Swedish experiences and visions in alliances and Supra-national partnerships

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INTRODUCTION

Sweden has a very long history of mapping, cadastral and land registration activities, with Lantmäteriet's history going back to 1628. This also means that Lantmäteriet has a long experience in the field of using up-to-date technology and working methods. Swedish organisations within the different fields of land administration have been something of pioneers in developing and using e.g. Land Information Systems (e.g. through the introduction of the Land Data bank System) and GIS (as Lantmäteriet e.g. was one of ESRI's first customers).

In recent decades the IT-development has had an increasing influence on the business of land administration. The Internet boom has created a new and rapidly changing environment for the further development. At the same time increasing costs and a more competitive environment has brought about a need for more global thinking.

Lantmäteriet is now deeply involved in two international development projects that will result in new tools for the property market. These tools aim at, in different ways, creating higher value and increased efficiency for their users. At the same time they are truly supra national, meaning that Lantmäteriet works in close co-operation with international partners of very different kinds. The following describes the functions and benefits of these new tools, EULIS and ArcCadastre, and also some of the challenges for Lantmäteriet and the others involved in the projects. Some concluding remarks are given concerning future visions.

EULIS

Background

To an increasing extent the European market is becoming more integrated. So far property transactions have remained quite national, and complaints have been made about the lack of a single mortgage market. In order to speed up the integration process Lantmäteriet has initiated a project for providing the market with a single point of access to land information across borders.

Project objectives

A well-functioning property market is generally considered as being fundamental for economic growth and prosperity. The opportunities for access to credit that are created through the use of real property as collateral is of great importance in this respect. In order for the market to function properly it is necessary to have access to information about, among other things, ownership, encumbrances and property values. Good access to information contributes to making it possible for all actors in

the market to participate on equal terms, to increased transparency and to keeping transaction costs down. The need for professional involvement in transactions of different kinds can, for example, be reduced as the citizens themselves have easier access to relevant and up-to-date information.

EULIS aims at proposing how an electronic European Land Information Service can be designed, what obstacles there might occur and how these can be overcome, as well as showing the functionality of the proposed outcome through a pilot system/demonstrator that will be launched. In this way it will be possible to illustrate the positive effects of having information readily available across borders.

Although it is envisaged that a single route to securing access to the same basic information from participating countries will have little impact on existing technical systems, the development of a pilot solution means that any need for modifications among the participating organisations and their computer systems is identified. The need for support in understanding and interpreting the various national records will be analysed.

The market

As part of the preparations for the EULIS project, the individual participants made limited, national market studies. The results of these studies show that:
- The present lack of information, both for individual properties and on the legal conditions in a specific jurisdiction, means that there is an unwillingness to do business with properties in other countries.
- The information about e.g. ownership of real property or security in real property in other countries is often collected through the assistance of local experts.
- Even though national experts still must be used to understand the meaning of the information, improved access to information will be of help in order to put more specific questions to such experts, and also make it easier to be able to refuse a loan application at an early stage.
- It is very time-consuming to obtain the information.
- It is easier to get hold of information if the bank has offices of its own in a country, or there are established contacts with local experts.
- The institutions seek the information that is necessary to give an impression of the physical and legal conditions of the real property before any decisions about granting of loans and conditions of the loans.
- The more information the institutions have access to the greater chances to get involved in the local market.
- The European Land Information Service should provide information about, registered ownership, rights, easements, site leasehold grant/ possession, particulars of the rights of users, mortgages, earlier conditions, tax assessment value, purchase price, building information, encumbrances, environmental pollution and approval from authorities.

- The information is needed for decisions about loans/credits, property analysis and valuation, acquisition of property, exercise of authorities and property management.
- The information must be reliable, accurate and trustworthy and therefor preferably from a government-related organisation.
- It would be very convenient if the information could be obtained through "one-stop-shop" service, irrespective of the type of organisation.

The study indicates that there is most certainly an increasing interest among consumers in the real property financial market to be able to carry out international transactions more frequently. This does however require that there is an easy way to get access to up-to-date and reliable information on land/real property across national borders. There is also a need to unify legislation, e.g. on repossession procedures to make it easier to do mortgages business across borders.

There are a number of different customer groups for the existing national services of this kind, the main ones being banks, credit institutions, property brokers, municipalities, and state authorities. Although their business areas differ, their information requirements are relatively similar. Information about ownership, mortgages, value and any restrictions affecting the property are generally the most common items asked for. This basic land information – including cadastral information on the properties themselves – is also often the basis for storing other kinds of information, which is used for business development, statistics, environmental planning, etc. The increasing wish to integrate land information and geographic information means that the possible user community is expanding.

The main users of the service will be found within the sectors that are the main users of the existing national land information services. The information may, however, initially mostly be of interest within the financial sector, e.g. banks and other kinds of credit institutions. Additionally, it can be envisaged that across-border land information will to an increasing extent be of interest to users within the public sector and for more public purposes. The need for information for environmental purposes is perhaps a prime example of this. A recent study published by the European Environment Agency in Copenhagen indicates that this is the case.

The project will therefore be able to highlight the need for the establishment of multi-purpose cadastres across Europe, and how a vast range of users within a number of different user communities has a need for such information.

Policy contributions

EULIS has received EU funding, as it will make considerable contributions to a number of EU policies. The funding comes from the eContent programme, which is under DG Information Society. The project will demonstrate how the utterly

important public sector land information can be pan-European accessed. The project has a concrete and hands-on approach and will open up access to data already available in digital form. The problems we face today with use of different formats in different countries, the lack of visibility and accessibility of existing data resources, and the lack of transparency of pricing policies, security policies and other conditions to obtain the information will be promptly addressed.

The project also reflects and supports emerging EC policy issues, such as the development of the single market, i.e. the free movement in the EU of goods, persons, services and capital. The project intends to support the achievement of the EC goal of a fully integrated and functioning financial service market. The project also supports other emerging EC policy issues, such as development and use of European digital content on the global networks and promotion of the linguistic diversity in the Information Society.

The proposed project will support the accession process with regard to the handling of issues related to land administration. Experiences from the project will be of specific interest for candidate countries in the process of reform and adjustment of their legal system, standards, and technical solutions concerning the handling of land information.

Project partners

EULIS is carried by nine organisations from different parts of Europe. They are:

- Lantmäteriet (Sweden)
- National Land Survey (Finland)
- HM Land Registry (for England and Wales)
- Registers of Scotland (for Scotland)
- State Land Cadastre (Lithuania)
- Kadaster (the Netherlands)
- Ministry of Justice (Austria)
- Norsk Eiendomsinformasion as (Norway)
- University of Lund (Sweden)

Two reference groups will be linked to the project, one with participants representing main user groups of the service and one with participants from other organisations in Europe responsible for providing land information. The interest for being part of the latter has been very positive, which is encouraging. This indicates that EULIS can be the platform for a real pan-European service. It is the intention of the original partners to extend the service to include additional partners as soon as the project finishes in mid-2004. Of course, this depends on others being able to provide the necessary access to information for the service.

Experiences from the project

The partners all have on-line access to land information in use. The technical systems, the regulations concerning the use of the information and the pricing structures differ between all. But more important than such differences are the common business-like approach to providing services, the strong focus on customers and their needs, and on cost efficiency. This makes it easy to keep the work within the original parameters and on track.

The fact that the partners in the project have all entered the project on a voluntary basis, with a belief that a service of this kind has a room to fill in the market place, also contributes to a surprisingly easy working environment. Another reason for this is the fact that all the partners were quite familiar with each other, and that the persons involved in the preliminary discussions already knew each other. It would undoubtedly have been much harder to design the project and get the applications for funding ready in time if that had not been the case.

Of course there are problems or obstacles that have to be solved along the way. To a certain degree languages can be a problem considering the very specialised terms and expressions used in this field. This partly depends on the very different legal systems and concepts among the jurisdictions involved in the project. But so far, we have been able to overcome this without too much effort. I think it is true to say that the participants concentrate not on the sometimes rather big differences but more on the common features, keeping the demands of the customers in focus.

The intention is that the development of the EULIS service shall not lead to changes in the existing national systems or legislation. But in a longer perspective this might be unavoidable, as users get better possibilities to compare information and service levels between countries. If that leads to changes, it will be the result of market demands, not because of the project as such. This ultimately leads to the conclusion that involvement in international projects, and internationalisation in general, will lead to new and perhaps "radical" demands from the market.

ARCCADASTRE

Background

As part of our experience in the development of tools for carrying out the tasks of Lantmäteriet, in-house software for topographical and cadastral mapping was developed at a very early stage. The information contained in various cadastre and legal land registers, utilities registers and map databases is a key, infrastructure component with an immense capital value, in both the public and private sectors of a nation's economy. A well-functioning map and land administration system is one of the essential corner stones in a market economy. So it has been quite natural to make

sure that we have good and reliable tools when building up such registers and databases.

The original systems for this (the AutoKa family) have been enhanced over the years, and many new facilities have been added. Three years ago Lantmäteriet decided to develop an entirely new product, and to replace the existing ones in order to increase efficiency in handling all kinds of spatial data. The prime target group was of course to be Lantmäteriet itself, and other users carrying out the same activities in Sweden, i.e. within the municipalities. The intention was to provide the software solutions for capturing, maintaining and managing survey data and cadastral information.

The product

ArcCadastre has been developed to be a tool suitable for cadastral and mapping activities with different kinds of spatial management and in different situations around the world. Although land administration systems and records vary in format and content from country to country, they all have at least one requirement in common, namely, the need to satisfy the requirements of the land market. The demand for land registration services and associated data is increasing year by year together with a need for systems, such as Geographic Information Systems (GIS), that can be used to efficiently manage the considerable volumes of data and also make it available to a wide range of users.

ArcCadastre is designed to support cadastral surveying activities, to handle geographical data and for map production. It is well suited for customer / country-specific extensions. The core product is the basic cadastral software and the tool for all mapping activities in the fields of large scale, small scale and utilities map production. The product contains all functionality needed for surveying and mapping purposes and for the greater part of the functionality that is common to cadastral workflow in different countries. With ArcCadastre you work sequentially from field measurements via computation, processing, presentation of various maps and reports, to a final storage in object oriented databases. ArcCadastre has been designed as a multi-purpose tool for handling geographic data together with non-spatial data from other databases. ArcCadastre´s extendibility is excellent due to the technology that was chosen for its development.

Functionality, which may vary between different user categories, or from country to country because of different local legal or other requirements, can be added by customisation. Hereby ArcCadastre can meet the needs of many user categories and for a wide range of applications including municipal mapping, managing cadaster systems, the production of cadastral index maps, public utilities companies, surveying and mapping, major real estate owners, land taxation purposes and land use planning.

The partners

After some initial planning we realised that we could gain considerably by establishing partnerships for this development. Lantmäteriet has therefore developed ArcCadastre together with its partners ESRI and Leica. With such international partners it was soon obvious that the product should be developed with not only a Swedish focus, but with a more global target group. Bearing in mind that AutoKa products already have a number of users in different parts of the world, the international focus was quite logical for Lantmäteriet as well.

ArcCadastre has been built on the latest, proven high technology platforms that are available within the respective technological fields. This means that ArcGIS from ESRI Inc. has been used as the base for the development of ArcCadastre and that Survey Analyst from Leica Geosystems AG is used for survey and computation functionality. Arc Cadastre also uses FME from Safe Software Inc. for import from and export to various data formats.

Experiences from the project

This structure has meant that the development work has been carried out in different parts of the world, by teams working closely together but not actually meeting each other. An important aspect of this long-distance relationship has been that the work tasks for the different teams have been clearly defined, in size as well as in time. To ensure that the teams are aware of the project's progress, weekly videoconferences have been held at fixed times. Therefore the delays that are a permanent fixture in projects like this have been identified early despite the distance between the teams involved. In addition, the project managers found that personal meetings should be held on a regular basis, to make it possible to have more detailed run-throughs of progress. Such meetings have been held every third month.

One effect of having teams working in different parts of the world has been that it takes longer time calendar wise compared to having the whole project in one place. But this effect has been matched – and considerably so – by the value of co-operating with those best equipped for certain tasks instead of trying to do it on your own, and the knowledge gained through this.

A very important aspect of ArcCadastre development has been the strong, personal support from top management within the partner organisations. Closely linked to this has been the wish to identify clear and distinct roles for the partners, both in the development of the product, and in the subsequent marketing. As the development process takes considerable time, these roles have been modified over time. These discussions have always been handled with considerable business expertise by top management without interfering with the actual development.

Although top management involvement has been important, it has also been very important for Lantmäteriet, being the owner of the product, to have a strong involvement from the local representatives of the other partners. The local ESRI company has not actively participated in the development, but has at all times taken part in the strategic discussions. This has undoubtedly contributed to a supporting environment.

CONCLUSIONS

These two projects illustrate two different approaches to supra national partnerships. But in many ways the processes of establishing the projects and of managing them are similar. There must be a genuine, sincere interest in joining up, the partnership must be designed so that it becomes a true win-win situation, and there must be shared vision of what is to be achieved. The differences in working methods, in languages and organisational or legal structures can be overcome – as long as you are aware that they are there! And the problems of working at large distances – and in different time zones – can be minimised through the use of video conferences and project management tools.

A very positive result of this kind of co-operation is the knowledge gained from working with partners from a different environment. The gain in skills and competence of staff involved, and for the organisation, is a definitive bonus.

So, an obvious conclusion must be that these kinds of partnerships across national boundaries have come to stay. But my belief is that they also will, and have to, grow. Much of what we have so far regarded as strictly national interests and core businesses in the land administration sector will be "deregulated", at the same time as our customers become less national and more international. Just as national airlines with heavy government subsidies are now (almost) gone, it is quite probable that various land administration activities will become increasingly international.

Growing dependence on advanced and expensive equipment, higher degrees of specialisation and more standardised procedures will raise questions about benefits of co-operation and partnerships between national land administration agencies and between such agencies and private sector parties. The question is just how fast this process will be.