bank fees for credit (% of mortgage amount)	0.8%	n/a	1%	1%	n/a	n/a	n/a
Fee for registration of mortgage (% of mortgage amount)	1.2%	0.1%	n/a	0.5-1%	n/a	n/a	n/a

Table 25

* Not mandatory.

** Acquisition of property by way of conveying a company is tax exempt even if real property is conveyed.

*** Market value of the property is paid to the municipality in which the real property is situated.

Summing up all costs of a transaction (including real property agent's and advocate's fee), in **Austria** and **the Netherlands** the average amount that has to be added to the transaction price, does not exceed 10% of the purchase price (whereby the percentage of real property transfer tax in the Netherlands with 6% and Hungary with 10% is considered high), in **Germany** side costs are considerably lower with approximately 7.5%. No reliable data is available from the other countries.

3.7.4 Funding and cost recovery

Funding of the system is essential, especially sufficient funding by the government for maintenance and continuous further development. The percentage of funding by the state (degree of budget autonomy and authority of the system to charge sufficient fees to cover costs for providing services) and by the user is relevant as well.

	AT	BG	HR	DE	HU	NL	SR
Source of funding	100% state budget	state budget*	100% state budget	100% <i>Länder</i> budget	fees**	fees	100% state budget
Cost-recovery of land registration	100%	n/a	very low	n/a	n/a	100%	n/a
Cost recovery of cadastre	17%	n/a	very low	n/a	n/a		n/a

Table 26

* Refers only to the Cadastre Agency which administrates the revenue from fees, fines and property sanctions. No data is available from the land registration sector.

** Cadastre: 45% fees; land registration: 35% fees; remaining rest funded by the state.

Explanation: very low = especially low figures compared with the other examined countries.

Whereas cost-effectiveness is an important issue, neither in **Austria** nor in **Germany** self-sustainability of the cadastre and land registration system is seen as a core objective. The services of cadastre and land registration are regarded as infrastructure services of the state. **The Netherlands** are the only of the countries analysed here where the cadastre and land registration system is maintained by an Agency that is independent from the state and has its own budget calculated on the principle of self-sustainability. In **Serbia** – although no exact data was available – a clear trend can be observed towards self-financing of the GGA in future.

3.8 Efficiency

The comparability of cost and staff information regarding the land registration and cadastre system is limited due to different data bases and limited data availability in most countries. All the following cost-effectiveness indicators therefore should be treated very cautiously.

3.8.1 Quantity of products

An important indicator for the capacity and functioning of the land administration system is the quantity of its main products (based on the average of the last five years).

	AT	BG	HR	DE	HU	NL	SR
Total no. of parcels in millions	10.5	8.7**	22,5	62.2	7.6	8.08	19
Total no. of titles in millions	3*	5.1**	2.4	35	10	8.08	1.2
No. of strata titles in millions	n/a*	n/a	n/a	14	2.5	0.9	1.3
Average per year:							
No. of new parcels created by land subdivision	100,000	n/a	50,000	600,000	80,000	236,440	289,000
Average no. of transfers of ownership rights handled	105,000	130,00-150,000	350,000	3.4 million	1 million	418,000	n/a
No. of mortgages registered	200,000	n/a	25,500	n/a	700,000	594,200	n/a
No. of applications for land registration	700,000	n/a	150,000	n/a	4.2 million	n/a	364,200
No. of applications for parcel subdivision	27,000	n/a	300,000	191,000	570,000	n/a	1.1 million
No. of extracts from the land register	5.1 million	n/a	1.2 million	n/a	3.6 million	n/a	250,000
No. of extracts from the cadastre	900,000	n/a	1 million.	2.2 million		13.5 million	720,000
No. of extracts per parcel from the land register	1.75*	n/a	18.75	n/a	2.58	n/a	76
No. of extracts per parcel from the cadastre		n/a	22.5	28.27		0.59	26.39
Annual transfers per existing titles	3%	n/a	15%	10%	10%	11%	24%

Table 27

* Strata titles are included in this figure; it is not possible to count strata titles separately as in case of e.g. a flat building one title could contain several hundred strata titles.

** Data from 2002, but not verified.

*** The figures from the land book and the cadastre are summed up, because the Real Estate Database in fact provides data on the cadastre as well as the land book.

3.8.2 Cost efficiency (costs related to outputs)

Cost efficiency of the cadastre and land registration system can be measured by relating the costs to the main outputs / products of the system, whereby the lower these indicators are the higher is efficiency. Unlike tables 21 and 24 above which show costs of service / user fees, the following figures show the **costs of the system**.

	AT	BG	HR	DE *	HU	NL	SR
Land registration costs per ownership right transfer	medium	n/a	low	very high	low	high	n/a
Cadastre costs per new parcel created	low	n/a	medium	high	low	medium	n/a

Table 28

* based on 1997 FIG data (EUR 1 = USD 1.2).

Explanation: very high = exceptionally high figures compared with the other examined countries; high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries.

In overall the selected indicators reveal a high cost-efficiency in **Hungary, Austria** and **Croatia** and a medium efficiency for the **Netherlands**. The system in **Germany** has a comparatively low cost efficiency. Taking into consideration only the land registration system cost efficiency is highest in **Croatia** and **Hungary** and lowest in **Germany**. For the cadastre system cost-efficiency is highest in **Hungary** and **Austria** followed by the **Netherlands** and **Croatia**.

3.8.3 Staff efficiency (staff capacity related to outputs)

Staff efficiency of the cadastre and land registration system can be measured by relating the number of staff to the main outputs / products of the system, whereby **the lower these indicators the higher the efficiency**. The private sector was not considered in the following calculations, however, a high number of private sector involvement (like in Hungary) has significant impact on efficiency.

	AT	BG	HR	DE	HU	NL	SR
Land registration staff per 1,000 ownership right transfer	medium	n/a	high	medium	low	very high	n/a
Cadastre staff per 1,000 new parcels created	low	n/a	high	very high	medium	medium	n/a

Table 29

Explanation: very high = exceptionally high figures compared with the other examined countries; high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries.

In overall the selected indicators reveal a high staff-efficiency in **Hungary** and **Austria** whereas the staff-efficiency in **Croatia, Germany** and **the Netherlands** seems to be lower. By taking into consideration only the land registration system, staff efficiency is highest in **Hungary** and lowest in **the Netherlands** and **Croatia**. For the cadastre system staff-efficiency is highest in **Austria** followed by **Hungary** and the **Netherlands** and. The system in **Germany** shows a high staff intensity for the cadastre system.

Education and training have important impact on staff efficiency: Human resources are crucial in the management of land, therefore sustained education and training in land administration must be ensured (cp. Recommendation 15 of Bathurst Declaration). The quality of education and the use of specially trained staff increases quality of the system.

In **Austria, Germany** and **the Netherlands** the educational background of personnel at the cadastre and/or land book offices is very satisfactory. It is reported that in the Netherlands around 50% of the employees are older than 45 years; this will need to be addressed in the near future. In **Bulgaria** the overall number of staff is small. Training is heavily needed for the staff in both, the cadastre and the

registration agency (which currently is being set up). In **Croatia** the SGA, like other government agencies, suffers from low salaries and fluctuation of personnel. Competent and well trained employees leave the services for the private sector (which has a great demand for surveying engineers). Several training activities are reported from **Hungary**, it is assumed that more training is needed. Also recently a law has been enacted on increasing the salaries of civil servants. In **Serbia** personnel of the GGA is not paid adequately. Qualified people leave the organization for better paid positions in the private sector. The level of education and motivation is low. There is a need for training on all levels of staff for various subjects. Management capacities are underdeveloped.

3.8.4 Average turn around times for transactions at the registration systems

Standard transactions shall be effected in a reasonable time, thereby minimising waiting periods. The amount of backlogs at the relevant institutions is relevant here.

	AT	BG	HR	DE	HU	NL	SR
Average duration for a standard transfer of ownership rights (days)	2-14	1	300	28-180	30	1	20*
Average duration for the whole process of subdividing a standard land parcel (days)	50	90-120	30	10-15	45	after registration	45
Backlog for registration	low	n/a	high	medium	high	low	low / medium

Table 30

* As a rule, there is no difference between city offices and rural offices; however, entries in greater cities are often hampered by the fact that title evidence is missing or ownership relations are not clear, so the party wishing to have an entry done is forced to obtain ownership (or other title) evidence prior to applying for registration. This causes delays in the registry procedure in city areas.

Explanation: high = clearly above the average figures of other examined countries; medium = average figures with relation to the examined countries; low = clearly below the average figures of other examined countries.

In **the Netherlands** waiting time for a registration is within the same day between submission of a deed for registration and the receipt of the confirmation of acceptance. There are no backlogs and no differences between urban and rural areas. It is a relevant feature that necessary cadastral boundary survey is carried out not prior, but after the transfer. It is not uncommon that this happens up to one year after the transfer. In case of full ownership the law provides rights and mortgage rights on non-surveyed parcels. Besides, the speed of service regarding extracts is minimized through data order by phone and fax as well as through internet access (95% online access). In **Austria** in general 40-50% of the applications for registration of property rights are registered within two days after their reception at the district court. (Rare) involvement of the cadastre offices increases waiting periods for another two to four weeks. The waiting periods can be considered reasonable, especially because the legally decisive date for registration is the date of the arrival of the application at the court. There are no differences between city offices and rural offices and there are no backlogs. Besides, the speed of service regarding extracts is minimized through internet access.

Also in **Bulgaria** it is claimed that registration is effected within one day. The contract is signed by the parties and the notary, who submits an application for registration of the deed to the registrar the same day. The registrar has an obligation to register the deed until the end of the working day, on which the application and the deed and the attached documents have entered or to issue a refusal for registration. The whole process is, however, slow, because for subdivision an application to the Cadastre Agency must be submitted and its handling takes about 3-4 months. In **Hungary** average wait-

ing periods are around 30 days. A report of the Ministry of Agriculture of 10 March 2004 states that despite the constantly growing number of documents to be dealt with, according to data as of 1 February the backlog of documents has been eliminated in 16 counties and problems in this field are only encountered in Pest county and Budapest. Whereas backlog could be reduced during the last months, it still remains substantial – especially in the capital Budapest. A recent audit shows an improvement of file processing quality and velocity of the District Land Offices related to the land registration.

In **Germany** the waiting periods at the cadastre offices and the land book offices vary considerably and comprehensive data are not available. The waiting periods at the land book vary depending on the number of personnel (estimated that all data for a registration is available and correct) between 4 and 26 weeks, which can be considered as very long. There are no significant differences between city and rural offices. Only in **Croatia** it takes even longer (300 days). The Croatian cadastre and land registration system is suffering from heavy backlog which makes the system inaccurate and insecure. Following a report on Cadastre and Property Registration System in the Western Balkan Countries from 2004 commissioned by the World Bank, “[in Croatia] presently, 340,000 processing backlogs have been recorded in the property register authorities at the courts nation-wide, 110,000 of which are attributed to Zagreb alone. The land register sections at the courts are hopelessly overburdened by this situation. According to the information from a private-sector bank, the situation is assessed as being very critical. Entries into the property register can take up to seven years.”

In **Serbia** average waiting periods are between two and three weeks. As a rule, there is no difference between city offices and rural offices; however, entries in greater cities are often hampered by the fact that title evidence is missing or ownership relations are not clear, so the party wishing to have an entry done is forced to obtain ownership (or other title) evidence prior to applying for registration. This causes delays in the registry procedure in city areas. Therefore in areas where the records have already been updated in the REC system, the process for registration of rights is speedy and within a reasonable time. In other areas where records are being reconstructed, such a process might take up to two or three years.

4. GOOD PRACTICES

With regard to the areas defined in the comparative analysis the following **good practices** could be identified and the following **recommendations** are made for the examined countries:

4.1 Accessibility

Good practice with regard to accessibility includes that the number of offices is such that it guarantees equitable access to all users / customers: hereby increasing computerisation needs to be taken into account. The balance is between decentralisation on the one hand and one-stop-shop on the other side, the latter being the final aim to be envisaged for provision of services in cadastre and land registration.

All the examined countries offer public access to information from the land registration and cadastre system. The number of offices (cadastre and land registration) seems to be evenly distributed and in general accordance with the size of the respective country.

Country	Recommendations with regard to Accessibility
Austria	<p>With regard to one stop shop consider improving possibilities for online access also for registration of applications</p> <p>Consider whether “search by the owner” necessarily has to be restricted to comply with data protection rules</p>
Bulgaria	<p>Improve possibilities for online access and accelerate this development</p> <p>Consider review and streamlining of the institutional set-up. There are different kinds of local offices in place (municipal technical offices, land commissions) involved in land registration and cadastre. Whereas access to information is provided, the very high number of local offices contributes to in-transparency.</p>
Croatia	<p>Improve possibilities for online access and accelerate this development</p> <p>Consider review and streamlining of the institutional set-up. There are many local offices involved in land registration and cadastre. Whereas access to information is provided, the very high number of local offices contributes to in-transparency.</p>
Germany	<p>Review necessity of showing legitimate interest for receiving information from the land registration and cadastre system</p> <p>Consider that no nation wide information system is available for cadastre and land registration, which hampers access, and that one stop shop is not realised.</p>
Serbia	<p>Improve possibilities for online access and accelerate this development</p> <p>Consider review and streamlining of the institutional set-up: due to insufficient technical equipment, a large part of the registration process is handled manually and, thus, parties have to refer to different departments within the same office. Also the municipal courts have to be approached separately for authentication of documents.</p>

4.2 Fairness

Good practice with regard to fairness includes that equitable access is available for disadvantaged sectors of the society as well as minorities and foreigners. No additional cost should occur to these sectors of society (e.g. in terms of legal representation), when using the cadastre and land registration system.

Country	Recommendations with regard to Fairness
Bulgaria	<p>Consider implementation of measures to improve access to cadastre and land registration for disadvantages sectors of society such as physical access to offices for handicapped people and access for minorities.</p>
Croatia	<p>Consider implementation of measures to improve access to cadastre and land</p>

	<p>registration for disadvantages sectors of society such as physical access to offices for handicapped people and access for minorities.</p> <p>Reduce administrative hurdles for access to land registration by foreigners.</p>
Hungary	<p>Improve access to cadastre and land registration for disadvantages sectors of society such as physical access to offices for handicapped people and access for minorities.</p> <p>Consider the much mentioned policy on land sales to foreigners. Sale of land by foreigners still needs complicated administrative approvals.</p>
Serbia	<p>Consider implementation of measures to improve access to cadastre and land registration for disadvantages sectors of society such as physical access to offices for handicapped people and access for minorities (e.g., consider offering services in minority languages)</p> <p>Reduce administrative hurdles for access to land registration by foreigners.</p>

4.3 Completeness

Good practice with regard to completeness includes that information from the cadastre and the land register is up to date, available for a whole national territory. Registration shall have constitutive effect.

Country	Recommendations with regard to Completeness
Bulgaria	<p>Accelerate process of coverage of cadastre and land registration in digital format; also consider reviewing the currently duplicate registration form (paper and digital).</p> <p>Consider that registration so far is not constitutive; this inter alia would support completeness of the land register.</p>
Croatia	<p>Accelerate process of coverage of cadastre and land registration in digital format; there are still 80% of cadastral maps to be vectorised and 90% of land books to be digitised. Especially implement effective measures to reduce existing inconsistency between cadastre and land registration. This includes acceleration in development of GIS, especially the common database for cadastre and land registration.</p>
Germany	<p>Consider the provision that state owned parcel are not registered in the land book, because they are not part of the land market.</p>
Serbia	<p>Accelerate process of coverage of cadastre and land registration in digital format; especially implement effective measures to reduce existing inconsistency between cadastre and land registration. This includes acceleration in development of REC system as considerable delays occurred in transferring the old cadastre and land register into the REC system.</p>

4.4 Transparency

Good practice with regard to transparency includes clear and transparent processes, supported by a functioning inter-relationship between the cadastre and land registration. Guaranties for proper process and liability for errors are part of the system as are quality management mechanisms (including information on customer satisfaction).

Country	Recommendations with regard to Transparency
Austria	<p>Review architecture of the IT-systems which due to their age need improvements.</p> <p>Increase the awareness of user satisfaction; especially consider the customer surveys.</p>
Bulgaria	<p>The institutional set-up is not very clear, due to numerous land commissions and municipal technical offices, both under different subordination. Further the Cadastre Agency needs to develop to a strong centralised head office. The institutional set-up of the recently established registration Agency is still unclear and needs more detailed regulations. The inter-relationship between cadastre and land registration is not yet fully implemented and needs to be faced.</p> <p>The database solution – a common database for cadastre and land registration – until now is only weakly developed. Acceleration of implementation of the respective plans should therefore be considered.</p> <p>Increase the awareness of user satisfaction; especially consider the customer surveys.</p>
Croatia	<p>Whereas competences are clear by law, they are often not followed in practice, so for instance because the interaction between the cadastre and land registration systems is inadequate, in part due to the lack of electronic equipment and linkage between the institutions.</p> <p>Mutual updating of cadastre and rights registration data, in practice is weakly developed so far. Many land registries are still kept manually or on local computers not linked to the cadastre counterpart. Therefore consider (partly) renewal of hardware and software. Also improve harmonisation of the planned centralised IT-solution for the common database with the existing local solutions already in place.</p>
Germany	<p>Whereas the administrators of this system know their competences very well and work well with the system and also the general public is aware about its functioning, this system is not clear and transparent at first sight. Consider improved harmonisation of processes on a nation wide basis.</p> <p>No full linkage of data of cadastre and land registration is yet implemented, which leads to duplicate collection and maintenance of data.</p> <p>Increase the awareness of user satisfaction; especially consider the customer surveys.</p>
Hungary	<p>Finalise development of the countrywide TAKAROS digital cadastral map management system.</p>

	The awareness of user satisfaction is extremely low, the long waiting periods, and high number of backlogs and disputes makes low satisfaction probable. Therefore – together with improving procedures – also consider implementation customer / user surveys.
Netherlands	The IT system has reached a considerable age, which needs to be faced in the near future.
Serbia	With regard to clear and simple processes problems occur due to a lack of clearly defined work flows and due to unclear competencies. In this context also consider (partly) renewal of hardware and software. Liability for potential errors from the system lie with the respective Authority (GGA), however, no clear liability rules have been implemented so far.

4.5 Security

Good practice with regard to security includes that measures are foreseen to protect security in terms of (i) technical security with regard to parcel identification, but also physical security; (ii) legal security with regard to ownership, which is finally expressed in the number of disputes and (iii) market security with regard to functioning land and mortgage markets, and attraction of investment.

Country	Recommendations with regard to Security
Bulgaria	Legislation with regard to land registration is unclear and imprecise. By-laws are still missing. Consider improvement of this situation. The amount of pending disputes is very high. Review existing procedures in order to reduce the number of proceedings. Consider an effective judicial reform to improve the country's investment climate and attract much-needed foreign direct investment. Also consider completion of the privatisation process in a transparent manner and accelerate the restructuring of public utilities. Improve physical back-up of databases.
Croatia	Due to the fact that land registers and the cadastre have not been updated for years certainty of ownership in many cases is doubtful. The harmonization of cadastre and land registers is a high priority, but remains a major cause for concern. The amount of pending disputes is very high. Review existing procedures in order to reduce the number of proceedings. Consider development of efficient rules and procedures for the process of transition to the real property cadastre and implementation of necessary regulations and by-laws regarding the new property register legislation. Improve physical back-up of databases.

Hungary	The amount of pending disputes is very high. Review existing procedures in order to reduce the number of proceedings.
Serbia	<p>Whereas data in the REC system can be considered as consistent and reliable, there remains a large amount of data contained in the old systems which cannot be considered as reliable. The transformation of previous systems creates confusion and causes problems for the general acceptance and trust into the system.</p> <p>The amount of pending disputes is very high. Review existing procedures in order to reduce the number of proceedings.</p> <p>Consider position of the registrars with regard to their independence in decision-taking. A 2004 report on the Cadastre and Property Registration System in the Western Balkan Countries commissioned by the World Bank states: <i>“Besides the constitutional guarantee for any kind of property, the principle of the separation of powers has to be considered in order for the property registration system to be governed by rule of law and the state can guarantee these ownership rights. The separation of the judiciary and the executive power has to be legally safeguarded. [...] Only if he [the registrar] is guaranteed factual independence under constitutional law (like a judge, but not necessarily being a judge) it is ensured that an entry into the property register enjoys good faith and cannot be challenged.”</i></p> <p>With regard to land registration neither the judge in the court (who only authenticates the signatures on the contracts) nor the jurist in the GGA checks the documents for their correctness. Serbia also lacks a notary system which leaves the impression that rights are registered without any control of their validity.</p> <p>Improve physical back-up of databases</p>

4.6 Cost-effectiveness

Good practice with regard to cost-effectiveness includes that the total cost of the system such be as low as possible and close to being cost recovering. Decisive criteria like input of personnel and development costs (especially for IT) are in relation to the costs (fees) of services to the individual user and the overall funding of the system.

Country	Recommendations with regard to Cost-effectiveness
Austria	Consider the relatively high overall additional costs of transaction (10%).
Bulgaria	Consider increasing personnel input at the Cadastre Agency, which with a total of approximately 200 persons seems to be very low.
Croatia	Consider review of personnel management: With regard to the figures given in this analysis the personnel costs seem to constitute nearly 45% of the total costs of the system (whereas salary of employees is very low). In comparison with the other countries examined here this is considered to be relatively high.

	With regard to the figures given in this analysis the total costs of the system seem to be relatively high and cost-effectiveness is therefore low.
Hungary	Consider that with regard to the figures given in this analysis cost-recovery of the cadastre and land registration system is very low.
Germany	With regard to the figures given in this analysis the total costs of the system seem to be relatively high and cost-effectiveness is therefore lower; this is certainly due to the fragmented institutional set-up and implied high maintenance costs.
The Netherlands	Cost-effectiveness is in the middle range; consider higher involvement of private sector input in order to lower total costs of the system.

4.7 Efficiency

Good practice with regard to efficiency includes that the land administration system of a certain country performs its designated functions with minimum consumption of resources, i.e. with a minimum of cost and personnel. Important key indicators for this are the quantity of products, efficiency of cost and of staff as well as average turn around times for transactions.

Country	Recommendations with regard to Efficiency
Bulgaria	With regard to the figures available for this analysis over all number of staff seems to be low, for cadastre as well as land registration. Consider introduction of incentives for staff in order to combat fluctuation, e.g. increase of salaries of civil servants and judges in the field of cadastre and land registration. Education and motivation are essential. Consider introduction of effective codes of ethics for special professional groups in order to strengthen the self-image of the profession. These would also be effective measures against corruption.
Croatia	<p>With regard to the figures available for this analysis over all number of staff seems to be low, for cadastre as well as land registration. Consider introduction of incentives for staff in order to combat fluctuation, e.g. increase of salaries of civil servants and judges in the field of cadastre and land registration. Education and motivation are essential. Consider introduction of effective codes of ethics for special professional groups in order to strengthen the self-image of the profession. These would also be effective measures against corruption.</p> <p>Training is especially needed in the following fields: for the cadastre (i) technical, (ii) legal, (iii) customer orientation, (iv) management and business skills.</p> <p>The very high backlog combined with the very long waiting periods (300 days and more) for registration of property needs urgent addressing.</p> <p>Increase efficiency in terms of realisation of planned activities. A 2004 report on states: <i>“However, no true willingness can be observed in the countries which would indicate in any way and to the last consequence that the required regulations are to be introduced and enforced. [...] implementation of regulations regarding the new property register legislation (Croatia; [...]) are partly missing.”</i></p>

Germany	Consider review of the waiting periods for registration of property, which are considerably long (up to 180 days).
Hungary	The very high backlog (esp. in Budapest) needs urgent addressing.
Serbia	With regard to the figures available for this analysis over all number of staff seems to be low, for cadastre as well as land registration. Consider introduction of incentives for staff in order to combat fluctuation, e.g. increase of salaries of civil servants and judges in the field of cadastre and land registration. Education and motivation are essential. Consider introduction of effective codes of ethics for special professional groups in order to strengthen the self-image of the profession. These would also be effective measures against corruption. Training is especially needed in the field of management, IT and GIS.

5. COUNTRY ASSESSMENTS

5.1 Austria

5.1.1. Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

The Austrian land registration and cadastre system is a title registration system characterised by a separation of competencies between two different institutions, the data of which are stored centrally in a common database (Real Property Database). Austria has an area of 83,871 sqkm with a total of 8.2 million inhabitants. The total number of parcels amounts to 10.5 million.

5.1.1.1 Institutional and legal framework for cadastre

The cadastre lies within the competence of the Federal Office for Metrology and Surveying (Bundesamt für Eich- und Vermessungswesen – BEV, an administrative authority that reports to the Federal Ministry for Economic Affairs and Labour), the cadastre is maintained by 41 subordinated cadastre offices (Vermessungsämter).

The cadastre includes technical data on parcels and buildings thereon in written as well as graphic (map) form for the whole territory of Austria, i.e. for public as well as for private land. It is a parcel-based system consisting of (1) digital cadastre map; (2) parcel index; (3) database of co-ordinates, which is the technical basis for the boundary points, the parcel boundaries and additional annotations, and (4) register of addresses (effective as of end of 2004). Content of the cadastre map are the boundary points, boundary lines, number of the parcels, land use (i.e. forest, agricultural use, buildings, etc), control points, etc. The parcel index includes the number of the parcel, land use, area of the parcel, soil evaluation index, number of last surveying document etc. The cadastre map is provided in 3 scales, 1:1000 (urban areas, rural areas with a high density of parcels), 1:2000 (rural areas), 1:5000 alpine areas. Data capturing/measuring in the cadastre does not differ between rural and urban areas. There is no special building cadastre.

The cadastre is public. Everyone can without any legal interest or indication of reasons ask for information of the cadastre. A parcel is defined as the smallest register unit in the cadastre, i.e. as a con-

tiguous portion of land in possession of, owned by, or recorded as the property of one person, claimant or company. A building usually cannot form a separate parcel, exceptions, however, exist.

The territory of Austria has been completely surveyed during the years 1817–1861 for taxation reasons. Since then land survey is done prior to the maintenance of the cadastre and to few general new survey requirements (e.g., in case of land consolidation). Land survey is mostly made in case of subdivision of parcels or in case the owner of the real property wishes so e.g., for conveyance of the real property or determination of the exact boundaries for personal reasons of the owner. In some cases land survey is initiated and made ex officio. Following the Surveying Act of 1969, survey of parcels is generally done by private licensed surveyors. The results of the survey (surveying document) may be the basis for an application to the cadastre office and – in cases where ownership or other real property rights are affected – further on to the district court. (The approved surveying document and the contract on the conveyance of ownership have to be attached to the application for registration in the land book.)

Parcel boundaries are usually surveyed precisely by measurement and recorded in the digital cadastre map; no topographical map is used for this. Boundary points have an accuracy of about +/- 0.15 metre (measured points) up to +/- 1 metres ([historical] graphical points) relative to the national coordinate system.

Decisions in the cadastre offices are taken by their head as the responsible authority. He or she signs all official documents and orders. Individual cases are prepared by technical support staff (i.e., surveying engineers).

Since the Surveying Act of 1969 parcels can be transformed into a special legal status of the cadastre, the so called “fixed boundary cadastre” (Grenzkataster). This is a special legal based procedure that includes (i) negotiations of a certified person (i.e. cadastre office, licensed surveyor or few special governmental institutions within their domain) with the owner(s) and all neighbours of the relevant parcel in the nature, (ii) fixing the boundaries by the owner(s), (iii) signing a certificate, (iii) surveying the boundaries and (iv) recording in a surveying document by the certified person. According to this procedure the boundaries of the parcel are exactly determined, have a special legal status and thus are guaranteed by the state. In this case claims based on boundaries of parcels are exclusively decided by the cadastre offices on the basis of the surveying documents and the cadastre map. In the cadastre map and in the parcel index these parcels are indicated with a special symbol. More than 15 % of the parcels are presently part of the fixed boundary cadastre. Proof of evidence under consideration also of witnesses, signs on the grounds etc. are restricted to judicial proceedings.

For the rest of the parcels of the cadastre the reliability for cadastral data is not guaranteed by the state. Although a lot of parcels have the same technical quality, they do not have the high legal status of the “fixed boundary cadastre”, lack of fixing the boundaries by negotiations and the signature of the owners. Boundary disputes with regard to such parcels are within the competence of the district courts. They decide about the boundary using evidence from witnesses, experts, surveying documents of the archives or signs in nature.

Based on the average of the last five years the annual number of new parcels created by subdivision of parcels and recorded in a surveying document amounts to 100,000. About 27,000 applications for subdividing a parcel are processed and about 900,000 extracts are produced at the cadastre system each year.

The cadastre as an essential part of the national data infrastructure is always under pressure for change, e.g. rapidly evolving technology or the impact of online information access. These major challenges for the future identified by BEV include restructure of the organisation, cost and staff reductions, focus on core tasks. In concrete this means improvements regarding (i) easy access to data (internet); (ii) state of the art quality of works from a technical point of view; (iii) efficient working processes (e.g., introduction of electronic means for certification of documents handed in by licensed

surveyors); (iv) cost savings, and (v) geodata-policy: data shall be kept only by one authority and access shall be provided to those who need the data (data access instead of data transfer).

5.1.1.2 Institutional and legal framework for titling

Registration in the land book requires a written contract between the parties, which has to contain certain minimum elements in order to be valid. The signatures on the contract and the birth dates of the parties further need to be authenticated by a notary or district court. Restrictions exist as to foreign parties, certain agricultural/rural land and sometimes building areas. EC-citizens are treated like Austrian citizens.

From a legal point of view it is important to emphasise that the acquisition of property rights consists of two-steps: (1) *titulus* and (2) *modus*. A legal transaction (such as sale, barter, etc.), therefore, requires (1) a contract between the parties on the subject of contract (e.g., the purchase object) or any other legal form of property acquisition (such as last wills) i.e., any legal opportunity (i.e., any title) that grants a claim for the acquisition of property; and (2) an act that realises *titulus* i.e., a visible act of conveyance. The latter in case of moveable goods is usually the physical transferral of the object e.g., from the seller to the purchaser. In case of immovables, the physical transferral is replaced by the necessary registration in the land book i.e., changes of rights to land do not take effect before being registered in the land book. Adverse possession is allowed after 30 years of *bona fide* possession.

The real property registration system is in line with the rights and obligations obtained for real property through the titling procedure. These principles apply for more than 200 years and have been permanently improved according to the needs of technical / legal development. Therefore, no concrete needs for regulatory reform could be identified.

5.1.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

The land book belongs to the competencies of the Federal Ministry of Justice (Bundesministerium für Justiz – BMJ) and is updated by the land book units (Grundbuchsabteilung) at the 145 responsible district courts (Bezirksgerichte). It contains legal data on real properties for the whole territory of Austria. It consists of the main book (Hauptbuch) with three sections: “A” for description of components of the registered real property (i.e., parcels) and data on additional rights connected with the parcel or ownership; “B” for data on the ownership of the real property and on restrictions of the owner’s power of disposal; and “C” for all encumbrances (including use rights and restrictions to the real property that according to the law have to be registered) and the collection of documents (Urkundensammlung).

Applications for registration in the land book are registered in the electronic docket (Tagebuch) according to the chronological order of their receipt at the court reception office (day and exact time of receipt are registered) and endorsed with a file number. The application received earlier precedes over the application received later. Applications are handled (by either accepting or rejecting them) in this order of receipt. The paper file is transferred to the competent organ, the court registrar (Rechtspfleger), who checks all documents against the status of the land book on the screen (against the data of the Real Property Database). In case of a positive result the registrar alters the data of the land book (Real Property Database) in conformity with the application in the working area, closes the case with the effect of changing the data of the land book (Real Property Database), and certifies, by signing the original application, the correct performance of the changes in the land book. As soon as the data in the Real Property Database is changed, everybody can inspect the changed data and rely on the new data, e.g., the bank for paying off the mortgage or the notary as trustee for paying the vendor. Electronic Data Interchange (EDI) for applications is currently under development.

From the legal point of view ownership of a real property includes ownership of the building thereon, if this building is constructed for long-lasting existence (principle *superficies solo cedit* – the building

follows the parcel beneath). Therefore, a building does not constitute a separate real property, but forms part of the parcel beneath. As a consequence building data is not registered in the land book. There are however exceptions to this principle. In case of lease of a building, the respective right can (but does not have to) be registered in the land book in order to secure the right against successive owners of the property. No new real property object is created by this.

The relevant fact is the registration of the acquisition, transfer, restriction or annulment of an ownership or other real property right in the land book. In opposite to the cadastre, which in general is of only informative character, registration in the land book is of legally binding nature. What ever is registered is binding, even if the real situation appears to be different. Such registration of a right in the land book effects the immediate and unconditional acquisition, transfer, restriction or annulment of this ownership or other real property right. The acquisition is permanent (even if the registered person is not the rightful titleholder) unless an action for discharge of the entry is filed against the purchaser. Registration in the land book is further deemed right and complete, i.e. everyone inspecting the land book can trust in the rightfulness and completeness of the information given by the land book. For this hardly any mistakes or misconduct can occur.

Land registration data are held to be conclusive. Damages that occur due to transfers in good faith have to be compensated between the parties according to civil law rules.

Access to the land book is public. Everyone can – without proving legal interest – inspect the land book and get informed about the legal situation of a real property. Due to data protection reasons the applicant has to show a prima facie legal interest, if he wants to search by name for a specific owner of a real property.

An average of about 700,000 applications and about 105,000 transfers of ownership rights are handled every year. Austria is also characterized by a high amount of about 200,000 mortgages registered per year. The number of annual extracts from the land book amounts to 5,000,000 (online from outside the courts) and 183,233 from within the courts.

No concrete needs for reform of the legal framework for land registration as such could be identified, adaptations with regard to electronic data processing are, however, needed and already envisaged. With regard to sustainability of the land book and cadastre system major challenges identified by the BMJ include (1) computerisation of the collection of documents, (2) introduction of electronic data interchange (EDI) for applications and decisions including billing, (3) technical re-design of the Real Property Database (from IBM-IMS to modern relational database) and (4) automatic electronic generation of the court-writ following changes in the Real Property Database.

5.1.1.4 Conflict resolution mechanisms

The BEV generally is second instance to all decisions taken at the cadastre offices. The Ministry for Economy and Labour is third instance. There are about 25 appeals per years.

Appeals in land book matters are dealt with in courts of second instance. Appeal decisions have retroactive effect. Due to the safe system of registration there are hardly any appeals in land book matters. In case of disputes on property it is possible to take legal action at the courts of ordinary jurisdiction.

The number of pure titles disputes is nearly insignificant. It is roughly estimated that there is less than one case per year regarding pure title issues at the land book, and not more than 30 cases per year at the cadastre institutions. About 200 disputes on ownership issues per year are settled at the civil courts. Compared to the total of all annual transactions this is only a very minor portion (0.2% for the rights registration and 0.05% for the cadastral system) of disputes thus underlining the well-functioning of the Austrian system. The average length of such proceedings at courts of first instance is approximately six months.

Notaries and advocates are obliged to have liability insurances. In case of negligence the affected party may be successful in proceedings against the notary or advocate.

Generally users may bring in a petition for administrative review or (in case of land book issues) a claim for fixing a period for decision, forward the case to the Ministry or ultimately (in case of administrative issues) to the Ombudsman (Volksanwalt).

Apart from regular appeal procedures there are no external conflict resolution mechanisms, which are specifically designed for the real property registration and cadastre system. Considering the very low number of appeal cases in this system there is no such need as in fact the system is very well functioning and there are hardly any problems.

5.1.2 Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.1.2.1 (Historical and current) role of courts

Already the Land Book Law of 1871 provided for the land book to be maintained by the courts. Since then competence for registration of property rights has been with the land book units at the competent district courts. The land book units are fully responsible for the registration of real property rights in the land book.

5.1.2.2 Type of court involvement

The court is directly involved in the land registration process. Decisions are usually taken by specifically trained court registrars (Rechtspfleger), who undergo a three years' training focussed on land book issues before starting their work. They are subordinate to a land book judge. The court order is generally signed by the court registrar. On his discretion the judge can decide cases on his own, then he will also sign his decision. This happens very rarely.

The court decision is made by actually updating the Real Property Database. Therefore no delay in any updating case is possible between the operational service and the information service.

5.1.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the Rechtspflegers, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

The overall advantage of court involvement lies in the fact that property rights as basic civil rights are handled by the courts. Ownership as one of the highest goods of society is explicitly secured in Austria's constitution. Decisions on civil rights issues according to the Human Rights Convention (HRC) shall be taken by the judiciary. To have the judiciary already in charge in the registration process shortens the procedures, which in other legislations – for compliance with to the HRC obligation – have to be offered to external judicial institutions.

Damages that occur due to wrong acts stated by representatives of the state are compensated according the State Liability Act. A decision taken by the courts is, however, unanimously esteemed impartial as well as of high quality. From a historical point of view it was only the ranking of registrations, which could be critical. The registration stamp and the preliminary docket number provided for by the Real Property Database today secure that a court clerk or court registrar cannot influence the ranking system. No liability proceedings are known for such cases since 1945.

For transactions of real property the registration process at the land book is the most important. The cadastre is generally only involved where the boundaries of a parcel change and a surveying document is required. The introduction of modern IT-methods – in cases where the cadastre is involved –

optimises co-operation, i.e. the involvement of the cadastre offices (e.g. in case of surveying documents) does not lead to delays for the users anymore. The system offers the user a high level of legal security combined with fast and efficient settlement of applications and still comparably easy access to the institutions and stakeholders involved.

5.1.3 *Interrelationship between the legal land registration service and the cadastre agency whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective*

5.1.3.1 *Interrelationship between the legal land registration service and the cadastre agency*

Austria's real property registration and cadastre system is organised in two institutions which belong to two different ministries, but are linked via the Real Property Database. The respective institutions are responsible for changing data within their competence. Data related to cadastre and the land book is stored in the Real Property Database and maintained by the cadastre offices and land book units at the district courts under protection of their legal competencies. The database – on a national basis and related to individual register units – contains the property rights connected with a real property as well as other rights, restrictions, obligations, land use and geometric description. In total the number of online accesses to the real property database amounts to 25 million per year.

The link between the cadastre and the land book units at the district courts exists not only regarding the technical aspects but also the legal, organisational and financial aspects. On a strategic level representatives of the BEV and the BMJ closely co-operate, for instance with regard to the modernisation of the database.

Further, also notaries and licensed surveyors are obliged by law to connect to the Real Property Database. Advocates – by a regulation of their Chamber – are obliged to provide access to the Real Property Database.

5.1.3.2 *Advantages/disadvantages particularly from the user/customer perspective*

From the user's point of view the cadastre office is usually only approached in case a surveying document is necessary (e.g., subdivision of a parcel). In this case the owner of a parcel or property first has to entrust a licensed surveyor, who drafts a surveying document and has it certified by the cadastre office. With this document the party can make the application to the land book unit. After registration of the new and changed ownership the cadastre offices further become active on the basis of the court orders on real property changes by the land book units, as they update their data according to the surveying document and the decision of the land book unit. For information acquisition (extracts) the one-stop-shop principle is realised in so far as access via the internet leads to extracts with entries of both institutions. Information may be received from any land book unit or cadastre office in the country about any real property of the whole territory of Austria or may be ordered by mail. In addition the data can also be accessed at the notaries' offices or at the offices of the licensed surveyors.

Inter-organisational co-ordination can be considered as very strong and very well functioning. Court involvement in the regularisation process in its current form is not questioned. The Real Property Database is seen as a big advantage, which overcomes the idea of unification of systems. Unification from a technical point of view is achieved. Distribution of powers of the authorities is legally based, clearly organised and transparent to all stakeholders and the public. No overlaps of competencies exist. Co-ordination between public institutions and the private sector is secured by laws and is functioning very well in practice, although for registration in the land book private sector involvement is not obligatory. Approval of the surveying documents by the cadastre offices takes considerable time, but this will improve with the envisaged introduction of EDI.

5.1.3.3 *Costs/benefits particularly from the user/customer perspective*

For getting an extract from the Real Property Database the user has to pay about EUR 3 for a typical extract. In case the parcel had to be subdivided before transaction, costs for examination and approval of the surveying document are about EUR 50. Subdivision is usually made by private licensed surveyors; costs for the surveying document amount to about EUR 1,300. Secondary users like public institutions have to pay for services like private users do. There are only a few fee exemptions for public authorities. Summing up all side costs of a transaction (including real property agent's and advocate's fee and land transfer tax of 3.5 %) the average amount that has to be added to the transaction price, does not exceed 10% of the purchase price. This is considered to be reasonable.

Average waiting period at the cadastre offices depend on the matter asked for (administrative matters: instantly; certification of documents: 2-4 weeks; updating of cadastre: 2-4 weeks; land survey: 2-4 months). Proceedings will be accelerated as soon as the electronic certification of documents by cadastre offices will be implemented (during the year 2005). At the land book offices in general 40-50 % of the applications for registration of property rights are registered within two days after their reception at the district court, in complicated cases it may take up to 3 weeks and more. The court writ is produced within 1 to 2 weeks (in 2005 there is a project on the way to electronically produce the court writ and send it to the recipient). There are no differences between land book units and / or cadastre offices in the city or in rural areas. No considerable backlogs and no differences for urban and for rural areas exist.

5.1.4 *Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)*

5.1.4.1 *Human resources*

The **total staff capacity** of public sector employees employed in the area of the land book is 380, of which only a staff size of 229 is directly involved in property registration tasks: The majority of this capacity (163) are non-academic Rechtspfleger fully involved in registration tasks. A further capacity of 63 full-time equivalents of administrative staff and 3 full-time equivalents judges (145 judges with only 2% of their working time related to supervision on real property registration) is working in the land book units. The personnel capacity is therefore relatively small, but suitable to the size of this system and the national circumstances.

For the cadastre system the total staff capacity of public sector employees amounts to 350, of which only a staff size of 275 is directly involved in cadastre tasks. Most of them are technician surveyors while the others are licensed land surveyors with academic degree and administration personal. The number of public sector employees is esteemed rather low in comparison with the amount of processes.

In addition there is a considerable amount of private sector personnel also involved in the land administration system (462 notaries, about 300 surveyors and a large number of lawyers who are only partially involved with land administration tasks).

Educational background of personnel at the cadastre offices – if not technical or administrative staff – is to a considerable amount academic. Technical staff at the cadastre has completed a four years' training on the job accompanied by a special course of ten weeks. An examination completes this training. The registrars (Rechtspfleger) at the land book units have a general qualification for university entrance and have completed a three years' training on the job accompanied by about 16 weeks of schooling. After this training, which is specialised for land book matters, a demanding examination

has to be gone through. The registrars therefore are especially skilled and highly qualified for their job.

Existing personnel in both organisations are very well educated. Regular further education and professional information exchange (newsletters, meetings etc.) keeps the personnel of both institutions updated. No educational resource gaps or urgent training needs could be identified.

5.1.4.2 Technical resources

Austria's real property registration and cadastre system is 100% computerised. All records are kept in computerised format and are stored centralised in the Real Property Database. Maintenance is done in the 41 cadastre offices and 145 land book units. The database was established for computerised maintenance of data, and is run at the Federal Computer Centre, today a state-owned limited liability company. 100% of the cadastral maps are in digital format and modelled with a system independent data description language which allows a transfer of attribute data and topology between different GIS-systems without information loss.

Focus lies with modernisation of the database and development of further facilitating e-government tools in general (e.g., computerisation of the collection of documents of the land book units).

5.1.4.3 Financial resources

Both the cadastre (annual budget for the whole BEV about EUR 73 million) and the land book system (annual budget for the whole justice system about EUR 900 million) are funded by the state. Their income (fees) does not form a direct income, but is a part of the state budget administered by the Ministry of Finance. Neither of the respective responsible institutions is cost-recovering. However, the land book system itself is fully recovering its costs by fees; the cadastre is not cost covering. The reason for the considerably smaller recovery rate of the cadastre is related to the far broader range of infrastructure services provided by the cadastre system (i.e., essential part of national infrastructure for municipalities regional planning, etc. and other public authorities using the data of the cadastre as a basic system without fees).

In addition to fees the state also generates a high income from taxes by far surpassing the costs of the land administration system. The annual income from land transfer taxes is estimated EUR 470 million. The annual income from land taxes is about EUR 510 million, which amounts to about 0.4% of GDP.

The Austrian system of cadastre and land registration – taken together – shows limited cost recovery. The revenues of the land book are, however, considerably higher than those of the cadastre. The annual income from related taxes is of significant importance for state budget. Due to technical development of the “graphical part” of the system of land administration the activities of the BEV are not cost recovery, because the BEV covers more than only the cadastre, such as topographical mapping. The BEV will offer a special web shop starting in 2005, which will enable it to get better figures for costs and income (which are likely to be better than 17 %). The web shop will have impact to the processes in the back office and therefore the restructuring of the organisation is part of this process.

5.1.5 Ability of beneficiaries to demand better services

Neither in the cadastre institutions nor in the land book offices regular feedback mechanisms are available, however, there are hardly any complaints. Surveys are undertaken only from time to time and according to budgetary possibilities. Sporadic surveys and the public opinion, however, show excellent results. The last such survey undertaken in the justice system was on the question “How often does the citizen use the justice system and is the citizen satisfied?” The result was that an aver-

age citizen has very rare contact with the justice system, apart from land book and business register. Whereas citizens are not satisfied with services from the general justice system, they are overall satisfied with the services of the land book. Although there is sufficient awareness of user satisfaction, this could be improved by setting up regular customer surveys.

5.1.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - consistent legal and institutional framework - high security / reliability of the system - efficient linkage of data (cadastre / land book) - excellent education - low number of disputes - on-line access - low waiting times - no backlogs 	<ul style="list-style-type: none"> - low awareness of user satisfaction - overall additional costs of transaction - age and architecture of IT-systems

5.2 Bulgaria

5.2.1 Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

The Bulgarian land registration and cadastre system provides for a deeds system that is characterised by a separation of competencies between two institutions. This system is, however, not yet in place. The total number of parcels amounts to 8.7 million. Bulgaria has an area of 110,994 sqkm with a total of 7.9 million inhabitants.

5.2.1.1 Institutional and legal framework for cadastre

The cadastre is created, maintained and kept by the Cadastre Agency under the Minister of Regional Development and Public Works. It is a legal entity based in Sofia, with 28 subordinate cadastre offices, one in each of the administrative centres of the regions. (It has not yet been decided whether the cadastral offices should in future be located in the courts, where also the registration offices are).

To date in Bulgaria there is no countrywide harmonised cadastre. Currently still so called Municipal Technical Offices issue property sketches which are the basis for the issuance of a transferral deed by the public notary. Following the Unified Cadastre Law of 1980 and the Rules for its application the cadastre included: (i) central cadastre containing summarized data on country-wide objects for the needs of the state power; (ii) territorial cadastres containing data on the objects in the administrative-territorial units; (iii) cadastres of the executive bodies containing data on specific objects on the territory of the country, which are used for the needs of specific ministries and executive bodies. Currently, however, data is still kept by the Ministry of Finance and the Ministry of Agriculture (for all agricultural areas). This data does not yet form part of the unified cadastre and property register and although in theory the Ministry of Agriculture will hand over data to the Cadastral Agency this has not yet happened. The Municipal Technical Offices currently maintain records and the land commissions.

In June 2001 the Council of Ministers adopted a Long-term Program on the Activities related to the Creation of the Cadastre and Property Register. According to this Program within 15 years a **unified cadastre and property register** must be developed and updated. This unified cadastre is a compila-

tion of main data regarding the situation, boundaries and size of immovable property on the territory of the Republic of Bulgaria, collected, presented, maintained in current status and kept according to the procedure foreseen in the Cadastre and Property Register Act of 2001. It must encompass (i) data on the owners and the carriers of the right to build on immovable property, as well as the acts, from which their rights arise; (ii) data on the state boundaries, the boundaries of the administrative-territorial units and the boundaries of territories with one and the same permanent purpose; and (iii) additional data, which is registered on the cadastral map and is recorded in the cadastral registers. In the existing map material and in the cadastre currently being developed all types of ownership over immovable property are included – state and municipal property, private and public, as well as property of co-operatives, legal entities and citizens. The data in the cadastre is public, there are no restrictions regarding their use by all owners and concerned persons.

The main cadastral data is: (i) for a land property: identification number, boundaries determined with the geodetic coordinates of the points determining them, area, permanent purpose and permanent means of use of the property and address; (ii) for a building: identification number, outlines of the building, determined with the geodetic coordinates of the determining points, built area, number of floors, purpose, address; (iii) for a separate object in a building: identification number, location, floor, purpose. The cadastral map contains: (i) state borders, boundaries of the administrative-territorial units, boundaries of territories with one and the same permanent use; (ii) land properties with their boundaries and identification numbers; (iii) buildings and their identification numbers; (schemes of the separate objects in the buildings are created); (iv) names of areas, streets, water streams and areas and other objects; (v) points from the geodetic basis.

Survey of new boundaries and the drawing up of the cadastral maps and cadastral registers is a 100% done by private companies. The boundaries of the land property are determined with the geodetic coordinates of the points that determine them. For the creation and maintaining of the cadastral map of the country a three dimension net of primary geodetic points is maintained as a unified basis of the geodesic surveys. The geodetic co-ordinates are determined in a unified coordinate system. Citizens and executive bodies have an obligation to mark the boundaries of the property, which they own or use with permanent signs at their expense.

Cadastral data in Bulgaria has never achieved full territorial coverage. The present cadastral mapping is fragmentary, since administration of agricultural areas, forests and urban land has never been under one governmental institution. In order not to disrupt rural land markets a database for rural properties will be kept by the land commissions until the cadastral offices are ready to take this information over. Needs for reform of the institutional and legal framework for cadastre include further efforts in developing the unified cadastre and property register in order to reach the envisaged date of completion.

5.2.1.2 Institutional and legal framework for titling

Ownership is acquired through a legal transaction, statute of limitations or in any way, determined by law (exchange, gift, contract for ownership transferral against an obligation for support and care, auction etc.). For the acquisition of ownership of an immovable property the conclusion of a contract between the owner and the buyer is necessary. The actual conveyance of the property or the registration of the deed in the property register is not necessary for the validity of the contract. The transferral or the establishment occurs on the grounds of the contract itself. Adverse possession is allowed after 10 years of bona fide possession.

The transferral of the ownership right or the establishment of any other property right over an immovable property, which is state- or municipal-owned, is carried out in writing; the notary form is not necessary. The contracts for transferral of ownership or for the establishment of any other property rights over immovable property, however, must be made with a deed. The notary form is a precondition for their validity.

The relinquishing of ownership over immovable property has legal force only if it is made in writing with a signature authenticated by a notary and if it is registered in the property register.

The institutional and legal framework for titling is in place and functioning. It is, however, important to harmonise it with the current framework for property registration. As the transferral or establishment of rights occurs on the grounds of the contract itself, and registration is not mandatory, it remains doubtful whether a nationwide reliable property registration system can ever be successfully set up.

5.2.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

To date registration of property is undertaken by registrars and property register conductors at the district courts. The registrars may register the deeds only for property within their area, which matches with the court area of the respective district court. Following the amendment to the Cadastre and Property Register Act of 30 April 2004 a Registration Agency shall be established for creation and maintenance of the property register. The agency shall be based in Sofia and shall be subordinated to the Minister of Justice. The 112 registration offices currently attached to the district courts will then be subordinate to the Registration Agency.

In the property register are registered the deeds, with which ownership is recognized or transferred, or proprietary rights over immovable property, the encumbrances and mortgages on immovable property, as well as other actions, circumstances and legal facts, for which the law foresees registration. To date registration is made according to the name of the owner. The new envisaged system foresees registration based on real property units.

For each immovable property the property register consists/will consist of five parts: (i) Part A: technical information about the property (identification number, type of the property, address, boundaries, area, purpose, floors of the building); (ii) Part B: information about the owner (name, address) and recognition and transferral of ownership (type of ownership, shares of co-ownership, data on co-owners; number and date of notary deeds, registration date); (iii) Part C: information about the establishment and transferral of other property rights and legal facts and circumstances, which are subject to registration (type of right, owner of the right; term in case of time limited rights, property deed); (iv) Part D: information about mortgages (type of mortgage; type, number and issuer of the deed; amount of the receivable, for which the mortgage was established; interest, expenses; date when it is due; creditor and debtor; changes in the receivable; deletion of the mortgage and grounds for deletion; the circumstance that the contract was concluded under a condition (if there is such a condition); renewal of the mortgage; and (v) Part E: information on incapacities.

The system knows the principle "*superficies solo cedit*": The owner of the land is the owner of the buildings and the plants on it, unless it is established otherwise.

The application for registration is submitted by the notary to the registrar according to the location of the immovable property. The application contains the name, address of the applicant; the legal fact subject to registration; a description of the immovable property; the identification number of the property in the cadastre; the lot number; other circumstances provided by law; the signature of the applicant and the following is attached to the application: a sketch-copy of the cadastral map with an extract from the cadastral register of immovable properties and for a separate object in a building also the scheme; evidence in writing certifying the legal fact to be registered. The registration application cannot be submitted under a condition, term or other stipulation. The deed is registered if the person transferring the right is registered in the property register as a carrier of the right, unless the property is acquired under a statute of limitations. The registrar orders the registration after checking whether the requirements of the law have been fulfilled, as well as the legally-provided form of the deed, with which the property right is recognized, established, transferred, modified or terminated. The decision for registration is subject to immediate execution.

The registration is made on the day of entering of the application. For every registration the date (day, month and year), on which the registration was made, is noted. The registration is certified with the signature of the registrar. On the registered act the incoming number, the registration date and the lot number are noted. The registrar has an obligation to inform the respective cadastre office immediately about newly-opened lots and their registration. When the requirements foreseen in the law are not fulfilled, the registrar refuses registration. Data in the property register is public and there are no restrictions for references and services from parties and concerned persons. Based on the average of the last five years the annual number of transfers of ownership rights is approx. 130,000-150,000. In 2003 365.262 registrations were made in the country as a whole and only 2134 mortgages were registered. The figures clearly show that the land market is not yet developed.

The system for registration of immovable property is guaranteed by the state, which bears liability for errors made, unless it is proven under the respective procedure that the error is deliberate – then the offender bears the respective liability.

There are urgent needs for reform of the legal and institutional framework of property registration:

The 2004 amendment to the Cadastre and Property Register Act is not clear enough and leaves detailed provisions to a regulation still to be issued, major issues on the status of the Registration Agency seem not yet clear: The registration offices as well as the registrars themselves are administratively subordinate to the president of the district court. The budget for support of the Registration Offices and the amount of the remunerations of the registrars are determined by the Supreme Judicial Council. The property register conductors, however, will be employees of the Registration Agency. The function of the head of registration office (supervisor) is only open to property register conductors.

The archives of the registration offices will be taken out of the archives of the courts and will be provided to the Registration Agency. Only the employees of the agency will have access to these archives, the registrars will not.

The registrars only check whether the formal legal requirements have been fulfilled in the execution of the deeds. To ensure security in the real property market, it must be clearly decided whether the deeds shall be registered or the ownership, and also what is the status and authority of the registrars (legal experts who check the ownership in the execution of real property transactions or technical persons who register the deeds executed by the notaries without being able to follow the legality of the transactions, most importantly the relationship to the registered predecessor).

The Registration Agency shall also include an “Information Services and Technologies” Directorate, which will perform functions related to the development and maintaining of the Information Strategy of the Judiciary Bodies and the overall management of projects related to the activities of the courts, prosecutors and investigation offices. The property register, however, shall not be a part of the unified court register and the assignment of such functions to the Registration Agency seems to lead to a delay in the development of a unified cadastre and property register.

5.2.1.4 Conflict resolution mechanisms

The procedure for the creation of the cadastral map and the cadastral registers begins with an order of the executive director of the Cadastre Agency. The order is promulgated in the State Gazette and at least two central daily newspapers. The cadastral map and cadastral registers prepared by an authorized person are accepted by the territorial cadastre office and presented to the concerned persons. Within 30 days of the announcement in the State Gazette the owners may make objections in writing on the cadastral map and the cadastral registers before the cadastre office. The objections are examined by a commission, determined with an order of the director of the Cadastre Agency and the commission gives a final decision on the objections. The accepted cadastral map and registers of the immobile properties in the respective area are approved with an order of the director of the Cadastre

Agency. The concerned persons are notified about this order and may appeal within 30 days of its promulgation in the State Gazette before the respective regional court.

The registrar's refusals to register in the property register can be appealed before the district court in accordance with the general claim procedure.

Boundary disputes are heard by the court in accordance with speedy proceedings rules. The number of court cases opened on boundary disputes is very low. In court, the disputes may be resolved with a court or out-of-court settlement.

The notaries bear disciplinary and property liability for damages caused to users. There is no legal obstacle for the users to seek compensation for guiltily caused damage from notary publics and attorneys.

General conflict resolution mechanisms are in place. It remains however unclear whether only refusals of the registrars may be appealed or also decisions that approve registration.. No other external dispute resolution mechanisms exist.

5.2.2. Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.2.2.1 (Historical and current) role of courts

The courts never played a major role in the actual real property registration process. Until 1998 the registration was carried out by state notaries, who also executed the transactions. Following their reorganization into private, the notary activities are carried out by private notaries and the registration is carried out by the registrars under the district courts.

5.2.2.2 Type of court involvement

The court is competent only for appeals of refusals of the registrar to register a deed, and for boundary disputes.

5.2.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the Rechtspflegers, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

The registrars carry out an important part of the registration process, which improves the security of the system. An even better guarantee for the users of the system would be the widening of their powers, so that they can also exercise control functions in substance concerning the notary and other deeds.

The participation of the registrars is effective. According to the law the registration of the deeds is made on the day they enter the respective registration office: The application is submitted by the notary on the same day, the contract was signed by the parties and the notary. The registrar has an obligation to register the deed until the end of the working day, in which the application, the deed and the attached documents have entered, or to issue a refusal for registration. The likelihood of biased decisions is significantly small, as legal mechanisms regulating the whole registration process exist. The court decides in the appeal against refusals of the registrars.

Registration seems to be effective as the law foresees registration within one working day. It remains however unclear whether these time limits are kept in practice. Further registrars only make formal checks of the deeds received by the notaries, which leads to the fact that responsibility for accurate application of the law lies with the notaries, a legal, however, private profession.

5.2.3 Interrelationship between the legal land registration service and the cadastre agency *whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective.*

5.2.3.1 Interrelationship between the legal land registration service and the cadastre agency

Until now interrelation between the Cadastre Agency and the Registration Offices, in the future the Registration Agency, only exists in legal terms. Technically it will be fulfilled after the development of the information systems, whereby the cadastre and the property register will continue to be developed and maintained as two separate, independent systems. Both registers will be connected through a two-way connection on the basis of an immovable property identification number. The main data on the immovable property in the property register (Part A) will be received from the cadastre. The data on the owners and the carriers of the right to build on immovable property, as well as on the acts, from which their rights in the cadastre derive will be received from the property register. The registers will be linked with the Unified Classifier of the Administrative-Territorial and Territorial Units, the Unified State Register of the Commercial Subjects of the Republic of Bulgaria (BULSTAT), the Unified System for Civil Registration and Administrative Services for the Population (ESGRAON), the state and municipal property registers.

5.2.3.2 Advantages/disadvantages particularly from the user/customer perspective

Implementation of the unified cadastre and real property register is severely delayed which clearly has negative implications to the users/ customers of the system. The one stop shop – principle is not yet developed and considering the current institutional framework it remains doubtful whether it ever will be.

Inter-organisational co-ordination is not yet well developed. The delays in implementation of the unified cadastre and real property register have negative implications regarding the public opinion on the cadastre and registration system and on the overall development of the land market.

5.2.3.3 Costs/benefits particularly from the user/customer perspective

There is no reliable information available regarding the fees for a standard parcel subdivision, a standard ownership right transfer or an average extract. Property and mortgage registration fees amount to 0.1% of the property. Additional costs are notary's and advocate's fees as well as bank fees and real estate agent cost. As registration is only made upon an application of the notary public who has executed the notary deed, the costs of the notary are unavoidable and have to be considered.

5.2.4 Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)

5.2.4.1 Human resources

The total staff capacity of public sector employees in the field of property registration is not available. There are currently approx. 250 property registration conductors working. The number of registrars is determined by the Ministry of Justice, and currently amounts up to around 100. The Registration Agency shall have 12 employees, when it is established. The personnel capacity is relatively small.

For the cadastre system the total staff capacity of public sector employees amounts to 216, of which a staff size of 147 is in the local cadastre offices. Most of them have an academic degree. The number of public sector employees is considered to be rather low. Further there are approx. 2000 private surveyors.

Educational background of personnel at the cadastre – if not technical or administrative staff – is to a considerable amount academic. Registrars in the registration offices must have a higher legal education. Property registration conductors have middle education, no qualification and respective specialisation to respond to the functions assigned to them by the law.

Training needs are apparent: In the field of cadastre as well as in property registration. There is a subproject for training of the employees of the Cadastre Agency within the “Cadastre and Property Registration” Project. Further training is necessary especially with regard to IT and strengthening of management structures.

5.2.4.2 Technical resources

The cadastral map and the cadastral registers are created in graphic form and in writing on a traditional carrier and digitally on a magnet, optical or other technical carrier. Until 2002 all cadastral data was kept by the respective offices on a paper carrier. Since 2002 (under the World Bank “Cadastre and Property Registration” project) digitised cadastral maps are being made. Under the condition that this project is implemented well and precisely, the computerized form for keeping of cadastral data should be 100% within 5 to 15 years (however, since 2002 the map of only one area – the city of Balchik – has been drawn up and approved). The computerized cadastral data will be kept by the Cadastre Agency. No information as to territorial coverage is available for the cadastre. Further, an IT system is being developed in the cadastre offices.

All property registers are kept on a paper carrier; since May 2002 all data is also available in 100% computerised format. In conformity with the law the deeds continue, however, to be registered at the same time on paper and information carriers. Data is maintained locally at each registration office. After establishment of the Registration Agency, property register data will be maintained 100% centrally by this agency. Within the implementation of the “Cadastre and Property Registration” Project until May 11 2002 all 112 registration offices under the district courts were equipped with hardware and software. In 105 offices one program product is introduced and in the others the program products are different.

Focus certainly lies with the development of the IT system for the cadastral and property registers. Double maintenance of data (paper and digital) needs, however, evaluation whether this is necessary.

5.2.4.3 Financial resources

The Cadastre Agency is an independent legal entity, which is a secondary disposer of budgetary means. It administrates its revenue from fees, fines and property sanctions collected in accordance with the Cadastre and Property Register Act. This revenue is spent only for the development of the material basis, for the enhancement of the qualification and for stimulating the employees of the Cadastre Agency within conditions and procedures that shall be determined by a Regulation of the Minister of Regional Development and Public Works.

The Registration Agency is not yet factually established, therefore no information on its budget exists. However, the Supreme Judicial Council will determine the amount of the remuneration of the registrars. So far, the budget of the registration offices is included in the budget of the judiciary. Currently the costs for property registration amount to approx. 1,5 million EUR per year.

5.2.5 Ability of beneficiaries to demand better services

Neither for the cadastre nor for the real property register regular feedback mechanisms are available. Funds are foreseen under the “Cadastre and Property Register” project, but no detailed studies have been conducted until now.

5.2.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - fast registration of deeds 	<ul style="list-style-type: none"> - unclear and imprecise legislation - weakly developed databases - no mandatory registration - undeveloped land market - insufficient management structures

5.3 Croatia

5.3.1 Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

The land administration system of the Republic of Croatia is a title registration system characterised by a separation of competencies between two institutions. The basic legal framework, as well as the institutional set-up follow the Austrian model. Croatia has an area of 56,542 sqkm with a total of 4.5 million inhabitants. The total number of parcels amounts to 22.5 million.

5.3.1.1 Institutional and legal framework for cadastre

The cadastre functions are executed by the State Geodetic Administration (SGA) being responsible for the maintenance of the cadastre and state surveying. The SGA reports to the Ministry of Environmental Protection and Urban Planning. Whereas the SGA is responsible for the overall management of all cadastre activities, the work itself is performed locally and the data are registered locally. 21 local cadastre offices (including the cadastre office in the City of Zagreb) are established for each county territory, with a total of 92 branch offices. The City of Zagreb Cadastre Office is not under the supervision of the SGA, but with regard to the tasks to be performed it acts like a local office of the SGA.

The cadastre is defined as the register of land units (parcels), buildings, part of buildings and permanently constructed objects permanently present on or below the land surface. Purpose and objective of the cadastre is the collection and processing of data on cadastral plots, buildings and parts of buildings, i.e. the position, shape, area and use of a land parcel, and people claiming rights on it. There exists no special building cadastre. A cadastral parcel is a part of an area within a cadastral municipality, with boundaries and definitions of legal status, shape, size, general land use (agriculture, forest, inland water, sea water, other land areas). The cadastre operate consists of a text part, entirely kept in EDP format), consisting of (1) list of cadastral plots, list of buildings, list of owners, additional lists, and (2) graphical part with cadastral plans in the scale of 1:2880 (old Austrian maps), 1:1000, or 1:2000, showing boundaries of cadastral municipalities, land use, cadastral plots and buildings, and (3) collection of documents.

All land parcels are supposed to be registered with their physical data in the cadastre. No difference is made between publicly or privately owned land, as before the law public and private parties have the same position. The same refers to the surveying of land and the fees to be charged. Surveys are usually performed by private licensed surveyors upon request by interested public or private parties. The registration of a real property right (ownership or other property rights) does not require a map, unless there is a change in the physical data of the property involved (e.g., in case of a subdivision of the property). Then a plan, indicating property boundaries and coordinates, has to be produced by a

private licensed surveyor. The plans and maps produced in this way are submitted to the cadastral office for registration in the cadastre, and, subsequently in a separate step to the land register with regard to the rights involved.

The cadastre system is complete with 100% of the land being covered by cadastral plans. 62% of data are on paper and not based on a national coordinate system. Another 21% of data are in numeric format with boundary points surveyed, coordinated and based on a national coordinate system, but as cadastral map on paper only. 17% of cadastral maps/plans are in digital CAD format; transfer of attribute data and topology is not possible without information loss. Information like control points, property units, buildings, area of parcel are included in the cadastre system.

Based on the average of the last five years the annual number of new parcels created by land subdivision amounts to 50,000. About 150,000 applications are processed at the cadastre system each year. The number of annual extracts amounts to 1,200,000.

Needs for reform have been identified by the SGA in the following areas: (i) Elaboration and completion of the fundamental geodetic bases for state survey; (ii) establishment of a multipurpose spatial information system for the support of spatial management performed by state authorities and public enterprises; (iii) establishment of an information system for collecting, managing, saving and distributing state survey and real estate cadastre data.

5.3.1.2 Institutional and legal framework for titling

The acquisition of property rights (purchase/sale, mortgage rights and other rights) has to be realized through the legal "titulus", i.e. based on a written contract between the parties. The signatures on the contract need to be authenticated by a notary. The transaction has then to be registered in the real property register ("modus"). Certain restrictions exist as to acquisition of ownership rights by foreigners. The registration has constitutive character. The law also lists those cases where the acquisition of property rights is based on the decision of a court or another authority, e.g., on inheritance. In such cases entry in land register has only declaratory character.

The titling procedures meet all standards as required by law and are consistent with the practice in comparable countries.

5.3.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

The registration of property rights is a judicial function performed by 106 municipal courts belonging to the Ministry of Justice and Local Self-Administration. All relevant information like land property units, buildings, property owner, mortgages and servitudes are included in the land book (*Zemljisna Knjiga*). The land book is parcel-based, meaning that the basis for the registration of rights is the register unit as the object (instead of its owner as the subject). Register units can consist of several land (cadastral) plots within the same cadastral municipality. All land plots belonging to the same register unit share the same legal fate. The land book is organized in three parts: Part A (cadastral property data), Part B (ownership rights), and Part C (encumbrances). Cadastre data as well as the data of the land book (which contains the basic cadastre data) are open to public inspection without restriction.

Following the principle "superficies solo cedit" land is defined as any portion of the earth's surface, entered into the cadastre with cadastral number and name of cadastral municipality (cadastral plot). All that is connected with this land constitutes an integral part of such land and shares its legal destiny. However, there is a large amount of illegal buildings in the outskirts of the cities which have not been registered in the cadastre and real property rights registers as they were erected without building permits.

90% of the land parcels that have by law to be registered in the real property registration system (land register) are actually registered, 10% of titles are held in digital form. An average of about 350,000 transfers of ownership rights are handled every year. 25,613 mortgages are registered per year. 300,000 applications have been handled last year. The number of annual extracts amounts to 1,000,000.

The registration of real property transactions is performed by judges at the municipal court. The registration is entered into the land book. Land book entries can be registration, conditional registration and annotation. Registration is the registration of recordable rights as enumerated in the law, through acquisition, transfer or termination. Conditional registration means that rights registered upon condition, subsequently have to be justified or terminated, e.g. when they are not met in time, the conditional registration has to be cancelled. In order to secure the applicant a priority position for future registration, an annotation can be recorded. Such annotations are restricted as to the time of validity (in general for one year, in the case of a mortgage for only 60 days) in order not to block other intended applications for registration.

The act of registration of a right (as a result of a contract between parties under civil law) in the land book has constitutive character, i.e. the very act of registration establishes the (real) right. This is the modus of acquisition of a real property by contract. The registration of rights is based on cadastre data. In case of differences between cadastre and rights registration, the registration of rights prevails initially, until formal corrections are made. Adverse possession is allowed after 10 years of bona fide possession.

The most important feature of the Croatian land register system is public confidence in the registration of real property rights. According to the law the public can reliably assume that the land register is complete and correct. The “bona fide” buyer of a real property, therefore, can rightly assume that the predecessor in rights as evidenced in the land book is real. But whereas laws and regulations provide for conclusive registration and fair treatment of users, conditions in practice differ greatly due to problems caused previously by war and abolishment of property rights. Strong efforts, though, are made to harmonize and reconstruct cadastre and land books in order to meet the requirements demanded by law.

5.3.1.4 Conflict resolution mechanisms

In areas where the cadastre and land book are established, harmonized and functioning, conflicts are very rare, due to the fact that the registration of real property rights are of constitutive character. In instances of conflict, a law suit to an appellate court might be pursued. In case of a simple error made by the registrar in preparation of the judge’s decision or made in the decision for registration, the error can be corrected by the judge. A factual error made while making an entry in the land registry shall be corrected on the basis of an agreement reached by all interested parties. Then the court makes a ruling to correct the erroneous previous entry. In cases where no agreement can be reached, the court will advise the parties to seek remedy in a lawsuit. When the error has been made without violation of any rights, then a correction can be made ex officio by the court. An appeal against the ruling of the land registry court shall be permitted. The appeal does not delay the entry. It has to be made within 15 days.

Disputes occur very often. It is roughly estimated that there are some 250,000 disputes with court relevance per year for the cadastre and some 5,000 for the land book. Compared to the total of all annual transactions this is a very high portion. The average length of such proceedings at courts of first instance is approximately one year.

Notaries are obliged to have liability insurances. In case of negligence the affected party may be successful in proceedings against the notary.

The differences between the cadastre status of a property and the status at the registration court require a reconstruction of the registers and, thus, pose a severe cause for conflicts. For the resolution of such conflicts increasingly community boards are used (instead of courts) which inspect the land and propose to agree on the setting of the boundaries and the establishment of rights, what is deemed to be a more suitable instrument for the resolution of such conflicts.

5.3.2 Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.3.2.1 (Historical and current) role of courts

The Croatian Land Registration System dates back to the year 1855 and has its roots in the then Austrian-Hungarian Monarchy, which Croatia was part of at that time. In the aftermath of the political changes of the 1990s the country tried to tie on to the former tradition and the new Croatian land registration system heavily builds on the respective Austrian laws. Accordingly, responsibility for land registration lies with the land book units at the district courts in non-contentious proceedings.

5.3.2.2 Type of court involvement

The Law entrusts all procedures to be conducted and tasks to be performed in connection with registration of rights to the land registrar – or any other such land book officer as appointed by the land registrar – under the supervision of the competent judge. The application for registration of rights is reviewed by the registrar and – after positive review – prepared for the court's decision. The registration itself is a decision by the judge.

5.3.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the *Rechtspflegers*, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

The Ministry of Justice and Local Self-Government has administrative control over the land registration offices, but the judges at the municipal courts are independent in their decision and keep their land books at the local level of their courts. They are, however, supervised in administrative issues. Whereas sometimes such independence of a judge in registration matters might be regretted with regard to efficiency, the independence of the decision making judge prevents any undue influence.

The registration of real property rights through the decision of a court (1) creates a higher degree of public trust in the registration decision (as opposed to an administrative decision) which is essential for the high good of real property and (2) reduces the steps of appeal in a litigation case.

The judge is the master of the process and provides for the security of the registration; he/she is responsible for the eventual creation of a liability on behalf of the state. The completion of the Land Registration Database and the strengthened interaction between cadastre and land registration offices will result in a high degree of efficiency and minimize cost differences between single and dual agency models. The Republic of Croatia bears objective responsibility for damages caused due to errors in maintaining the land book by means of electronic data processing, but excludes from this responsibility any damage falling into the responsibility of judges and officials of court.

With regard to the ever increasing functions of a cadastre system providing data for economic development, control of agricultural land etc. the cadastral data needed for the registration of real property rights remains a small portion of the overall data collected and maintained in the cadastre. Even with respect to this position maintenance costs of a dual system are definitely higher as maintenance of a single agency solution, but can be mitigated by the use of electronic data processing and the establishment of a single, joint, database (as opposed to two data bases linked with each other).

As a result of the currently unsatisfactory situation, transactions with real property are not yet entirely secure (despite the requirements of the Law) and the mortgage market remains underdeveloped which hampers the economic development of the country.

5.3.3 *Interrelationship between the legal land registration service and the cadastre agency whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective.*

5.3.3.1 *Interrelationship between the legal land registration service and the cadastre agency*

The linkage between the cadastre and the real property registration system is realised on a legal and technical level only: The records are held at the regional and local cadastre offices, as far as the cadastre is concerned, and at the municipal courts which perform the rights registration. The laws require both the cadastre and the registration of real property rights systems to co-operate and to update each other's data.

In practice many land registries are still kept manually or on local computers not linked to the cadastre counterpart. The creation of a centrally organized Land Registry Data Base is in the process of realization. Only full computerization will provide a high quality standard for coordination. Whereas the set-up of the institutions and their functions are clear, procedures used and activities performed continue not to be simple due to the unsatisfactory conditions of the electronic system.

At this time, cadastre and rights registration records on a wide scale are not consistent. This is due to the fact that some records have not been updated since World War II and only slowly the cadastre is being reconstructed and the rights registration data are brought in line with each other. Major efforts are made in this respect and are declared a high priority by the government, the institutions and the World Bank supporting these objectives, but it will take substantial resources and an extended amount of time to achieve the final goals of harmonized and consistent data between cadastre and rights registration. The present situation causes concerns and urgently needs to be improved to make cadastre and rights registration records consistent.

The Croatian land administration system to a large degree does not reflect the actual situation with regard to cadastral and rights data, due to previous abolishment of property rights, wars and lack of resources. Major efforts (supported by international projects), though, are under way to update and harmonize the records.

5.3.3.2 *Advantages/disadvantages particularly from the user/customer perspective*

Any information to be entered into the land register needs to be based on data of cadastral surveying. Further, description of the parcels needs to be coordinated between the two authorities and reciprocal notification about changes in either the land register or the cadastre is compulsory by law.

The current situation with regard to information, transparency and clarity of the necessity and the advantages of the rights registration process is unsatisfactory and requires improvement. According to surveys performed during the preparation of a World Bank project during 2001/2002 large parts of the population are not well informed about the advantage and the necessity of the registration process for the acquisition of property rights. The condition of the system in some locations does not encourage the trust of the population. As a result, there are instances where transactions are not registered and consequently become subjected to litigation.

The speed of service differs widely between the locations, depending on (1) the status of harmonization between cadastre and rights registration, (2) the use of EDP and the electronic linkage between cadastre office and rights registration court and (3) the backlog existing in many offices, in particular in Zagreb. The speed of service and the timeliness is unsatisfactory and has negative consequences

for the security of property rights and the public perception for the validity of the system. Transferring a standard property right in average takes about 300 days. The minimum duration is 2 days whereas in special circumstances the duration can be up to 4,000 days (depending on aspects external to the administration). The duration for the whole process of subdividing a standard land parcel takes in average about 30 days. The minimum duration is 15 days whereas in special circumstances a maximum duration of 90 days is possible.

The biggest problem Croatia is facing in the area of land administration is that cadastre and real property rights as registered are not congruent or harmonized because the respective registers have not been updated as a result of the abolishment of property rights during the communistic past of the former Yugoslavia, and both institutions are suffering from heavy backlogs.

5.3.3.3 Costs/benefits particularly from the user/customer perspective

There is no reliable information available regarding the total user costs for a standard parcel subdivision or a standard ownership right transfer. However, possible additional costs can be lawyer fees (1-2%), real estate agent cost (2-4%), notary's fee (1,2%) or in case of debt-finance bank fees (1%). The user fees for a standard parcel subdivision are about EUR 8.4, for a standard transfer of ownership EUR 25.2. For getting an extract from cadastre database the user has to pay EUR 8.4 for a typical extract and EUR 2.4 for an extract from the land register.

5.3.4 Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)

5.3.4.1 Human resources

In total there are about 2,200 employees in the public sector. The staff capacity of public sector employees in the area of land property registration is about 1,129 persons directly involved in property registration tasks. The majority of this capacity is non-academic administrative staff involved in the assistance for registration, administration and support. A further capacity of 120 judges and 49 full-time equivalents of assistants (academic degree) exists. For the cadastre system the total staff capacity of public sector employees amounts to 1,071 directly involved in cadastre tasks. Most of them are technician surveyors (360, sub degree qualification) and professional licensed land surveyors with academic degree (230), as well as a considerable amount of administrative/supportive staff.

348 notaries and some 2600 advocates are to some extent involved in the land registration process. No further information is available concerning the degree of their involvement.

The SGA suffers from fluctuation of personnel, due to low salaries. Competent and well trained employees leave the service for better paid jobs in the private sector. Due to this, in many cases qualification of personnel is not up to acceptable standards, although strong efforts are being made to overcome the problematic situation.

Intensive training programs are needed for both institutions and are being implemented. Training needs at the SGA are perceived in the following fields: (i) Technical competence, (ii) Laws and regulations, (iii) Customer orientation, and (iv) Management and business skills. Training needs at the registration courts and at the Ministry of Justice and Local Self-Administration are perceived in the following fields: (i) Laws and regulations, (ii) Electronic Data Processing, (iii) Management and business oriented planning and organization skills, (iv) Customer orientation.

5.3.4.2 Technical resources

62% of cadastral plans are on paper and are not based on a national coordinate system. Another 21% of data are in numeric format with boundary points surveyed, coordinated and based on a national coordinate system, but as cadastral map on paper only. 17% of cadastral maps/plans are in digital CAD format; transfer of attribute data and topology is not possible without information loss. Information like control points, property units, buildings, area of parcel are included in the cadastre system.

Inter-organisational coordination and the issue of centralized or de-centralized operations depend heavily on the use of information technology and the computerization of operations. Both institutions have introduced medium term strategic plans which as an objective contain implementation and increased use of information technology and computerization. In particular, the creation of the Land Registry Database will substantially improve the conditions of data maintenance, processing and distribution. It will, however, take a considerable amount of time and resources until the intended goals can be reached.

There is a severe resource problem with regard to equipment, management capabilities and training.

5.3.4.3 Financial resources

The system is funded by (1) government budget (major portion), (2) user fees (at both institutions) and (3) by co-financing (by regional or local authorities) of local cadastre projects, and (4) by international projects.

The maintenance cost of the cadastre and land registration system are funded on a national level. Establishing and upgrading cost are partially covered on a provincial and local level, or by property owner. Data regarding the total amount of user fees generated annually shows an amount of EUR 6.73 million for the land register (transfer of ownership) and EUR 1.26 million for the cadastre (land subdivision). In total these income of user fees is considerable lower than the costs of the system indicating a very low cost recovery. Income from land transfer taxes is approximately EUR 84.16 million. No data are available regarding income from land taxes.

The severity of the overall financial resources problem can be characterized by the fact that the updating and harmonization of cadastre and real property rights registers will cost beyond Euro 500 million. Further, no business plan has been established yet for either organization.

5.3.5 Ability of beneficiaries to demand better services

Neither for the land property registration nor the cadastre system customer satisfaction surveys have been carried out. From point of this important indicator customer awareness does not seem to be of special importance.

There is a general awareness about the problems the land administration system is facing, despite the fact that no regular or systematic surveys are performed.

5.3.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - legal framework in place - functioning titling procedures - private sector involvement 	<ul style="list-style-type: none"> - no full linkage of data (cadastre / rights) - no developed IT-system - low security / reliability of the system - no online access - low awareness of user satisfaction - huge gaps in training, human resources - high fluctuation of personnel - huge backlogs - efficiency gaps

5.4 Germany

5.4.1 Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

The German real property registration and cadastre system is a title registration system characterised by decentralisation (responsibility lies with the Länder) and separation of competencies between two institutions. Germany has an area of 357,027 sqkm with a total of 82.5 million inhabitants. The total number of parcels amounts to 62.2 million.

5.4.1.1 Institutional and legal framework for cadastre

Official surveying and mapping including the maintenance of the Real Property Cadastre (Liegenschaftskataster) belongs to the responsibilities of the 16 federal Länder. Each of the 16 Länder has its own surveying and cadastre law. While these laws are unified in their general regulations, different regulations – especially concerning the responsible authorities – remain. Depending on the organizational structure in the Länder the cadastre offices (Katasteramt) may belong to federal or local administration. There are altogether 320 cadastre offices at regional level and 85 on local level.

The Real Property Cadastre – covering the whole territory of German with all kinds of landowners (private and state) and all kinds of land use (urban, rural, forests etc.) – is defined as the official register of all parcels and buildings in a Land, in which all parcels are described with graphical and textual data. It also contains additional information (e.g., results of the official soil assessment). The cadastre is a parcel-based system, i.e. information is geographically referenced to unique, well-defined units of land. These units are defined by formal boundaries marking the extent of land. Each parcel is given a unique parcel-number. There is no separate building cadastre, because the buildings are part of the parcel. It is designed to show the de facto status of real property. As far as legal real property titles are concerned, it shows their scope and the part of the surface to which they extend. All relevant facts, such as designation, location, size and use, plus the boundaries as surveyed by authorised government agencies and licensed surveyors are described.

The Real Property Cadastre consists of the (1) Cadastral Register (Liegenschaftsbuch), which in most parts of Germany is operated in a digital system (Automated Real Property Register – ALB); (2) Cadastre map (Liegenschaftskarte) giving a graphic presentation of the Real Property Cadastre. Its scale is in general 1:1000; others may apply (e.g. 1:500, 1:2000, 1:5000). The cadastre maps are digitised in most parts of Germany (Automated Real Property Map – ALK); and (3) In the numerical

data (Vermessungszahlenwerk) information for the determination of the boundary points, buildings, co-ordinates etc. are stored.

As a rule, cadastral surveys are being executed only on application. In some cases the cadastre office may proceed *ex officio*, e.g. in determining changes in the land use or in the context of land consolidation. Real property may be sold without surveying, provided only whole parcels are affected. If a part of a parcel is to be sold, the law requires the cadastral survey prior to recording the subdivision in the land book. The portion of land must be identified and described in exact terms recorded by an official surveying body, either the cadastre office or a private licensed surveyor.

After the cadastral survey the maintenance of the Real Property Cadastre is performed by the responsible cadastre office. As it is an official authority the registration document is signed by a civil servant of the cadastre office. It is not necessary that the head of the office does it. Rules of procedure regulate who is entitled to sign the registration documents. These are not the same for all cadastre offices in the Länder (varying from Land to Land).

The content of the cadastre is assumed as true and correct. A mistake that is obvious and does not effect a change of the parcel's shape, can be corrected *ex officio*; e.g. wrong registration of the actual land use, wrong area of the parcel (the public faith is not valid in this case).

The Real Property Cadastre is a public register. An individual may get access to it, if he or she has a so called legitimate interest i.e., somebody, who plans to buy a parcel, does not know the owner or needs information about the area, land use etc. In such a case this information can be received (not for free). It is, however, not possible to get e.g., information about all parcels in a community. Direct access, if available, to the Real Property Cadastre e.g. via internet is only open for authorized persons (e.g. publicly licensed surveyors or notaries).

Based on the average of the last five years, the annual number of new parcels created by land subdivision amounts to 600,000. About 191,000 applications are processed at cadastre system each year. The number of annual extracts from the cadastre system is 2.2 million.

No concrete needs for reform of the institutional framework could be identified. Especially there are no cadastral problems with informal or illegal settlements. For some years now a new system is under development (ALKIS® – Authoritative Real Property Cadastre Information System), which integrates both the cadastre map (ALK) and the descriptive part of the cadastre (ALB).

5.4.1.2 Institutional and legal framework for titling

Registration in the German land book requires a written contract (*Auflassung*) between the parties, which has to contain certain minimum elements in order to be valid. The signatures on the contract of the parties further need to be authenticated by a notary. Changes of property rights do not take effect before being registered in the land book.

From a legal point of view the contractual agreement about a change of title is based on a legal transaction (e.g., purchase, gift, barter). This contractual agreement obliges the partners to fulfil a separate activity, i.e. the conveyance of the right. It is important to note that according to the principle of the abstract nature of rights in rem the contractual agreement is strictly separate from the actual transaction in fulfilment of an obligation. The purpose of this principle is to create legal security and clarity for the transaction in fulfilment of an obligation regarding the registration of land property.

The real property registration and cadastre system is in line with the rights and obligations obtained for real property through the titling procedure. No needs for legal or institutional reform could be identified with regard to titling procedures.

5.4.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

The maintenance of land book (Grundbuch) – covering the whole territory of Germany – is part of non-contentious proceedings in the district courts (Amtsgerichte). It is based on federal law; registration work is done by the land book offices (Grundbuchämter). There are in 2004 1,300 land book offices (700 on Länder level and 600 on municipal level). The land book shows the legal status of all real properties (except those in state ownership, which are not part of a normal land market, e.g. streets), which are described by reference to the Real Property Cadastre. In its documentation and publication role it works as the statutory basis for real property conveyance, in particular to ensure unequivocal status of ownership and other titles, as well as for mortgage loans. The land book consists of three parts (I for the name of the owners and the number of real properties; II for all forms of servitudes, encumbrances and other restrictions and ranking of rights; and III for all forms of mortgages). Beside this official register there are files containing contracts and other documents related to the folio.

The Land Book is governed by the principle “*superficies solo cedit*” (buildings are part of the parcel). An exception exists for the Länder of the former GDR. There it was possible to be the owner of a building without being the owner of the parcel. These rights were registered in the building land book (“Gebäudegrundbuch”). Over and above that there were also large numbers of unsurveyed land plots (so called undivided courtyards – “ungeteilte Hofräume”). It was therefore important to create land plots on which real property loans can be granted in the “undivided courtyard” sector. After the reunification these problems were solved by special laws and acts. Further it is also possible to register strata titles and condominiums (in condominium registers). Another possibility is the registration of building leases (in land books for building leases).

The application process starts with the reception of the application by the land book office; there the application is marked with a date-stamp (including time). Formal checking of the documents against the registration status is done by the registrar (Rechtspfleger): If the documents are faultless, the real property, the easement(s) or the mortgage is registered; if not, it is returned to the notary with the request to review and correct it. The document is signed by the registrar. Finally the affected parties (old owner, new owner, cadastre office, notary, bank – in case of the registration of a mortgage) are informed of the registration.

The land book is characterised by two important legal principles: (1) Changes of rights to land do not take effect before being registered in the land book; (2) Until otherwise proven, the correctness of all titles recorded in the land book is assumed. The land book enjoys “public faith”, in other words, the details registered may be presumed correct by anyone acquiring a legal title with regard to real property unless an appeal against the correctness is recorded or the person acquiring the title is aware of the entry being incorrect. The date of receipt of the application at the competent authority is crucial for all further legal effects. The only exception is the arrangement about change in the priority for a right. Specific rules also apply to the ranking of mortgages or easements. Adverse possession is allowed after 30 years of bona fide possession.

Legal registration is therefore conclusive. Damages that occur due to transfers in good faith have to be compensated between the parties according to civil law rules. No concrete needs for reform of the legal and institutional framework for land registration as such could be identified. A Law on Justice Communication is under development which shall address electronic land dealings.

5.4.1.4 Conflict resolution mechanisms

Appeal is possible against the correctness of the surveying, not against the legal boundary. The correctness of the cadastral survey will then have to be verified and if it was correct, a notice of opposition will be given. In the other case the cadastral survey will be corrected *ex officio*. The legal boundary can be contested at court. No figures are available, but protests against a cadastral survey take place sometimes. Protests against the legal boundary are very rare, mostly founded in the misunderstanding of the possibilities after the surveying. People sometimes think that the cadastre office has to

decide about the legal boundary, but the main task in this case is to make the boundary registered in the cadastre visible to the public.

Also decisions of the land book offices can be appealed. If it is not possible for the land book office to remedy the appeal, the district court (Landgericht) will have to decide. The next instances are the regional court of appeals (Oberlandesgericht) and the Federal Supreme Court of Justice (Bundesgerichtshof). No figures are available also for the land book offices, but the number of disputes there is very low, too (far below the number of cadastral disputes).

Notaries and advocates are obliged to have liability insurances. In case of negligence the affected party may be successful in proceedings against the notary or advocate.

Apart from regular appeal procedures there are no external conflict resolution mechanisms which are specifically designed for the real property registration and cadastre system. Considering the very low number of appeal cases in this system there is no such need as in fact the system is very well functioning and there are hardly any problems.

5.4.2 Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.4.2.1 (Historical and current) role of courts

Since 1900 the land book is maintained by the land book offices at the district courts. Since then changes were made mainly due to reunification of Germany or due to technical improvement (automated land book).

5.4.2.2 Type of court involvement

The court is directly involved in the land registration process. The registrar is responsible for all external business of the land book. He or she decides independently, only regulated and restricted by law. The official for certifications has to register the decisions made by the registrar in the land book and countersign the records in the land book. The land book is updated only by application. If the formal requirements are not available, the registration process will not take place. Registrars undergo a three years' education at a special college of higher education. Judges make decisions of special personal consequence.

5.4.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the Rechtspflegers, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

Court involvement is based on the Civil Code, the Land Book Act and additional by-laws. They are used in all land book offices in the same way and they guarantee a very high security of ownership and the other registered rights.

The possibility and likelihood of biased decisions within the courts is very low. At first the notary gets an excerpt of the land book; then he or she prepares the documents (purchasing contract, bill of contract, documents for the mortgages or easements). When preparing this the notary has to guarantee that all is correct. After handing in the application for registration, the registrar only checks the formal correctness of the documents. If they are adequate, the registrar then registers the real property, mortgages or easements. This system is guaranteed by the state following the principle of public liability for activities of public bodies i.e., if such a public body makes a mistake the state will be liable.

For transactions of real property the registration process at the land book is the most important. The overall advantage of court involvement is its good reputation. Due to the unbiased and highly qualified execution of the registrars' duties with a long lasting tradition people trust this institution.

5.4.3 *Interrelationship between the legal land registration service and the cadastre agency whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective*

5.4.3.1 *Interrelationship between the legal land registration service and the cadastre agency*

Cadastre and land book are kept with two different institutions, which are obliged by law to interact. The Land Book Act requires the Real Property Cadastre as detailed register for real property specification and individualisation. This construction makes a continuous data exchange necessary and vital. In case the land book offices are in need of cadastral information they will be given this information from the cadastre offices. In some Länder the cadastral authority provides direct access to the real property cadastre for the land book offices. The cadastre offices receive information about changes in the land book by paper.

A link – although not fully institutionalised – exists between the cadastre and the land book only regarding legal aspects. Regarding technical, organisational and financial aspects there is no institutionalised linkage. Duplicate collection and maintenance is therefore necessary with regard to certain data (personal details of the owner). Also due to the fully decentralised system of Länder autonomy inter-organisational co-ordination among the Länder is low.

Notaries play an important role in the land registration process as only they are allowed to certify contracts regarding land registration. Without this it is not possible to apply for a registration in the land book. The services of the advocates in contrast are not mandatory.

Inter-organisational interaction between the two authorities could be improved, but this is more a question of investment than of techniques. Competences are nevertheless clear between the federal and the state level on the one hand and between cadastre offices and land book offices on the other hand. In summer 2004 the Federal Council of Germany proposed to integrate the land book offices into the cadastre offices with the aim (along current technical developments) to promote better services to land owners and investors. In one of the Länder, namely Hessen, a pilot project is implemented with regard to this. The German government reacted reluctantly to this proposal, the respective draft law (BT-Dr 15/3148 of 14 May 2004) will be treated in the parliament, but is likely to be refused, because quality standards of registration might not be sufficiently secured.

5.4.3.2 *Advantages/disadvantages particularly from the user/customer perspective*

The competences of the different authorities are clear and transparent to the customer, although in the case of boundary disputes sometimes misunderstandings can occur when customers think that the cadastre office has to decide about the legal boundary (this needs to be decided by the courts). The one-stop shop principle is not realised and customers need to approach the two institutions separately.

The system provides public and open access through a large number of decentralised offices. The number of offices is sufficient to provide this access. Opportunity for online access is however reduced due to the fact that there is no nation wide system in place. The system itself is clear and transparent to the customers and customer trust is high.

5.4.3.3 *Costs/benefits particularly from the user/customer perspective*

Registration fees for the cadastre as well as the land book vary among the 16 Länder of Germany. The charge for the cadastral registration is a percentage of the charge of the surveying. Charges are the same for all users: Examples (rough estimates) are: (1) Excerpt from the Cadastral Register: EUR 12 as basis fee plus EUR 4 for each selected unit. (2) Excerpt from the Cadastre map: EUR 12 as basis fee plus EUR 7 for each sheet in the format DIN A4 (more for larger formats). The tax offices do not have to pay for land use information. The surveying of an average parcel costs about EUR 1,500 to 2,000 although the costs vary considerably depending on value, number of new parcels, boundary points, time used etc. The charges for the land book in general depend on the value of the item to be registered. All these charges are the same for all users, e.g. (1) excerpt from the land book: EUR 15; (2) registration fee (depending on the value of the right to be registered): EUR 704 in case of a value of EUR 200,000.

Average waiting periods at the cadastre offices and the land book offices vary considerably and comprehensive data are not available. On condition that all data for a cadastral survey is available, the whole process of subdividing a standard land parcel can be completed within 10 to 15 working days including measurement, calculation and preparing the documents for registration. Waiting periods at the land book vary (estimated that all data for a registration is available and correct) between 4 and 26 weeks. There are no significant differences between city and rural offices. No considerable backlogs exist.

Summing up all additional costs of a transaction (including transfer taxes, real property agent's and notary's fee) the average amount that has to be added to the transaction price, does not exceed 7.5% of the purchase price. This is considered to be rather low in the context of the examined countries. Waiting periods are relatively long.

5.4.4 *Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)*

5.4.4.1 *Human resources*

For the cadastre system the **total staff capacity** of public sector employees amounts to 26,000, of which a staff size of 20,800 is directly involved in cadastre tasks. Most of them are technician surveyors while the others are licensed land surveyors with academic degree and administrative staff.

The total staff capacity of public sector employees employed in the area of real property registration in Germany is about 6,900, with 100% of their working time directly involved in property registration tasks. The majority of this capacity (4,300) is administrative staff. The capacity of (non-academic) registrars involved in the registration process is about 2,600. Land book registration is part of the so called "voluntary" (non-contentious) jurisdiction. Only registrars are responsible for the land book, not judges.

In addition there is a considerable amount of private sector personnel also involved in the land administration system (about 1,400 professional land surveyors with academic degree, about 10,000 technician surveyors and a large number of lawyers and notaries who are only partially involved with land administration tasks), although detailed numbers for the latter are not available.

Educational background of personnel at the cadastre offices is either based on university (study of surveying and mapping) or a technical college of higher education. Surveyors with one of these degrees are allowed – as civil servants – to carry out cadastral surveys. To achieve a higher post in a cadastral office a university degree and an additional special traineeship including a public examination is required. Staff at the cadastre without such academic degree has undergone a so-called ap-

prenticeship training, which is a three years' training on job combined with additional courses. The registrars at the land book offices have attended studies at a college of higher education with a duration of 3 years.

Personnel in both organisations are very well educated and employees with academic degree are mostly civil servants. No educational gaps and no specific additional training needs could be identified.

5.4.4.2 Technical resources

About 75% of the cadastral maps/plans are in digital format and modelled with a system independent data description language which allows a transfer of attribute data and topology between different GIS-systems without information loss. About 60% of all titles in the land book are held in digital form.

The cadastre map gives a graphic presentation of the Real Property Cadastre. For some years now a new system is under development (ALKIS®), which integrates both the cadastre map and the descriptive part of the cadastre. At the end of 2003 the latter was nearly (99.9%) fully automated in the Länder, the cadastre map was automated for 75%. The new ALKIS® concept follows the ISO and OGC standards with their topological features. It is planned to start with the migration from the old system to the new one in 2005/2006 (depending on the potentials of the Länder). All these activities will also be influenced by the establishment of the National Data Infrastructure for Germany (GDI-DE).

During the last few years the land book has been converted to a more automated system, but this is merely a word processing system (no database). To make work more efficient automation projects have been started several years ago, e.g., SOLUM-Star to help making registration work more efficiently. About 60% of the old entries in the land book have been scanned. The new ones are registered with the new (software assisted) system.

There are no gaps in information exchange, because the land book offices gets the information directly from the cadastre office. More and more land book offices have direct access to the cadastral registers. But there is no direct connection between the Real property cadastre and the land book. There is always a media gap between the two systems. Use of information technology for computerisation of the land book and cadastre system is currently being improved. Due to constitutional restraints and restraints in cost computerisation is not developed fully in terms of user friendliness.

5.4.4.3 Financial resources

Due to the decentralised system in Germany it is very difficult to get detailed financial data. Regarding the land book the funding is carried out by the Länder whereby it can be assumed that maintenance costs are recovered from user fees. The costs for establishing and upgrading the cadastre system are carried by the provincial and the local level each for the agencies at the respective level (79% of all agencies local, 21% provincial). Maintenance costs for the cadastre system are recovered by fees, other costs like investment, development etc are not covered.

In addition to fees the land administration system is also generating a high income from taxes by far surpassing the costs of the system. The annual income from land transfer taxes is estimated EUR 8.9 billion which is about 0.12% of the property value. The annual income from land taxes is about EUR 4.8 billion (0.06% of property value). The total of these tax income amounts to about 0.6% of GDP and is therefore of significant importance for the state budget.

Although levying charges for their services from the users, neither of the respective responsible institutions is fully self-sustainable. Both the real property cadastre and the land book are public tasks and belong to the infrastructure services of the state. Therefore the question of cost-effectiveness is important, but is not seen as the core question.

5.4.5 Ability of beneficiaries to demand better services

Customer surveys have been carried out by some cadastral authorities, but it is unknown, whether the same has taken place or will take place for the Land Book. These surveys can be seen as an indicator for increasing customer awareness and the results in general are very positively for the surveying authorities. The main aspects of critique are the level of charges and fees.

Users theoretically have the opportunity to demand better services, i.e. to file a petition for administrative review of a specific registration case or against a specific person involved in the regularisation process, but due to the independence of the registrars it is not realistic and will not be successful. There are no other mechanisms for customers to demand better services (e.g., Ombudsman).

5.4.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - consistent legal framework - high security / reliability of the system - excellent education - low number of disputes - no backlogs 	<ul style="list-style-type: none"> - low on-line access - computerisation / no nationwide access - low speed of service - linkage of data to be improved (cadastre / land book) - low awareness of user satisfaction - high staff capacity - complex organisational structure with duplications - poor availability of system data

5.5 Hungary

5.5.1 Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

In 1972 Hungary decided to integrate the cadastre and land books on legal basis and institutional level into the – title registration based – Unified Land Register System. The integration was completed in 1981. Responsibility for establishing, maintenance and supplying of the geodetic control networks, the large scale base maps including the cadastral maps, the land register, land protection and valuation, the topographic maps of selected scales and the remote sensing lies with the Department of Lands and Mapping (DLM) at the Ministry of Agriculture and Regional Development and its 116 district land offices at first level and 20 county land offices (including Budapest land office) at secondary level. Hungary has an area of 93,030 sqkm with a total of 10.1 million inhabitants. The total number of parcels amounts to 9.3 million.

5.5.1.1 Institutional and legal framework for cadastre

The Unified Land Register System consists of two parts: The legal part (see below) and the cadastral (mapping) part. The cadastre is comprised of the data content of the cadastre map (administrative boundaries, lot number and boundaries of the parcel, type of cultivation, the boundaries of existing buildings, etc.) and the technical data generated in the process of mapping. This content is recorded partly on the cadastre map itself, and partly on the title sheet belonging to it. There is no special building cadastre. Data is open for the public.

The system covers the total (both urban and rural) area of the country. The scale of the cadastre map is 1:1000, 1:2000 in urban and 1:2000, 1:4000 in rural areas, but there are still 1:1440, 1:2880 scale maps. All state, private, co-operative land and real properties have been registered including condominium units (apartments). All land parcels and real properties have been registered and cadastre maps cover the whole country. Two different types of real properties can be registered: 1) land parcels; 2) other independent real property. All types of properties have a unique identifier and are registered separately: 1) land parcels can include buildings where the owner(s) of the land is the same as of the building; 2) there are three different types of other independent property: a) building, cellar, underground garage, structure, if the owner of the property is not or only partially owner of the land parcel; b) flat / unit ownership (apartment, shop, garage, etc): The land is common property, the unit is an independent real property; c) cellar, underground garage, construction with direct access to public domain (street, road). There are 7.3 million land parcels and about 2 million other independent real properties (condominium units and others). Based on the average of the last five years the annual number of new parcels created by land subdivision amounts to 80,000. About 570,000 applications are processed at cadastre system each year.

Cadastral survey for legal purpose and preparing survey documents of changes in cadastre map data is the responsibility of the licensed surveyors. The Institute of Surveying Cartography and Remote Sensing (FÖMI) under the Ministry of Agriculture and Rural Development issues the license to surveyors.

The content of the cadastre has no binding effect. However, the cadastral data recorded on the title sheet (parcel area, branch of cultivation, land quality, etc.) can serve as proof against data from other sources. In various official (court) procedures the reliance on cadastral data as non-discretionary, sufficient evidence is obligatory.

No need for comprehensive reform concerning legal and institutional framework can be identified. The following four main problems are however to be solved very soon: (1) acceleration of the completion of digital cadastre mapping; (2) fully operational on line data service of the land register database; (3) final development of the countrywide digital cadastre map management system (TAKAROS); (4) development of market driven data services.

5.5.1.2 Institutional and legal framework for titling

The transfer of proprietary title has two prerequisites: (1) the valid (written) contractual (in the case of purchase, exchange, donation) or other legal title (which certifies title acquisition), on which the transfer of title is based; and (2) the registration of change of title in the land register. In drawing up the contract, the actual state of property registration is an important factor.

Upon discretion of the parties the contract for the transfer of title can be construed in the form of a notarial deed or a private document countersigned by an advocate. The advantage of the notarial deed is that it ensures direct out of court execution (the court can attach an out of court enforcement clause to the deed). It is of relatively low importance for transferring the title itself, though more significant in the mortgage procedures of bank loans. The advocate's countersignature certifies – among others – that the document is in accordance with the parties' intention as manifested, as well as with the legal regulations, and proves, further on, that the party named in the document signed it personally and acknowledged, respectively, the signature as genuine.

Recently the concept of the new Hungarian Civil Code – made public in January, 2003 – based on legal historical and practical reasons raised the issue of reviving court controlled land registration. Following the publication of the concept, negotiations have begun between the Ministry of Agriculture and Regional Development and the Ministry of Justice on the reinstatement of the land register court system. There were similar negotiations nearly ten years ago – without any result. Further, there is

still a need for reform in the area of land ownership for foreigners, but this will have to be solved during the near future.

5.5.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

Hungary was the only socialist country where during the socialist period (1949-1990) the land register was operating without any gap. As a result of this there was a fully operational land register system in place in 1990 when Hungary introduced democracy and market economy.

Now, the legal part (title sheets) of the Unified Land Register System contains for each land parcel and other independent properties (e.g. apartment) a title sheet containing three parts: (1) descriptive part: parcel number, address of the property, area, status of the property (urban, rural, built in or vacant) building information, in case of rural area different cultivation, quality of soil, value of land; (2) ownership information (owners name, address, personal id. number, title, etc.); and (3) mortgages, restrictions, servitudes and other rights, or facts according to law. With regard to registration of specific properties the title sheet can be divided into a base title sheet (for common parts of a building) and a special title sheet (for individual freehold apartments). The title sheet is publicly accessible.

4.2 million applications have been handled in 2003, and about 1 million transfers of ownership rights is handled every year. Hungary is also characterized by a rather high amount of 700,000 mortgages and 200,000 servitudes registered per annum.

The title to a building is held by the owner of the land (principle "*superficies solo cedit*"). In exceptional cases however the title to the building can be separated from the title to the land. This is the so called autonomous building, the proprietor of which is entitled to perpetual servitude.

The registration procedure is initiated by the application of the concerned party. It is only exceptionally initiated by the land office. The application is to be submitted to the competent land office by the acquirer of the title within 30 days following the date of the contract. In case of failure to meet the given deadline for the submission of the application, a penalty for default is charged. The date of submission is decisive in the ranking of the created title. The decision of the competent district land office has to be signed by either the head of the land office or an entitled delegate. The decision can be either approval or refusal, though in exceptional cases a partial refusal, where the nature of the case makes it possible and the applicant, on request of the land office expresses the wish of retaining the application for the executable part. The application for registration is refused if the document underlying the registration contains a defect of form or content which makes it patently defeasible. The fact of refusal is generally entered on the title sheet.

When registered, the created rights are effective on filing the application for registration to the land office. The title registered on the title sheet is to be regarded as valid and vested on the person entitled to it as laid down in the real property registration. As a rule, anything that is not registered in the land register is to be regarded as non-existing. The state therefore acts as the guarantor of title through the act of property registration which records all required legal, administrative, financial and physical description information within the system of register and upon the cadastre map. Adverse possession is allowed after 15 years of bona fide possession.

Land registration can be held conclusive: For damage caused in the procedure of real property registration the provisions for tort of the Civil Code apply. According to the general rule of liability the person who causes unlawful tort is liable for compensation, but is exempt from liability if he/she can prove that in the given situation acting as expected, i.e., the liability for the damage is laid on the very person who – with unlawful and lamentable behaviour – caused it. An exception is made in the case of damages caused by employees in the sphere of public administration, including the land offices. Here the liability towards the party adversely affected is borne by the employer. The prerequisite, however, for establishing liability is that the damage cannot be remedied in the available ways, and

the offended party has previously employed the available ordinary sources of remedy, respectively. This regulation provides for damage caused e.g. by errors in filing; a legally wrong decision; the omission of marginal note; error in the service of the decision following registration. No major needs for reform could be identified.

5.5.1.4 Conflict resolution mechanisms

A court appeal can be filed against the decision of the county land office by the party whose title is offended by the decision. The appeal for redress has to be submitted to the district land office within 30 days on receiving the decision and is adjudged by the competent county court. The court possesses reforming authority: it can alter, reverse or annul the decision of the county land office; can instruct the office to resume the procedure or dismiss the claim. Deficiencies of the underlying documents cannot be remedied in the course of the court procedure. The provisions concerning appeal and court remedy also apply to land office decisions concerning the cadastral content of the register (e.g. partition of the parcel, changes in area).

Disputes – especially boundary disputes – are more common than in Western countries. It is roughly estimated that there are about 4,000 cases with court relevance per year. Compared to the total of all annual transactions this is a relatively high portion (0.4% for the rights registration system). The average length of such proceedings at courts of first instance is approximately six months.

Notaries and advocates are obliged to have liability insurances. In case of negligence the affected party may be successful in proceedings against the notary or advocate.

Apart from regular appeal procedures there are no external conflict resolution mechanisms which are specifically designed for the real property registration and cadastre system. Considering the very high number of appeal cases in this system there is a need for mechanisms to improve the functioning of the system.

5.5.2 Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.5.2.1 (Historical and current) role of courts

The institution of land book dates back to 1851. Between 1855 and 1972 the district courts (namely their land register units) served also as land registration authorities. Their staff consisted of land register judges, who were responsible for the adjudgement of applications for registration, and the registration clerks and clerical assistants, to whom the judge could delegate the procedures. It was the task of the land register units to enter the registration in the land book. The land book administered by court was phased out between 1973 and 1981. As of January 1, 1972 the land register staff of the courts (nearly 400 people) were transferred to the land offices belonging to the then Ministry of Agriculture and Food Management, now Ministry of Agriculture and Regional Development. The judges of the land register courts were not transferred to the land offices. Since then courts are not involved in land registration procedures anymore.

Thus enforced, it was the task of the land offices to prepare a new real property registration system which would replace the land book. The laws and ministerial decrees on real property registration issued since 1973 create the legal framework of the present real property registration. They show considerable similarity with the old procedural regulations of the land book, however, the land offices today do not issue mortgage debentures or land charge debentures.

5.5.2.2 Type of court involvement

The judge or court registrar has no part in the real property registration procedures initiated with the land office. The only role the court has in serving as a platform of legal remedy.

5.5.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the Rechtspflegers, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

With the merger, both the cadastral authority and the old land book are integrated within the land office as administrative authority. The respective departments within the office, however, deprived of authority, cannot practice the same legal control over the other special departments as in the past when they did not belong to the same institution. Operating as separate institutions the land register was the control of technical and cadastral activity and vice versa. When operating within the same organisation, the severity of this control leaves room for doubt.

Land offices are administrative bodies. The right to mandate follows from the hierarchical structure of public administration. The importance of achieving impartial legitimacy is not always valued adequately. There are cases when the conditions of impartiality fall short for reasons intrinsic to the organisational structure itself, for instance when the land office has to prove its objectivity against the interests of its supervisory body, the Ministry of Agriculture and Regional Development (FVM). In cases of contracts on subsidies allocated to various parties, FVM is the mortgagee. Based on the contract FVM applies to the land register for the registration of its mortgage right and, for the beneficial right to expropriation and mortgage injunction on the property of the subsidised party. The land office is on no easy ground when according to its judgement the conditions of registration are amiss. This type of conflict is likely to multiply in proportion to the widening scope of agricultural subsidies. This is in sharp contrast with the position of land book courts, which only deal with judicial issues and are subject to law alone.

Due to the accumulation of unprocessed cases as well as content issues, the real property registration of land offices has been facing loss of confidence, which undermines administrative authority. The concept of the new Civil Code justifies the opinion that in such situation the role of the courts increases. Consequently, expanding cadastral services and increasing the cadastral feature of property registration is not the right therapy for recovery, and less so, as the problem actually concerns the legal construction of title acquisition.

5.5.3 Interrelationship between the legal land registration service and the cadastre agency whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective

5.5.3.1 Interrelationship between the legal land registration service and the cadastre agency

The relationship between real property registration and cadastral maintenance takes the form of work relationship between two specialised organisational units (teams or departments) of the same land office. This work relationship is not disturbed by issues like the potential discrepancy or different numbering between the cadastral property part (parcel) specified in technical terms and the legally specified and registered property part of the title sheet. The cadastral parcel with its cadastre map based parcel number and data (e.g. parcel area, and use classification etc.) is also recorded on the title sheet. The property part defined on the cadastre map is at the same time the object of material law, the base of real property registration. In this case the sequence, in which the changes claimed in the applications and requiring registration on both the cadastre map and the title sheet are actually carried out, is a question of internal organisation. The harmonisation of cadastre map and title sheet content can be maintained by choosing the proper order and way of transferring the document within the

land office. Both the legal and mapping part are updated daily and simultaneously to guarantee the data consistency required by the nature of Unified Land register System.

Also external users (notaries, local authorities, banks advocates, real property agencies, public administrations) are linked to the network for information about title sheets and map copies.

5.5.3.2 Advantages/disadvantages particularly from the user/customer perspective

For any matters related to land administration the customer simply has to approach the competent district land office. The customers undoubtedly profit from the practical nature of the combined structure of the land registration authority. The one stop shop principle is adopted and the clients can access some parts of the Land Register also using the internet via the governmental portal (www.meh.hu, www.ikb.hu).

The duration for the whole process of transferring property rights or subdividing a standard land parcel depends on the complexity of the procedure. The duration for the whole process of transferring a standard property right in average takes about 30 days. The minimum duration is 8 days whereas in special circumstances the duration can be up to 100 days depending on aspects external to the administration. The duration for the whole process of subdividing a standard land parcel depends on the complexity of the procedure and takes in average about 45 days. A recent audit showed an improvement of file processing quality and velocity of the district land offices related to the real estate registration.

The exceedingly long processing time of applications has been a concomitant symptom of Hungarian real estate property registration, a "historical constant" practically since its introduction. The number of unprocessed applications is especially high in Budapest. It is also typical of the capital that occasionally 10-15 claims concerning the same property have been pending for many years. This juridical insecurity impairs the work of lawyers and notaries, the creators of title documents, and provides opportunity for property fraud. The present Hungarian real estate property registration as a consequence does not enjoy the full confidence of the public. The Minister of Agriculture on 10 March 2004 submitted a report to the government on the land register and it was approved by government. The report states: 'Despite the constantly growing number of documents to be dealt with, according to data as of 1 February the backlog of documents has been eliminated in 16 counties and problems in this field are only encountered in Pest county and Budapest. The number of documents submitted to the land offices has been increasing steadily for years: in 1999 a total of 2.2 million applications for land registration were submitted to the land offices, in 2003 the corresponding figure was almost 4.3 million. The land offices found it difficult to cope with such work load with their administrative capacities. At the same time the data pertaining to the backlogs show that problems have not been encountered in general, instead, they have been focused on certain regions, i.e. they need local actions. By the end of January 2004 there were somewhat fewer than 5,600 documents waiting to be dealt with, in contrast to the backlog of 52,000 a year before. At the Land Office of the Districts of Budapest, however, there was a backlog of 137,000 last year and the number of documents waiting to be dealt with, past deadline is still a substantial 116,000.'

Following a country study of the CELK Center on Hungary "The existing backlog of registration and titling applications varies in different county offices, but in many the average lag time between possession of land and issuance of titles is about 18 months. With the anticipated increase in sales and mortgage registration activities in the near future, the pressure on the existing limited capacity will increase. The speedy issuance of ownership titles is important for the development of the land sale market. At present there is a lack of reliable (state-confirmed) evidence of ownership and this may deter potential buyers from the purchase of land due to the risk that the seller in fact is not entitled to alienate the property. An expansion of the registration and titling capacity is thus warranted. Some of this expansion can be achieved by transferring manpower and resources from the compensation of-

fices that will be winding down their activities in the near future. But it is clear that significant additional resources for the enhancement of the land administration capacity will be necessary.”

5.5.3.3 Costs/benefits particularly from the user/customer perspective

There is no information available regarding the fees for a standard parcel subdivision, a standard ownership right transfer or and average extract. In a FIG survey (published 1997) the costs for a standard parcel subdivision were estimated to be US\$ 6.0 resp. US\$ 13.0 for a standard ownership right transfer.

Possible additional costs aside from views can be lawyer fees (1%) or in case of debt-finance bank fees (1%). Real property transfer tax is however rather high in Hungary with 10 % of the market value. It is notable in this context that for the transformation of companies no such tax needs to be paid.

5.5.4 Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)

5.5.4.1 Human resources

The DLM has about 4,900 employees. The total staff capacity of public sector employees employed in land property registration is 590, of which only a staff size of 286 is directly involved in property registration tasks. The majority of this capacity (250) are administrative staff while staff capacity of registration assistants with academic degree amounts to 30 full-time equivalents. For the cadastre system the total staff capacity of public sector employees amounts to 1,250, of which only 912 are directly involved in cadastre tasks. In addition there are about 6 full-time-equivalent judges (40 judges with about 15% of their working time related to real property registration tasks) dealing with land registration cases at the courts.

In addition there is a relatively high amount of private sector personnel also involved in the land administration system (about 6,000 surveyors, 150 GIS specialists and a large number of lawyers and notaries who are only partially involved with land administration tasks), although detailed numbers are not available.

Training activities are undertaken or planned, e.g. continuous training for county EDP managers (starting in 1995), should however be improved. The training for the employees parallel with the daily activity can only partly be organised within the land offices themselves, so other forms of education should be applied. Recently a law has been enacted on increasing the salaries of civil servants.

5.5.4.2 Technical resources

For the capital of Budapest, the cadastre map is 100% held in digital form. In total about 60% of the cadastral maps/plans are in digital format and modelled with a system independent data description language which allows a transfer of attribute data and topology between different GIS-systems without information loss. Of the remaining data about 20% are available in a digital CAD format with considerable transfer limitations and 20% are only available on paper. The digital cadastre mapping in the rural area will be completed before the end of 2004.

Services of the TAKARNET for the Land and Mapping Administration (electronic mail, support of work in land offices, acceleration of communication) are available in the whole country.

Since 1990 the Hungarian National Mapping Agency has undergone a great Information Technology (IT) development. Today four great IT projects are going on: (1) TAKAROS (IT development of district land offices): The project developed a cadastral information system, with integrated handle of land

register record and cadastral maps; the system will be installed at the 116 district land offices at the end of this 2004. (2) TAKARNET (Network of Land Management Sector): This is an intranet characteristic network, consisting of the members of Land Management Sector and some other registered users, like advocates, local governments, public notaries, banks etc. (3) META (IT development for county land offices): The project shall develop a complex information system for county land offices to manage and verify cadastral datasets (land register and cadastral maps) of the district land offices, to produce value-added products from existing datasets, to serve data for external users through networks (INTERNET and TAKARNET) etc. (4) NKP (National Cadastre Programme) for the establishment of a Digital Base Map.

5.5.4.3 Financial resources

About 45% of the cost for the cadastre system (establishment, upgrading and maintenance) are recovered from the property owners and other customers. The cost of the real property registration operations (establishment, upgrading and maintenance) for about 35% are funded by the property owners and other customers. The remaining costs of both functionalities are covered by the national government.

Data regarding the total amount of user fees generated annually is not available. Also there are no data available for state income from land taxes and land transfer taxes. In an older FIG survey (1997) the annual income generated from the land administration system was given as about USD 20 million.

5.5.5 Ability of beneficiaries to demand better services

Neither for the land property registration nor for the cadastre system customer satisfaction surveys have been carried out. From this important indicator, customer awareness does not seem to be of special importance.

5.5.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - legal framework in place - institutions in place - fairly developed IT system - private sector involvement 	<ul style="list-style-type: none"> - high amount of disputes - considerable backlogs - long waiting times - low awareness of user satisfaction - training needs - institutional set-up (role of courts) still under discussion

5.6 The Netherlands

5.6.1 Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

The Netherlands' real property registration and cadastre system is based on a deeds system and is maintained by one single land registration and cadastre. Land registration and cadastral mapping are tasks at national level, assigned by mandate to the Cadastre, Land Registry and Mapping Agency, an independent public body. The Agency has 15 regional offices responsible for information manage-

ment of all databases. The Netherlands have an area of 41,526 sqkm with a total of 16.1 million inhabitants. The total number of parcels amounts to 8 million.

5.6.1.1 Institutional and legal framework for cadastre

The Cadastre is covering the whole country up to the 3-12 miles nautical territorial zone. Because the State is treated like a private owner, no distinction is made between private and public land. The State has to behave like any private owner, also concerning notarial deeds and payments. There is no special building cadastre.

The cadastral maps reveal the national grid, cadastral boundaries, parcel-identifiers, street addresses, buildings, house numbers, and geodetic control points. The maps have the scales 1:500, 1:1000 or 1:2000. Parcel related attributes can be seen on the cadastral map. All together about 300 million co-ordinate pairs are represented in the spatial cadastral database. Cadastral parcel data are stored in one layer as described below; buildings are included in a separate layer. A parcel is defined as a land parcel that should be uniquely identified by parcel number and boundary survey. According to the legal rules of accession, buildings and subsurface features belong to the land.

Cadastral surveying aims at establishing a graphical accuracy of boundary points on the map, that is a so called 'relative precision' of $\sqrt{2} \times 20$ cm for urban areas and $\sqrt{2} \times 40$ cm for rural areas, otherwise the survey is considered too precise and therefore too expensive. For reconstruction purposes all original field sheets (showing the exact measurements) are stored. A normal cadastral survey is done by a two person-field team, which measures the new boundary as it is pointed out in the field by the seller and buyer. Only new boundaries are surveyed (after subdivision). Existing boundaries on request might be re-constructed in the field using the original field sheets. There are no private professionals involved in surveying, as the field survey is exclusively done by employees of the Agency.

Cadastral survey is carried out after the transaction was registered: (a) Buyer and seller, involved in the subdivision, point out the new boundary to the land surveyor. (b) If the indicated new boundary is in agreement with the description of the subdivision and the notarial deed of transfer (to the judgement of the surveyor), the land surveyor and his assistant survey the new boundary. (c) The land surveyor draws up a declaration of what he did, including names of buyer and seller or their attorneys. (d) The survey results are laid down in a field sheet that meets the requirements for reconstruction in the future. (e) The field sheet and the declaration are filed. Both documents have to be signed by the land surveyor. All cadastral surveyors are employees of the Agency (no licensed surveyors). (f) The survey results and the declaration are source for updating the cadastral map and the cadastral registers.

In essence the cadastral registers and maps are auxiliary registers to provide access to the public registers of deeds (see below). Deeds that are newly recorded in the public registers of deeds are extracted by administrative staff (paralegal level), and the essentials are inserted or changed in the databases. A simple case is a normal transfer of a house. Then the name of the seller is removed in favour of the name of the new owner, including all relevant data. This process is carried out by the Agency, because it is its mandate to do so. The delivery time of this process is: (i) placing an indicator of change at the involved parcel before 09.00 hrs next morning; (ii) finalising update process within 4 working days; (iii) in case of subdivision: preliminary update until survey is carried out and new parcel numbers are known.

Information from the cadastral registers is always up to date. The data are open for public inspection, without restriction. The law puts the general interest above the individual interest. The Agency is obliged to provide all data if asked for.

Based on the average of the last five years the annual number of new parcels created by land subdivision amounts to 236,440. Data concerning the number of applications processed are not available.

However, there were recorded 13.5 million extracts from the land registration and cadastre database (95% online access) in the last year.

No concrete needs for reform of the institutional framework for cadastre could be identified. The strategy of the Cadastre, Land Registry and Mapping Agency is to (a) meet the high standards of quality and customer-requirements, (b) introduce electronic registration of notarial deeds, (c) introduce recording of all public encumbrances (in co-operation with municipalities), (d) execute a program for renewal of all legacy systems, (e) digitize the public register of deeds (related to the electronic registration), (f) introduce a more centralized management, (g) capacity building in order to be ready for the future.

5.6.1.2 Institutional and legal framework for titling

Registration requires a written contract between the parties. On the basis of this the notary draws up a notarial deed of transfer which is submitted to the Agency.

From a legal point of view the signing of the deed by the seller and the buyer does not constitute a valid transfer of ownership. For this registration of the deed is required. All facts that determine the legal status of registered property are eligible for registration. The establishment, transfer, and abolition of real rights (rights 'in rem') must be registered in the public register of deeds: purchase, gift, barter, inheritance, auction, mortgage, long lease, usufruct, superficies, encumbrances, servitudes etc.

The registrar from the Agency checks various formal requirements (not the validity of the transfer) and finally confirms the registration (by signature and stamp). According to the law the legal delivery takes place at that very moment, but has effect as from the date of recording of the deed with the Agency. It can therefore be held that the real property registration and cadastre system is in line with the rights and obligations obtained for real property through the titling procedure.

5.6.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

Notarial deeds are recorded in the so-called **public registers of deeds** following the order of their incoming. The public register of deeds is always up to date by nature. Public registers are comparable with the land registers kept by the courts in other countries. The reason for filing in this order is the importance of the ranking of real rights (principle of priority). The moment of recording is of crucial importance e.g., by legal foreclosure and enforcement. The public registers by consequence are not easily accessible. The employees of the Agency extract the essential elements from the deed, these form in their turn the input for the **cadastral registers and maps**, providing registers on name, parcel (both administration and cartography), and street address. In essence the cadastral registers and maps are auxiliary registers to provide access to the public registers. The public registers are kept in analogue format: books with paper deeds, copied to microfiche. Both cadastral registers and cadastral maps are 100 % in digital format.

Legal registration is conclusive: The recording of the relationship person-right-land is based on the recording of notarial deeds. Acceptance of a submitted deed by the land registrar, does not imply investigation and review of the legal validity of the transfer. The check is done on some precisely described formal requirements only. Unlike a title registration system, the system in the Netherlands does not provide state guaranteed proof of title. The publicity principle however, results in the compulsory recording of all deeds pertaining to land, which are open for inspection without any restriction, and provide the base for knowledge about the status of tenure. The combination of compulsory involvement of the (Latin) Notariat and land registers and cadastre provide de facto title security. Adverse possession is allowed after 10 years of bona fide possession.

No full information regarding all public restrictions on real property is available at this time, but an amendment to the cadastre law regarding this issue is currently pending.

Following the principle *superficies solo cedit* (the building follows the parcel beneath) ownership of a real property includes ownership of the building thereon. Therefore, a building does not constitute a separate real property, but forms part of the parcel beneath. However: there are certain real rights that break the principle e.g., right of apartment or right to exploit subsurface minerals. Building information and contour lines are not necessarily included in the system.

Regarding the property right registration an average of 418,000 transfers of ownership rights is handled every year. The Netherlands are also characterized by a rather high amount of 594,200 mortgages registered per annum.

No needs for reform of the land registration system could be identified. All processes of the Agency are ISO certified i.e., all processes are exactly described, together with standards for quality and productivity. On a monthly basis quality indicators are measured, and reported, and form part of the accountability of the regional managers. Legal security indicators are targeted at no mistakes (zero tolerance), nevertheless mistakes are made. In this case the Agency is liable.

5.6.1.4 Conflict resolution mechanisms

In case the data in the cadastre (real property register and cadastral map) are incorrect compared with the source document (the notarial deeds as registered in the public register of deeds), the Agency has mandate to correct it ('administrative mistake'). If the notarial deed as such is incorrect it is a matter of the party to correct the deed through material notification or deed of correction.

In case neighbours disagree on their common boundary, they normally do not appeal to the court immediately, but request the Agency to reconstruct in the field the boundary as it was surveyed when the boundary came into existence. As all field sheets are kept, the survey party of the Agency reconstructs the boundary accordingly. The neighbours normally agree on the boundary as reconstructed by the Agency and courts are only rarely approached.

Due to the high standard and quality of registration the number of disputes is very low. It is roughly estimated that there are not more than 30 boundary disputes per year at the courts and not more than 20 cases per year before the Agency. Compared to the total of all annual transactions this is only a very minor portion, strongly underlining the well-functioning of the system. The average length of such proceedings at courts of first instance is approximately one year.

No other express external conflict resolution mechanisms are in place which are specifically designed for the real property registration and cadastre system. All activities of governmental bodies are further subject to judgements of the National Ombudsman. Citizens can complain about whatever, also the activities of the Agency. This occurs a few times a year. Finally there are also possibilities to complain regarding privacy matters at the National Council for Privacy.

Notaries and advocates are obliged to have liability insurances. In case of negligence the affected party may be successful in proceedings against the notary or advocate.

Apart from regular appeal procedures (Board of the Agency and courts respectively) there is also the opportunity of mediation procedure before the Agency. Considering the very low number of appeal cases in this system of conflict resolution mechanisms no need for reform could be identified.

5.6.2 Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.6.2.1 (Historical and current) role of courts

The courts (since 1811) are not involved in registration; they do not keep any property register. The Dutch real property registration and cadastre system is unified in one single Agency. This organization since its establishment in 1825 formed a department of the Ministry of Finance, and in 1994 was transferred into a so called independent public body (Agency).

5.6.2.2 Type of court involvement

Courts are only involved in (rare) appeal procedures in the third instance or summary proceedings for title disputes. There might be two kinds of conflicts: (a) between buyer and seller about the actual property transfer, which entails civil court procedure; (b) between buyer and seller on the one hand and the Registrar on the other hand concerning registration or refusal to register, which entails administrative civil court summary procedure.

5.6.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the Rechtspflegers, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

Due to the fact that courts are not involved in the registration process there are no related benefits, disadvantages. The likelihood of biased decisions is low as all judgements are open for public inspection, and recorded in the official jurisprudence.

The legal effect of registration is determined by the so-called causal system, that indicates that the legal validity of a transfer, might depend on the validity of its preceding one, etc. Because of the causal nature of the deed system, the notary system is required to take care of all investigations, which are needed to meet all formal requirements. In this way land tenure security is guaranteed. According to the laws the State guarantees the system's availability and sustainability. However, the State does not guarantee the validity of the legal facts comprised by the public register of deeds. This is connected with the causal system of delivery in deed registration systems.

The State only registers notarial deeds, after some formal inspections, but does not inspect the legality of the transfer. The State is however fully liable for discrepancies between the data in the notarial deeds as registered in the public register of deeds and the cadastre (real property register and cadastral map) because in this an administrative activity is concerned (e.g., employees of the Agency that update the cadastre while reading and analysing the notarial deeds) and extracting essential data. According to market research, the system is much appreciated by the Dutch customers.

5.6.3 Interrelationship between the legal land registration service and the cadastre agency whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective.

5.6.3.1 Interrelationship between the legal land registration service and the cadastre agency

The real property registration and cadastre system of the Netherlands is organised in one single institution. Inter-organisational co-ordination is not an issue in the Netherlands as the cadastral registers and maps as well as the public register of deeds are kept and maintained by one Agency, the Cadastre, Land Registry and Mapping Agency, and share the same legal framework and technical facilities (one database). The system consists of a central database with responsibilities for updating at the regional offices. The database under the competence of the Cadastre, Land Registry and Mapping

Agency contains rights (real property register) and cadastral data (maps). Inconsistencies from that point of view are not an issue. Due to the fact that the content of the cadastral registers and maps is among other data also based on the essential elements from the notarial deeds, inconsistencies with the public register of deeds can hardly arise.

These registers and maps are supported by integrated work processes, facilitated by an integrated IT architecture. No gaps in information exchange between the public registers of deeds, the cadastral real property registers and the cadastral map can therefore occur. Competences within the institution are supported by integrated work processes (facilitated by integrated IT architecture) and are therefore clear and transparent.

5.6.3.2 Advantages/disadvantages particularly from the user/customer perspective

Mandates are allocated according to efficiency and effectiveness, which generally speaking avoids disadvantages such as waiting times between different organisations, non-coordination, efficiency-loss, different quality requirements, different data models, different financial regimes, lack of data integration, and less chance for a one stop shop approach for the user.

Registration is applied for by the notary, who submits the notarial deed to the registrar. The one-stop-shop principle for information retrieval is realised with the possibility for customers to order all data from one point of access. Access is possible also through internet to the cadastre (real property register, cadastral map). On line access through intranet for professionals was realised in 1993 and through internet for professionals and citizens in 2003. The introduction of electronic registration in the public register of deeds is a major objective for the next years.

Due to the clear mandate for real property registration and cadastre given to the Agency competencies are very clear and procedures are kept as simple as possible. The users are very aware about the functioning of the system in the Netherlands. The system runs very smoothly and citizens hardly even recognise it as a valuable and necessary facility. Accessibility of the system is optimally secured. Considering the size of the territory of the Netherlands the number of offices is sufficient to secure access to the system. Internet access is functioning for information retrieval. Electronic registration of notarial deeds is in preparation. Functioning of the system and involvement of institutions is wide spread basic know-how of the users.

5.6.3.3 Costs/benefits particularly from the user/customer perspective

Fees are to be paid by all customers, including government bodies. There is no differentiation between segments of customers. The only differences are caused by different product specifications. The regulating mechanism is the obligation to be 100% cost recovering, within the financial cost-benefit system. There are agreements between the Agency and the Minister on norm-equity-ratio (as a percentage of the balance sheet total), including a so-called fund for cyclical problems. If the norm equity is exceeded, a proposal should be submitted for a decrease of fees. If the norm equity-ratio is not met, then a proposal for an increase of fees can be made. The time horizon for consideration is about 5 years. The user fees for recording a standard deed of transfer of property is about EUR 20, for recording of a standard parcel subdivision fees are about EUR 451.

For getting an extract from both the property rights and cadastre database the user normally has to pay EUR 2.77 per parcel for a typical extract whereby an extract is understood as delivery of one piece of information. Secondary users like public institutions have to pay for services like private users do (the state, however, is exempt from paying land taxes).

Summing up all side costs of a transaction (including real property agent's and notary's fee) the average amount that has to be added to the transaction price does not exceed 10% of the purchase price, which is considered to be reasonable. Of this percentage the real property transfer tax with 6% is considered high.

Average waiting time for a registration is within the same day between submission of a deed for registration and the receipt of the confirmation of acceptance. There are no backlogs. There are no differences between urban and rural areas. The duration for the whole process of transferring property rights or subdividing a standard land parcel depends on the complexity of the procedure. The legal process of transferring a standard property right can be completed within a day.

A necessary cadastral boundary survey is carried out not prior, but after the transfer. It is not uncommon that this happens up to one year after the transfer. In case of full ownership the law provides rights and mortgage rights on non-surveyed parcels. These circumstances, depending on aspects and decisions outside the administration, influence the duration of the process. Besides, the speed of service regarding extracts is minimized through data order by phone and fax as well as through internet access (95% online access).

5.6.4 Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)

5.6.4.1 Human resources

In total (including head office, IT etc.) there are about 2,400 employees in the responsible Cadastre, Land Registry and Mapping Agency. Of these about 1,000 are working in general functions like marketing, administration, IT or head office. The staff capacity of public sector employees in the area of land property registration is about 720 persons directly involved in property registration tasks. The majority of this capacity is non-academic administrative staff involved in the assistance for registration as well as a considerable amount of professional specials in GIS.

For the cadastre system the total staff capacity of public sector employees amounts to 1,214 directly involved in cadastre tasks. Most of them are technician surveyors (subdegree qualification) and GIS specialist as well as administrative staff.

1,438 notaries are to some extent involved in the land registration process. No further information is available concerning the degree of their involvement. There are no private licensed surveyors (no private sector involvement).

The personnel capacity is relatively small, but suitable to the size of this system and the national circumstances. Also the other indicators are suitable to the specific national circumstances.

Educational background of personnel at the Agency – if not administrative staff – is to a considerable amount academic (university degree in surveying). The newly recorded deeds are extracted and the essentials are inserted or changed in the databases by administrative staff with para-legal education.

Training for personnel of the Agency is performed on a regular basis by the Central Education Department. The Agency also performs so called 'competence management', which includes professional requirements and behavioural skills. Every employee has a contract in which the requirements are mentioned. At the end of the year the judgement of meeting the requirements by the manager indicates for maximum 7% the salary of the employee. On all aspects training is possible. The requirements may change from year to year, in accordance with the developments. All staff are also skilled in using IT, it is an obligatory part of budgets for system development and implementation. Personnel at the Agency are therefore very well educated. No educational gaps or specific training needs could be found.

5.6.4.2 Technical resources

100% of the cadastral maps / plans are in a specific GIS digital format. A transfer of attribute data and topology without information loss is possible within the same GIS but not between different GIS-systems. 100% of the cadastral registers are kept in the system AKR (Automated Cadastral Registers), the maps in the LKI (Land Information System): two separated systems with interface connection in order to appropriately co-ordinate the ongoing updating of the cadastral registers and maps.

The Agency is technically linked with other institutions involved: (1) Notary Offices (100%) (both in and output), (2) Real Estate Agents (on-line information service), (3) Database Popular Census (Municipalities), (4) Database Legal Entities (Chambers of Commerce), and (5) about 10,000 customers with on-line access.

Aging of the information system needs to be faced: The main IT-systems have been working for about 10-20 years now, which hampers the application of new technology that is necessary in order to meet new customer demands: The public registers of deeds are still kept in analogue format (books with paper deeds, copied to microfiche). Also there are 15 separate registers of persons (auxiliary registers) kept at the regional offices, which are not yet interrelated. Therefore the Agency pursues a complex renewal program that will take at least 10 years. Focus therefore lies with modernisation of the database and development of further tools for meeting customer demands. No major gaps could be identified.

5.6.4.3 Financial resources

The Cadastre, Land Registry and Mapping Agency has a separate budget, which is independent from the Ministry. The Agency is self-sustainable with a 100% cost recovery. The related fees form a 100% direct income of the institution. The total amount of fees generated annually is about EUR 31 million for parcel subdivisions, EUR 22 million for transfer of ownership rights and EUR 28.9 million for extracts. The cost recovery through fees varies considerably between different products. From about 451% for ownership rights extracts, to 200% for parcel information extracts to 105% for an average transfer of ownership rights and 56,4% for an average parcel subdivision.

In addition to fees the land administration system is also generating a high income from taxes by far surpassing the costs of the system. The annual income from land transfer taxes in the year 2003 is estimated EUR 3,438 million (about 6% of the value of transferred property). The annual income from land taxes is about EUR 5 billion (respectively 0.5% of property value). The total of these tax income amounts to about 1.9% of GDP.

The land administration system in the Netherlands (establishment, upgrading and maintenance) is self sustainable and earns a 100% cost recovery by the property owners and other customers.

5.6.5 Ability of beneficiaries to demand better services

Both the land property registration system and the cadastre system are reviewed in a country wide investigation by an independent opinion poll bureau every three or four years. Customers rate the organizations along several indicators such as delivery times, meetings specifications, dealing with complaints, price or innovation. Data regarding the results of these surveys are not available, but relatively high customer awareness can be expected due to these surveys. Apart from that the regional offices organise their own surveys regularly for regional users. Besides these organised surveys there are the regular contacts between the account managers of the Agency and the individual users.

For demanding better services the users may approach the so-called User Board, which is established at Agency level and comprises representatives of umbrella organisations of users, such as notaries association, real estate agents association, mortgage banks association, consumer organisa-

tions etc. Furthermore there is regular contact between the stakeholders of the system at each level (federal, regional) exists.

5.6.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - on-line access to cadastre - high speed of service - linkage of data established (cadastre / rights) - awareness of user satisfaction - security / reliability of the system - low number of disputes 	<ul style="list-style-type: none"> - age of IT-systems - overall side costs of transaction - low private sector involvement

5.7 Serbia

5.7.1 Current institutional and legal framework for land registration (cadastre, titling, registration and conflict resolution mechanisms) in urban and rural areas

Serbia's real property registration and cadastre system is managed by a single institution, the *Republički geodetski zavod* (Governmental Geodetic Authority – GGA). The GGA is organized in six sectors and two departments and operates through nine regional centres that supervise 152 local cadastral offices all over Serbia (excluding Kosovo and Metohija). The unified system of real property registration – the so called Real Estate Cadastre (REC) – was introduced in 1988, with a view to abolishing land books and title deed books, uniting both factual and legal data on real property in one single register. The GGA is thus in charge of the classical cadastre functions as well as of the registration of real property rights. The system is structured following the title registration system. Up to 1988, real property registration was carried out by means of land books, title deed books and the land cadastre. Serbia has an area of 102,173 sqkm with a total of 8.2 million inhabitants. The total number of parcels amounts to 19 million.

5.7.1.1 Institutional and legal framework for cadastre

The REC has a unique recordation system of real property in the Republic of Serbia that enables it to record at one place all data about land, way of use, cultivation and class, objects, rights on real property and holders of these rights in the Republic of Serbia. It is established on the basis of gathering and uniting the data from the land books, title deed books and the land cadastre. In areas where a survey has not been done and where the land cadastre or an index cadastre has not been installed, and where the cadastral documentation has not been approved so far, the existing survey and land cadastre or the land books and the title-deed books are to be used.

The REC contains data about cadastral parcels, buildings, apartments and business improvements, separated parts of buildings and other structures, describing their position and shape, the area, kind of use, solvency, cadastre class, cadastral income, actual rights on them and holders of those rights on such real property. It consists of: (i) the working versions of maps, which are copies of the original archive and serve to maintain the survey records and the REC; (ii) the collection of deeds, which consists of the originals or certified copies of deeds important to the registration of rights on the real property; (iii) the cadastral documentation, which consists of: 1) real property sheets, 2) parcel index, 3) a list of the cadastral income, 4) a collected overview of surfaces and cadastre income according to

the purpose of use and the cadastral classes and 5) an alphabetical index of owners, holders of the right of use and holders of the real properties. The real property sheet consists of four sheets and contains data on (i) the real property (parcel of the land) (A-sheet), (ii) the holder of the rights on real property (B-sheet), (iii) building, apartment, business improvements as special parts of the building and additional construction property as well as the entity or holder of the rights on those parts (V-sheet), and (iv) restrictions to rights on real property (encumbrances) (G-sheet). No special building cadastre exists.

Most of cadastre maps (a total of 74.000) are in analogue format in the scale of 1:500 or 1:1000, or 1:2500. If a cadastre map does not yet exist, a (private) surveyor performs a boundary survey. After being reviewed and approved by the GGA, such a map is entered in the REC and becomes part of the cadastre map. Since 2002, all geodetic surveying has been entrusted to private surveying professionals or firms. In case that a premise is not registered at all, the V-Sheet (see below) has to be created in the first instance. The first subsection of the V-Sheet contains data on the building as a whole, while in the second subsection, apartments of the building are entered.

Boundaries are defined precisely as security of property rights is a high priority in Serbia. In case of boundary disputes between parcel owners, it is necessary to present the boundary unambiguously and exactly. Access to the real property registration system is open to everyone; no restrictions apply as to certain parts of the population. Acquisition of ownership rights on buildings, or parts of buildings (apartments) is not restricted and is even allowed for foreigners. About 1,084,000 applications are processed at the cadastre system each year. The number of annual extracts amounts to 720,000 from the cadastre.

As a heritage of the previous ideological system, Serbian legislation differentiates between different categories of land and applies certain restrictions as to sale/purchase and use of such land categories. According to the law, there are two main categories of land: (1) Building Land: All urban construction land (building land) is divided into public construction land (on which objects of common interest are erected), or other (non-public) construction land, which may be in private ownership. Thus, since 2003, it is possible to acquire ownership in urban building land, which therefore may be subject to legal traffic again, provided the building land in question is non-public; and (2) Agricultural Land, which cannot be alienated and strictly has to be used for the declared purpose. A reclassification of land is possible through an extensive bureaucratic process. There is no legal difference in registration between public and private lands.

The institutional and legal framework for cadastre is in place. Data in the REC system can be considered as reliable, but represents only a small part of all data of the country. In areas where the REC has not yet been installed, the old legislation referring to the two previous systems is still in force, which makes the overall situation complicated. Data from the old systems is not reliable. New legislation is under preparation to bring legislation in line with EU standards.

5.7.1.2 Institutional and legal framework for titling

In order to acquire the ownership right in immovable assets, apart from existence of a legally valid contract (which must be in writing and authenticated before the court), entry into the REC or other appropriate mode determined by law is required (constitutive nature).

Ownership may still appear not only in the form of private or state ownership, but also as social ownership, i.e., the supreme power over assets owned by social legal entities (associations, institutions). However, the duration of social ownership is statutorily restricted by a time limit, meaning that the existing enterprises in social ownership (but also in state ownership) can be privatised, so that a change of ownership will be effected in the privatisation process. As a result, social ownership still exists, though the Law on Privatisation stipulates that it has to be transformed into other forms of ownership within the coming few years.

The principle *superficies solo cedit* does not apply, so that the building does not share the legal fate of the land (piece of land) beneath. In real life, it may happen that an individual out of his own material and work erects a building or another construction on a real property (piece of land) over which another individual has the ownership right, while between them, no contract was ever concluded.

The institutional and legal framework for titling is in place. However, the legal institutes remaining from the former system (e.g. social ownership) still pose some obstacles to the current system, but this problem is already faced.

5.7.1.3 Institutional and legal framework for registration, conclusiveness of legal registration and liability in case of mistake

All registrable rights on real property and specific legal facts which pertain to the owner of the real property or the real property himself are registered in the REC (see above). No other or separate register is provided for registration of other rights on immovable property. The ownership right on a real property can be registered in the form of ownership, joint ownership, co-ownership and apartment ownership. As far as real properties in state ownership are concerned, apart from the holder of the ownership right, also the holder of the right of use and the user of the real property, respectively, is registered. Adverse possession is allowed after 10 years of bona fide possession.

Registration procedure in the REC is twofold:

(1) Recordation of real property in case the property had not been recorded yet, or had been recorded in a different (old) system: Data contained in the land cadastre and the land books are not automatically transferred into the new REC system, but prior to establishing a REC for a particular cadastral municipality. A real property owner is free to have his ownership right registered with the (old) land book, and this entry will afterwards, in the course of processing a particular cadastral municipality, be taken over by the GGA and transferred into the REC. Entries in the REC are of provisional nature for a period of two years. In cases where individuals or legal entities have not applied in the past for entry into the REC on their own initiative, such entries have to be reconstructed through a commission established by the GGA. The commission invites all citizens through announcements in the media to be summoned one by one in order to submit available documentation that might prove their ownership on the real property in question. The data of the survey, land cadastre and cadastral classification, as well as the data on the rights on the real property, are ascertained in the course of a display for public inspection. Against this data the individual who has a legal interest, may oppose within a time period of 15 days from the day the data were announced to him/her. The objection must be lodged with the commission in charge of displaying of the relevant data. Against the decision brought upon the objection, a complaint may be lodged with the GGA within eight days from the day of delivery of the decision. An administrative procedure cannot be conducted against the decision of the GGA. If the party fails to oppose the entry within this statutory period of time, then errors, that may occur, can be corrected only in a court procedure, on the basis of a legally binding court decision which would ascertain whether a particular right in rem on the real property of the plaintiff exists or not.

In case the rights in rem on the particular parcel are established by the competent regional office of the GGA, this office issues a formal notice to the applicant or newly entered owner, holder or user of the property, stating that the entry of a certain right is approved and the entry into the REC will be effected immediately after the formal notice has become final. The commission registers the "provisional" rights established by its findings in the B and the V sheet respectively. The "provisional" registrations are then announced in the Official Gazette of the Republic of Serbia. After two years, during which the party is entitled to appeal against this registration, the GGA records the definitive entry into the REC.

Within urban areas, severe problems might occur because the data contained in the land books (as far as they exist) and the data contained in the land cadastre in most cases do not match as the entries in the land books have not been updated over a long period of time. Due to the disharmony between land book data and land cadastre data, the work of the GGA on comparing the land books with the land cadastre is extensive.

(2) Maintenance of the (already established) REC, if a party, e.g., wishes to have changes in ownership or other rights registered: The registration of rights in the REC is performed upon a Resolution of a qualified jurist at the GGA. It is an administrative decision with the possibility to appeal. The jurist at the GGA performs a formal review of the underlying documentation, whereby only easily recognizable deficiencies can be detected. The Resolution is mailed to the parties of the transaction.

Steps	Parties / Institutions	Actions
1	Buyer and Seller of real property	With (or without) assistance of advocates, a purchase sale agreement is being prepared on the basis of an abstract obtained from GGA Office showing the present condition of property on sheets A to G.
2	Court (District Court, or in case of Registered companies: Commercial Court)	Court clerk prepares documents for review and decision of judge. Judge authenticates (with seal and signature) that the parties identified (individuals by usual IDs, companies by abstract of Business Register) have signed the purchase/sale agreement. The documents are handed back to parties, copies are kept in files.
3	GGA Registration Department	Jurist at GGA reviews completeness of documentation and existence of judicial authentication and then prepares a Resolution (<i>"rešenje"</i> / decree) for registration of the change of ownership. The contents of the Resolution is then entered into the A sheet of the REC.

Regarding the property right registration an average of about 289,000 transfers of ownership rights is handled every year. About 364,252 applications have been handled last year. The number of annual extracts amounts to 250,000 from the land register. No data are available for registered mortgages and servitudes.

Registration of real property rights in the REC has constitutive character and provides for a conclusive title. Registration cannot exist without a legal basis (valid contract). Since neither the courts, nor the GGA are required to check whether the underlying contract complies with substantive legal requirements, upon which registration of ownership or other rights are registered, the state cannot be held liable for mistakes that might occur. Liability for potential errors lies with the GGA. No specific procedures, though, exist for compensation of damages. In spite of this obvious defect, it is stipulated that entries shall be done in compliance with the Law on General Administrative Procedure, so all requirements under public law have to be observed, in any case.

5.7.1.4 Conflict resolution mechanisms

The resolution of disputes with the GGA can be appealed in an administrative procedure before the GGA. The municipal court may be approached in a second step. Disputes occur quite often. It is roughly estimated that there are some 38,000 disputes with court relevance per year for cadastral issues and some 1,716 for issues related to legal land registration. Compared to the total of all annual transactions this is a high portion. There is no information available regarding the average length of such proceedings at courts.

Any initial entry in the REC is of a temporary nature for the period of two years, during which the party is free to oppose the (provisional) entry (see above).

Whoever is of the opinion that the entry infringes his/her land register right, may request for extinguishment of the entry by bringing an action to the competent court. The action can be brought within three months from the day of knowledge of carrying out of the entry, and within two years from the day of carrying out of the entry at the latest. The court where the litigation has been initiated will inform the GGA accordingly, and initiation of the litigation will be indicated in the G sheet of the REC.

No express external conflict resolution mechanisms are in place, which are specifically designed for the real property registration and cadastre system. The institution of an “ombudsman”, or a similar people’s advocate, does not exist, nor does the profession of a notary. The parties use the services of private advocates and surveyors in order to file applications in the process of administrative reviews and/or appeals, and, definitely, in the case of an appeal to court. These professions, in general, carry liability insurance although it remains doubtful if coverage and procedures for claims are up to usual and adequate standards.

5.7.2 Role of courts and type of court involvement especially with regard to all stages of the land registration process

5.7.2.1 (Historical and current) role of courts

Historically, Serbia had followed the dual institution model (with an agency responsible for cadastre and the court responsible for the registration of real property rights), but opted for a single institution solution already back in 1988. The main reasons for depriving the courts of their role in registering rights in real properties were of economic nature, with a view to saving costs by means of performing any tasks related to real property issues by only one competent authority.

5.7.2.2 Type of court involvement

Since the creation of the GGA and the adoption of the Law on State Land Survey, Cadastre, and Registration of Rights on Real Property in 1992, the function of courts in the process of registration of real property rights in the REC is restricted to the identification of the parties to the transaction and the authentication of their signatures on the respective contract.

Changes of ownership and other rights or encumbrances are carried out by the competent cadastre office only upon production of a title deed, duly authenticated by the court. The competent municipal court authenticates the signatures of the parties involved in the legal transaction after verifying the identity of the parties who have signed the sales contract or another title, respectively. As the information on the object of transaction is provided by GGA, the court does not review whether the object of transaction is actually identical with the respective abstract from the GGA.

Staff employed with the GGA is bound by the general principle of legality and entries are to be done in compliance with the law. Therefore the likelihood of biased decisions shall be reduced although the respective operators are subject to instructions and do not act independently, as this would be the case with independent judges.

5.7.2.3 Benefits, disadvantages, and risks of court involvement, particularly the implementation and the role of judges, the Rechtspflegers, and who actually signs the registration documents, in terms of security, resulting liabilities, efficiencies including to the users of the system

Following the REC system, which aims at facilitating the registration procedure and focussing factual and legal facts in one institution, the involvement of courts (for authentication of documents) is retrograde, since it complicates registration procedure: Although registration of legal facts (rights) is done by an administrative organ, the customer is forced to go to the court in order to have his/her contract

authenticated. A one step procedure has therefore in fact not been reached by introducing the unified registration system.

Given the reduced participation of courts in the process of registration – and considering the lack of a notary system in Serbia –, the identification of parties and the authentication of signatures – without a loss of quality, but with an improvement in efficiency – could also be performed by qualified personnel at the GGA. To the opinion of numerous experts, it is unnecessary, costly and time-consuming to allocate such functions to the courts. This, however, could have negative impact on public confidence in the cadastre and rights registration system, as – generally – trust of the public in the judicial process is higher than in the administrative process.

Non-efficiency of court involvement becomes evident when considering the fact that the courts just have to authenticate the signatures of the parties contained in a contract which serves as prerequisite for registration of rights at the GGA: Often, the contracts submitted to the courts for certification are drawn up by the parties themselves, not having them checked by advocates or other legally trained persons. The courts do not check the contents of the contracts; they just witness the parties' signatures. Nor does, however, the jurist at the GGA.

5.7.3 *Interrelationship between the legal land registration service and the cadastre agency whether in the same organisation or in separate organisations or ministries, identifying the advantages and disadvantages, costs and benefits particularly from the user/customer perspective.*

5.7.3.1 *Interrelationship between the legal land registration service and the cadastre agency*

Inter-organisational co-ordination is not an issue as cadastral registration and information as well as registration of real property rights are administered by the same Agency (GGA). Competencies within the GGA are clear and transparent. There is no significant problem in the exchange of information or data between the departments involved. Usually, the party only has to turn to the REC sector of the REC office.

Co-operation with other public entities, however, might be suffering from the lack of data exchange mechanisms through electronic means. Problems exist with regard to communication between the GGA and the courts, which previously used to be in charge of real property registration, but the courts are statutorily obliged to provide the GGA offices with the land books, which upon implementation of the REC become invalid.

5.7.3.2 *Advantages/disadvantages particularly from the user/customer perspective*

Theoretically, due to the single agency structure of the GGA, the "one stop shop" principle is realised. However, due to the insufficient technical equipment, a large part of the registration process is handled manually and, thus, parties have to refer to different departments within the same office. Also the court has to be approached separately for authentication of documents.

The duration for the whole process of transferring property rights or subdividing a standard land parcel depends on the complexity of the procedure. Generally, average waiting periods are between two and three weeks. Transferring a standard property right in average takes about 20 days. The duration for the whole process of subdividing a standard land parcel takes in average about 45 days. The waiting periods can be considered as fairly reasonable for real properties already entered in the REC system, but are very long in areas where the data has to be reconstructed or newly established.

As a rule, there is no difference between city offices and rural offices; however, entries in greater cities are often hampered by the fact that title evidence is missing or ownership relations are not clear, so the party wishing to have an entry done is forced to obtain ownership (or other title) evidence prior

to applying for registration. This causes delays in the registry procedure in city areas. Therefore in areas where the records have already been updated in the REC system, the process for registration of rights is speedy and within a reasonable time. In other areas where records are being reconstructed, such a process might take up to two or three years.

5.7.3.3 Costs/benefits particularly from the user/customer perspective

There is no reliable information available regarding the total user costs for a standard parcel subdivision or a standard ownership right transfer. In principal, registration and inspection are to be paid by the party requesting the service. Generally, there are two types of fees: (1) administrative (basic) fee and (2) registration fee (as consideration for GGA's services). Fees for a standard transfer of ownership amount to EUR 50, and EUR 15 for processing an issue. These costs are only to be paid by those parties who are not registered in the land books (data already contained in the land books is taken over from the GGA ex officio). Fees for a standard parcel subdivision by a private surveyor are about EUR 100. Fees for services of the GGA, usually for separation of a parcel and establishing of a map, amount to approximately EUR 13 each. If there is a building on the parcel, the fee is increased by approximately EUR 27. For getting an extract from the cadastre database or from the land register the user normally has to pay EUR 10 for a typical extract. The citizens may obtain forms at the counters of the GGA's offices which indicate the fees and tariffs to be paid. Fee reductions for users with poor financial standing or lower financial abilities are not provided for.

5.7.4 Human, technical and financial resources of the agencies involved, and identification of resource gaps (including skill needs and specifications of the training requirements for existing personnel)

5.7.4.1 Human resources

The total number of staff within the GGA is 2,417 whereby about 2,000 employees (in full-time-equivalents) work for the land administration system. The majority of this capacity is technician surveyors with sub-degree qualification (1150 full-time-equivalent) and non-academic administrative staff involved in administration and support (433). A further capacity of 168 judges and 207 full-time-equivalents of professional licensed land surveyors (academic degree) has to be mentioned. No reliable information is available concerning the degree of involvement of the private sector.

Educational background of personnel at the GGA – if not administrative staff – is to a considerable amount academic (jurists and geodesists / engineers). Training programs are intended for the next future, but have not been (or only to a minor extent) established yet. The management quality of the GGA in many respects is insufficient. Salaries of GGA personnel are low and not commensurate with performance and/or private business jobs. As a result a high number of personnel leave for higher paid jobs in the private sector. Knowledge regarding IT, GIS and automation is not sufficient to meet the requirements for the modernization of the system. Moreover, there is a lack of GIS experts.

There is a need for training on all levels of staff for various subjects. Management capacities are underdeveloped.

5.7.4.2 Technical resources

The REC, which by December 2003 covered only around 35% of the territory of Serbia with a total of 5,137,940 cadastral parcels registered, is expected to be implemented on a nationwide basis between 2008 and 2010.

Digitalization of cadastre maps only slowly progresses. For example, in Belgrade are only 5% of inner city and 2% of total area of Belgrade digitized.

The degree of computerization and use of IT is very low, due to the lack of funding. Major efforts are made to improve the situation, mainly with the help of international projects. The major objectives of the GGA are directed towards installing the REC throughout the entire territory of Serbia and towards modernizing the geodetic equipment and facilities as far as the GPS system and digital geodetic plans are concerned. A great part of the funds required for reaching these objectives will be obtained by the state budget; nevertheless, the GGA expects the REC system to become more independent from budget allocations through the state in raising own funds by selling copies of maps to customers. One objective in the field of geodesy and technical equipment (operational development) is to proceed with realizing the tasks of control network improvements; network densification by GPS surveys; orthophoto mapping; digital mapping; information / communications technology systems modernization.

5.7.4.3 Financial resources

GGA is financed by the state budget as it does not have a separate budget. Fees paid by users for the services flow into the state budget as well. No reliable data regarding total annual fees exist. It is estimated that presently the fee revenues cover about two thirds of all expenditures. Cadastral surveying and mapping as well as land registration are to a degree of approx. 60% financed by the property owner/interested person, 40% are funded on a national level. The annual income based on the sale of spatial components, rights components and property registration is estimated EUR 10.0 million whereas in 2003 expenses for salaries amounted to EUR 10,394,900 and for some other costs to EUR 7,452,157.

5.7.5 Ability of beneficiaries to demand better services

Customer surveys and feedback / monitoring mechanisms are not regulated on a mandatory or statutory level. Customer survey and feedback has been introduced in 2003 by way of issuing customer questionnaires at the counters of GGA Offices. By way of these questionnaires, the customers and interested citizens are asked to suggest possible improvements and comments, and to give statements on the work performed by the GGA employees (whether they perform their work satisfactorily, whether the application has been processed within a reasonable period of time, etc.).

5.7.6 Strengths and Weaknesses

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - institutional framework in place 	<ul style="list-style-type: none"> - low degree of computerization - significant gaps in training / human resources / management - significant delays in transferring the old cadastre and land register into the new system - insufficient computer equipment - high fluctuation of personnel

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8. Abbreviations

approx.	approximately	HU	Hungary
AT	Austria	i.e.	id est (that is)
BG	Bulgaria	n/a	not available
BPU	Basic Property Unit	NL	The Netherlands
DE	Germany	no.	number
e.g.	example given	pop.	population
ECA	East Europe and Central Asia	sqkm	square kilometres
esp.	especially	sqm	square metre
EUR	Euro	SR	Serbia
GDP	gross domestic product	USD	US Dollar
HR	Croatia		