

## How e-government and land information align

e-Government: 'The use of information and communication technologies to improve the activities of public sector organisations'. All over the world, governments and land registries combine efforts to provide society with the benefits of e-government. This special edition of Abroad explains how the Dutch government and Kadaster align e-strategies.

To realise e-government, three aspects are at stake. If the government wants to safeguard the availability, access and use of land information for society, it should facilitate a (spatial) data infrastructure. If it wants people to use the facilities, it should facilitate electronic, legal and

economic transactions and participation. If data suppliers, like ourselves, want to respond to the needs of society and deliver high-quality electronic information and services, we should improve the availability and access to our datasets.

### What is the Dutch government doing to create an infrastructural facility and to put digital datasets in place?

#### Registering authentic data

First of all, we observe the need for restructuring the information architecture for government data. This is the case in many countries. The problem is that the same data are recorded many times in different databases without knowing the quality and source of the data and without appropriate access to these data. This creates an inefficient and ineffective information environment. This results in a government that inconveniences the public and the business community with requests for the same data many times; it does not offer

citizens a good and rapid service, it is misled by others and makes costs higher than necessary. For this reason, the Dutch government embarked on the concept of authentic registers some time ago. These were defined as high-quality databases accompanied by explicit guarantees on quality assurance. They are due to contain essential and/or frequently-used data pertaining to persons, institutions, issues, activities or occurrences. The registrations must be designated by law as the sole

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officially recognised registers of the relevant data, to be used by all government agencies and private organisations. One might also speak of 'key' registers or 'base registers', as is done in some other countries.

At present, six registers have been assigned in the Netherlands as the true core of a wider system of key registers: the register of personal records, the trade register, the cadastral registers and maps, the register of geographic information 1:10,000, the register for buildings and addresses. For all six registers special legislation was submitted to Parliament, providing state guarantees for quality specifications, compulsory use by all government bodies, financial aspects, rules for liability and compulsory feedback by users in case of mistakes. A change of the Cadastre Act was recently endorsed, upgrading our cadastral registration to a key register.

#### Registering restrictions of public law

The Dutch government has repaired a loop hole in land information. The availability of information on the status of land regarding private law (e.g. ownership) was well regulated. However, the



Registrations for public benefit



Putting digitisation to use

availability of information on the status regarding public law (e.g. monuments) was poorly regulated up till now. Many government bodies, such as ministries, provinces, municipalities or water boards, have the competence to impose restrictions. Already in the 1970's notaries and real estate agents complained about the effort it took to collect all relevant public restrictions on land. Through the years, the need for a sound registration of these public restrictions ('public

encumbrances', 'charges') became manifest. In July, a new law finally came into force. Municipalities are now obliged to maintain an official register of restrictions imposed by the relevant municipality, this means that about 450 municipal registers need to be created. All other public restrictions, for instance imposed by ministries and provinces, continue to be recorded by Kadaster. All information is accessible through our Kadaster-on-line service, achieving country coverage.

#### Expanding digital datasets

The Dutch government has expanded the use of datasets which are digital. After the enforcement of the new Spatial Planning Act (expected end 2007), all spatial plans (emphasis on zoning plans) must be in

## National access services

It is a challenge to collect and maintain data at one source, while at the same time safeguarding access from other registers. This problem was solved by introducing National Access Services. This is the solution to apply subsidiarity: collect and maintain data at the appropriate source, without losing access facilities. Such an online access service will be offered for all key registers. For the key registers of buildings, addresses, cadastre and geography it has already been decided that Kadaster will manage the national access service.

digital format. Various pilot projects are currently under execution. The aim is to improve citizen participation and integration with other datasets. Since 2003 the Ministry of Transport, Public Works and Water Management generated a digital elevation model of the country, based on airborne laser altimetry, replacing a 40-year old relief map. The production of a (digital) topographic base map started in 1975 and was covered nationwide in 2000. One of the distribution channels is an online service ('Basiskaart-on-Line'), operating since January 2005.

#### Providing subsurface information

By letter of 23 November 2004, the Dutch government informed Parliament about its concerns regarding the lack of regulations on planning of subsurface space. The government recognises the importance of subsurface infrastructure for the national economy and proposes to treat subsurface space similar to space at surface level. A reliable spatial planning, development and control system is therefore required. An estimated 1.7 million kilometres of cables is hidden in the ground. Zoning plans in the near future must include subsurface infrastructure. To develop experience on the issue, four pilot projects are currently running. It has already become clear that planning will be a difficult exercise without relevant information about subsurface elements. This policy issue therefore teams up with another letter of the government to Parliament, regarding sound registration and information exchange of underground topography.

#### Managing geo-information

For many years, the mandate of the National Council for Geo-information RAVI has coordinated geo-information in the country. The government became active only when the actors in the field were not able to solve their problems. Since recently, the government has also taken political responsibility responding to the growing importance of geo-information for decision-making processes. This resulted October 2006 in the establishment of a GI Council for high officials of various departments and other stakeholders, to propose measures and take initiatives.

## How does the Dutch government stimulate the practical use of the e- government infrastructure?

### Enabling digital authentication

Persons applying for an electronic transaction with the government must be digitally authenticated. The government therefore created the digital identity code (DigiD). This provides users with a personalised login code for the full spectrum of contacts with governmental bodies. The number of participating bodies is rapidly increasing. DigiD can send the DigiD-code with a transaction code by SMS, providing extra authentication for specific transactions. Various levels of authentication are therefore possible. The government offers public key regulations, providing for identification and authentication of individuals and parties necessary for message transfer, electronic signatures for legal transactions and encryption for securing messages. Websites can also be protected.

### Introducing unique ID-numbers

On 12 September 2006, the Dutch Parliament endorsed a law providing for unique individual numbers for citizens and people who reside in the country on a long term basis. This number will be



the successor of the unique individual fiscal number issued by the Tax

Authorities in the late 1970's. The new Citizen Service Number will have a broader field of application and will be a cornerstone in the e-service to citizens. Similarly, the already existing Unique Company Number, issued by the Chambers of Commerce, will be succeeded by a Unique Legal Entity Number, currently under development.

### Managing the e-services

And of course the government needs to administer the key electronic government services. For this reason the government recently created a government-wide Shared Service Organisation for ICT (GBO Overheid). This organisation will be responsible for tactical and operational management of generic shared key-services for e-government, such as the administration of DigiD, PKI (Public Key Infrastructures), security tasks and portal facilities.

## How does Kadaster enhance the Dutch e-government developments?

### Optimizing electronic conveyancing

In the Netherlands, the electronic submission of deeds (lodging) is legally possible since September 2005. Land transactions are an important part of the economy. Although to date more than 90% of the notaries have subscribed to the system and 75% of the deeds are already submitted electronically, the

experienced situation is not optimal. One of the difficulties to capitalise on electronic submission of deeds is the freedom of notaries to draw up a deed as they like. Recently the notaries and Kadaster signed an agreement for further co-operation on this issue. The next step is that notaries can use model-deeds divided into two parts. The first part, a strict model, comprises all the essential data of the transfer; it will be registered once by the registrar and kept in electronic stock. In the ICT-world this concept is known as a style sheet. The second part of the deed comprises space for texts specific for the case. The first part, because of the model make up, allows for automatic updating of cadastral databases. This solution pays respect to the notaries and allows for automated updating of cadastral databases.

### Good Practice label for Dutch e-conveyancing

The European Commission announced that the Dutch system for electronic conveyancing is one of the finalists for the European e-Government Awards 2007.



This means that the system has already earned the Good Practice label. In 2005, Kadaster won the Award with its online system Kadaster-on-line.

Established by the European Commission, these awards are presented every two years to organisations which have made an innovative contribution to electronic government. The presentation of the 2007 awards is due for 20 September.

### Creating national datasets

For easy, cheap and quick search we centralise our datasets. At the introduction of land registry and cadastre in 1832, the deed registers were limited to the districts of the local courts. This was later extended

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when their jurisdiction coincided with the territory of provinces. However, electronic submission includes the collection of all deeds at one virtual point, so why not take a chance to create a seamless deeds register at country level? This national deeds register, the successor of the existing 15 provincial deeds registers, was introduced on 12 June 2006. Similar considerations also go for the name register. Like the deeds registers, the register of names of rightful claimants (an important key register to the deeds register) was structured province-wise. When a customer wanted to know all real estate in the whole country owned by a certain person, it was necessary to inquire all 15 databases before getting the complete overview. This was particularly inefficient for mortgage banks. Per March 2006, the national register of names became operational, after a huge conversion and data-cleaning operation.

#### Expanding online distribution

Online distribution of land information is already becoming traditional since the introduction of our first electronic service in



Kadaster information also available through SMS

1993. Complete renewal of our site in 2004 gave another boost to these sales. Right now, more than 20 million information products are sold annually, while some years ago this was not

more than 5 million. The number of subscribers is also growing, currently up to 17,000 customers. The next step is 'My Kadaster' which transforms the Kadaster-on-line service into an individualised one.

#### Increasing the information range

The Dutch government is concerned about 40,000 excavating incidents per year. It appears that the annual costs for these incidents amount to € 40-75 million. To reduce the risk of digging accidents, the government informed Parliament in 2004

that a national system will be set up to safeguard efficient information exchange on the location and lines of cables and pipelines between



Exchanging data on cables and pipelines

construction companies (the digging parties) and the owners of the subsurface elements (mainly telecom- and utility companies).

This law passed Parliament recently. To establish a single portal, the existing Cable and Pipeline Information Center (KLIC) will be transferred to Kadaster. The owners of subsurface infrastructure are obliged to make their data accessible between 2008 and 2010.

#### Providing 7 x 24 access

A customer accustomed to e-government also will ask questions through electronic means, preferably 24 hours a day. Office hours are not relevant any more. Therefore, Kadaster offers a new service by which customers can ask questions 24 hours a day and are answered by an expert database comprising many different topics of interest. What applies for electronic communication, applies also for telephone conversations. Since December 2006 Kadaster is accessible by telephone 24 hours a day. Within office hours, calls are answered by office employees, outside office hours by a specialised call centre.

#### Offering e-mail billing

Customer surveys revealed that our invoicing and billing were not clear enough, they were too late and not compatible with their own systems. Of course, in the e-governance era, customers require e-mail billing. This became possible in 2006. Customers receive their e-mail invoice in such a format that it can be used as automated input in their own financial systems. The invoices are specified in a customer friendly manner. At present 3,500 customers are linked to the system. New customer surveys show that clients are satisfied with the new system. The pay-back time for Kadaster is less than two years due to reduction of mail and printing costs.

## Kadaster

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**Editorial address**  
P.O. Box 9046,  
7300 GH Apeldoorn  
The Netherlands

**Editing staff**  
Karl Adams  
Jan de Jong  
Paul van der Molen  
Telephone  
+31 (0)555 28 56 24  
Fax

+31 (0)553 55 73 62  
**E-mail**  
kadaster.international  
@kadaster.nl

**Website Kadaster**  
www.kadaster.nl  
**Design and layout**  
leesTekon,  
Doetinchem  
**Print and lithography**  
totdrukwerk,  
Apeldoorn

## Win-win

Although we have undertaken many activities, we know for sure that there are many more to come. Not only professionally interesting for ourselves, but also providing better service to our customers. We gladly gear up for this win-win situation.

As more and more countries embark on e-government, we are happy to share our knowledge and expertise.

