



# Land Governance in an Interconnected World

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## Online portals support European Interconnection of Land Registers (ID 258)

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## **Abstract**

Recent developments in the e-Justice domain are striving to open up and connect important key registers across Europe. In a modern society, a comprehensive, accurate and up-to-date registration system is vital not only to protect the ownership of property, but also to have a reliable source of information for tax collection, privatization of state property, legalization of buildings, city planning, valuation, environmental protection, etc.

The creation of a true single market and the free movement of capital is a great challenge to a united Europe. Cross border information on real estate that is easily accessible and online is a crucial prerequisite to success. EULIS was created to fulfil this purpose.

The European Land Information Service (EULIS) initiative to construct and maintain a portal for cross border exchange of property and land information has come a long way since the initial project to demonstrate its feasibility. The land information is obtained from the official Land Registries in the European countries.

Since the beginning of the EULIS initiative, the EU-Commission was a very important supporter of the basic concept of connecting national land registers to one European platform. In 2008 the Commission decided to establish the e-Justice portal. In 2012 the Commission developed strong interest to integrate the EULIS portal in the e-Justice portal, thus giving direct access to the land registers of the member states via its own portal.

In December 2015 the EU Commission started the Land Registers Interconnection (LRI) project that will eventually deliver a completely renovated and extended interconnection portal. In February 2016 the basic design and global requirements were presented to a special expert group. Two countries will be involved in the pilot phase of the project. Functionality will be evaluated and fitness for purpose is a key criteria.

**Key Words: EULIS, property information, Land Registry, LRI, online**

## 1 Introduction

The EULIS initiative has come a long way since the initial project to demonstrate its feasibility and, with its official launch due in November 2006, it has been a reality for over 10 years. The aim of the European Land Information Service (EULIS for short) is to provide easy worldwide access to European land and property information from the official Land Registries<sup>1</sup> in order to underpin a single European property market. The paper provides an update on the current state of play as well as initiative of the EU-Commission to build a similar portal.

The EULIS organisation, originally consisting of eight of Europe's advanced Land Registries and currently 19 members, officially launched EULIS as an operational service in November 2006. From this date, professional users of national on-line land information services had cross-border access to equivalent services in other European countries. A phased rollout was been planned to suit individual providers' IT development timetables and to minimize risk. The first phase saw cross-border access being provided between England and Wales, Lithuania, the Netherlands, Norway and Sweden. Another number of countries came on stream over the following twelve months. Specifically, these are the remaining EULIS consortium members, representing Austria and Ireland.

The EULIS consortium has been encouraged by the exceptionally large number of supportive responses that have been made in response to the Commission's Green Paper – Mortgage Credit in the EU, which questioned whether it should continue to play a continued active funding role in such initiatives. These echo the recommendation in the Commission's Forum Group on Mortgage Credit that "the Commission should provide financial support to the EULIS initiative, to enable and encourage its expansion across the EU". In the period 2006-2015 the EU funded a number of projects to build up the interconnection portal.

The EULIS portal was closed mid of 2017. It was done the moment that EU commission (DG-JUST), launched the first phase of the new portal. It is expected that by the end of 2018 2 countries will connect to the new portal: Austria and Estonia.

The quality of justice requires efficient and rapid access to legal information that citizens and justice professionals need to know. This includes obtaining when necessary reliable information on property rights of citizens and enterprises and verifying whether the registration of these rights is valid, for example, prior purchasing or selling a property. Public authorities and professionals, including notaries, geometers, lawyers and credit institutions, need to have access to land registers across Europe.

In order to examine different ways of providing cross-border access to land registers<sup>2</sup>, the European Commission (EC) DG Justice (DG JUST) has contracted in 2014 the iLICONN consortium to conduct a feasibility study that should inform a decision on whether or not a Land Registers Interconnection (LRI)

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<sup>1</sup> Land Registry: national organisation keeping the registers for property information and in many cases maintaining the cadastral index map. In several cases this latter function is under the responsibility of a separate organisation like a cadastre agency or a geodetic institute.

<sup>2</sup> 'Land Register' (LR) is used in its broadest meaning: a national (or regional, if no national file exists) electronic information source providing access to relevant land property data.

will be developed for inclusion in the European e-Justice Portal. In 2015 the Commission approved the construction of a new portal. In the same year European Design started the project that should result in the implementation of LRI-portal. In 2017 Austria and Estonia were awarded a grant to support the build of a connection between their national portals and the LRI-portal.

## 2 The Interconnection principles

### 2.1 Online information at national level

Most countries have widely used information services, providing society with land and property information. A feasibility study done by the European Commission (iLICONN, 2014) revealed that the vast majority of European member states (23 out of 28) provide on-line access<sup>3</sup> at least on some subset of data as illustrated in figure 1.



*Figure 1. On-line availability of property information in Europe*

Across each Member State, there is at least one land register with fully digitized data. Within a very few Member States the information is not fully digitized. However, they are currently consolidating efforts in achieving this objective. Thus electronic access exists today, at least for the internal needs of national administrations when registers are not on-line for external users. Therefore the land register digitization picture in Europe is close to 100%. However the whole land register history and all properties are not always fully covered, mainly because electronic registration started around or after year 2000 in a number of countries and it was not always possible and reasonable to provide the effort to digitize the old historical backlog.

Access to electronic registers is mainly depending on policy decisions (each Land Registry checking that no legal barrier exists) and on technical capacities. In some cases the register is maintained off-line, meaning that the Land Registry staff only has access to it. In other cases, some on-line access is implemented, either to the register or to a specific subset of information extracted from the register, for the general public or for specific categories of professional users.

The study revealed that nearly all Member States with electronic off-line or paper based registers would answer requests from users from other Member States if these are sent electronically via a standard form: in case the register is off-line for external users, the relevant authority would provide an answer by mail (asynchronous way).

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<sup>3</sup> On-line information is considered as data available on Internet.

When currently proposed by land registers, the existing available query forms are written in the language of the country owning the register (in the case LRI would be based on a common/interoperable data structure, this should not be necessary anymore).

After the request is received, the answer - where not provided on-line - is manually retrieved by the registrar from an off-line or paper based system and then submitted in a response to the original request, always in the language of the country owning the register. Currently, only one Member State with an off-line register does not see the possibility to provide asynchronous answers to future cross-border on-line requests.

## 2.2 Concept of the portal

Because of the number of diverse land register-system needing to be connected, a decision was taken early on that the technical design for EULIS should be as simple as possible. The chosen design achieves this using portal technology.

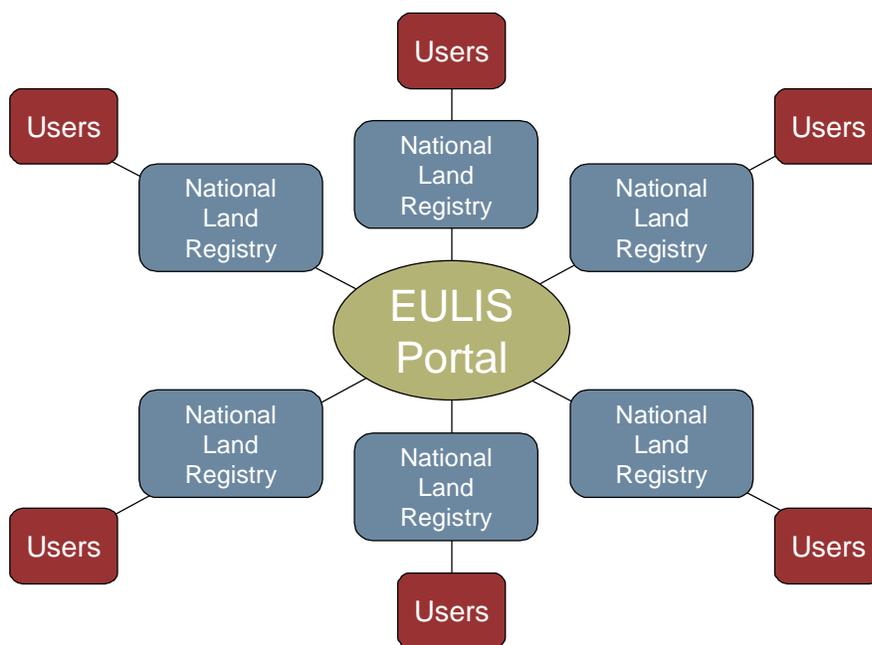


Figure 2. The as EULIS portal acts a hub to link different LR-systems

The EULIS portal acts as a hub through which the different land registration systems are linked (see figure 2). The EULIS service is provided via the internet and via the national land information services connected to the EULIS portal. As soon as national providers come on stream, their customers are able to access systems in other countries through the EULIS portal simply by logging on to their national system in the normal way. The national systems take care of matters such as authentication, security, billing and firewalls. Frontline customer support is provided by customers' own national providers (Atkey, 2006).

## 2.3 Target Users

Although it is ultimately the citizens of Europe who have the most to gain from an interconnection portal, its target users are the professional intermediaries through which citizens act, like lawyers, conveyancers and notaries, and service providers such as lenders and real estate agents. These stakeholders are interested in efficiency; ease of access is important to them, as is the ability to understand the information received, in context, and the implications.

By making it easier for professionals to do business in other jurisdictions EULIS aims to promote the economy of the European Community by:

- breaking down barriers to cross-border lending;
- enabling more competition in the secured credit and real property markets, giving more choice to borrowers;
- providing links with non-EU countries; and
- encouraging the spread of best practice.

Apart from professional users in real estate domain, a lot of interest from organisations can be noted from organisations, like tax authorities to check on (not declared) properties and social welfare organisations to check on the real estate assets of beneficiaries.

## 2.4 Accessibility

The accessibility of online information varies largely across the countries. The most common practice across the EU is that Land Registries share information with registered users only. Several mechanisms for authentication exists.

In some countries the user has to prove – or at least to declare or invoke - a legitimate interest in order to get access to the land data. This interest is an assumption in many cases: owner of the property, notary, bailiff, employee or public servant acting by reason of his office and institution of judicial superintendence do not have to declare their legitimate interest.

In 18 Member States, it would not be currently possible for everyone to search for information using the person's identification data. However, when searching on other criteria, such as the address or a property ID, it is possible to discover the owner. This information is available in 27 Member States; moreover, in 15 Member States search functionality is accessible to everyone whereas in 9 Member States it is available upon demonstration of a legitimate interest.

For EULIS-portal, the “circle of trust principle” was introduced: if a Land Registry in a certain country authorizes and authenticates a user, this users is automatically entitled to get information from the other connected Land Registries.

## 3 The features of the EULIS-portal

### 3.1 Cross border information exchange

The EULIS partners are aware of the studies, showing that despite the economic integration in many other areas of European activity, secured credit lending takes place almost entirely within national boundaries (Mercer Oliver Wyman 2003). They also subscribe to the widely held view that increasing the volume of cross-border lending would benefit the economy of Europe and its citizens. They believe that EULIS has the potential to mitigate or remove, in a very practical way, some significant barriers to cross-border lending, including:

- language barriers as all the reports and reference information is available in English language;
- lack of knowledge of practices, procedures and of the relevant laws and regulations in other countries;
- lack of access to land registration information.

The EULIS-portal seeks to overcome these barriers by increasing the accessibility of land and property information. At the same time the EULIS website provides information on the use of the application, a glossary with explanation on terminology and a mailbox-function, where users can ask questions of any kind

The attractiveness of the portal is dominated by the number of (large) countries connected to the portal. When England was connected the number of information requests mounted to 50.000 a year. After England was disconnected in 2012 the usage plummeted. Users find solution to connect directly to countries of interest. Nevertheless the practical use of the portal is undisputed also because language problems are largely covered by the translated documents and glossary.

The information provided through EULIS falls into three broad categories. In the next paragraphs more detailed description of the available functionality will be provided.

### 3.2 Various types of information

#### 3.2.1 Information from the official land registers

The official 'Land Information' presenting details about individual properties and loans, provided online, direct from the official land registers, can be considered as the prime information. The information is taken from the land registers and contains administrative information on the title, mortgage loans, burdens, address and identifier of the property, etc. See for an example Figure 2, that shows an excerpt from Kadaster in the Netherlands. The same excerpt is available in the English language.

<b>Kadastraal object</b>			
Kadastrale aanduiding:	HAARLEM II R 362		
Grootte:	2 a 7 ca		
Coördinaten:	103589-488226		
Omschrijving kadastraal object:	WONEN		
Locatie:	Crayenestelaan 61 2012 TJ HAARLEM		
Koopsom:	€ 737.500	Jaar:	2008
Ontstaan op:	24-11-1987		
<b>Publiekrechtelijke Beperkingen</b>			
BESLUIT OP BASIS VAN MONUMENTENWET 1988			
Betrokken bestuursorgaan: DE STAAT (ONDERWIJS, CULTUUR EN WETENSCHAPPEN)			
Ontleend aan:	4 16275/9	d.d.	15-12-1999
<hr/>			
<b>Gerechtigde</b>			
1/2	<b>EIGENDOM</b>		
	De heer LEONARDUS PETRUS THEODORUS		
	Crayenestelaan 61		
	2012 TJ HAARLEM		

Figure 3. Excerpt from the land register (source: NL-Kadaster)

The land information can also refer to graphical information on a specific property. In many countries a cadastral map provide information on the location of the property, the parcel number and the boundaries of the parcel. The information supplied on boundaries can be accurate based on field measurements and more general based on an index map. Figure 4 shows an example of an extract of the cadastral index map from HMLR<sup>4</sup> in England.



Figure 4. Excerpt from the cadastral index map (source: HMLR England)

In principle any property related information or information that might be relevant for (potential) users can be made available. This might be zoning information, topographic maps indicating the location, or even pictures of the property.

<sup>4</sup> HMLR: Her Majesty Land Register; the official land registry for England and Wales

### 3.2.2 Reference Information

Due to large cultural diversity and different legal traditions, the methods of property title registration differ considerably between groups of countries. Against this background of diversity, it is vital to ensure that the legal value of any cross-border land register excerpt is clearly communicated. Therefore, each element of an excerpt cannot be extracted and presented out of its jurisdictional context. It must be complemented by supporting information that guides the reader to understanding the legal value, the possible uses and the meaning of the communicated information.

In other words the reference information enables users to understand the outputs they receive from other countries and includes information on register contents, conditions for information usage, legal aspects, etc. The Reference Information is stored in the EULIS portal in a standard structured format (see figure 5), maintained by the participating organisations to agreed standards. Although the content is different for each country, the standardized approach makes it easier for users to navigate. It also enables comparisons to be made between countries and makes it simpler for new countries to join the service.

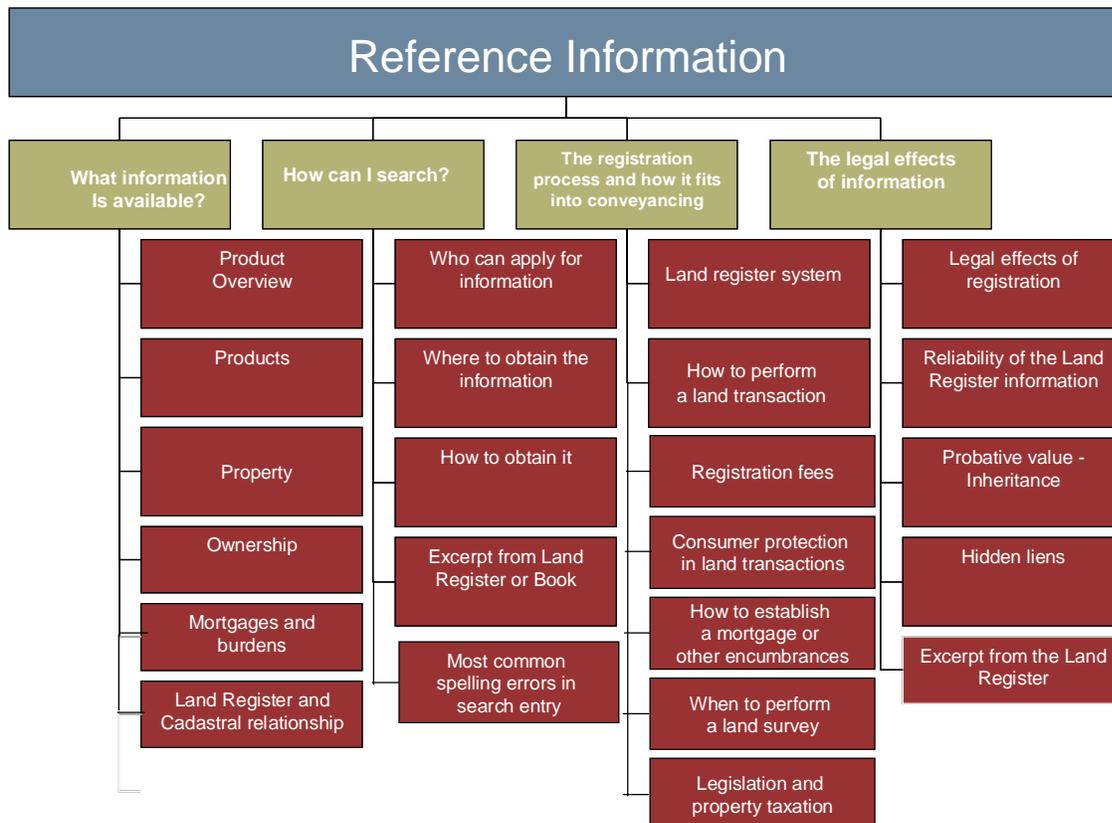


Figure 5. Structured Reference Information is a key feature of the service

Interesting to mention is the IMOLA II project that has been launched by ELRA (2017). The objective of the project is to facilitate the creation of a semantic common area of justice in civil and commercial matters.

### 3.2.3 Glossary of terms

Another important feature foreseen is the multi lingual glossary. Initially, information from the land registers will be presented as it is, in the language of the originating service, and Reference Information is in English. However, another key feature is the EULIS Glossary, which provides a multilingual search facility for key land transaction and registration terms and explains national differences compared with equivalent terms used elsewhere. The glossary can present the terms in different languages at the same time (see figure 6).

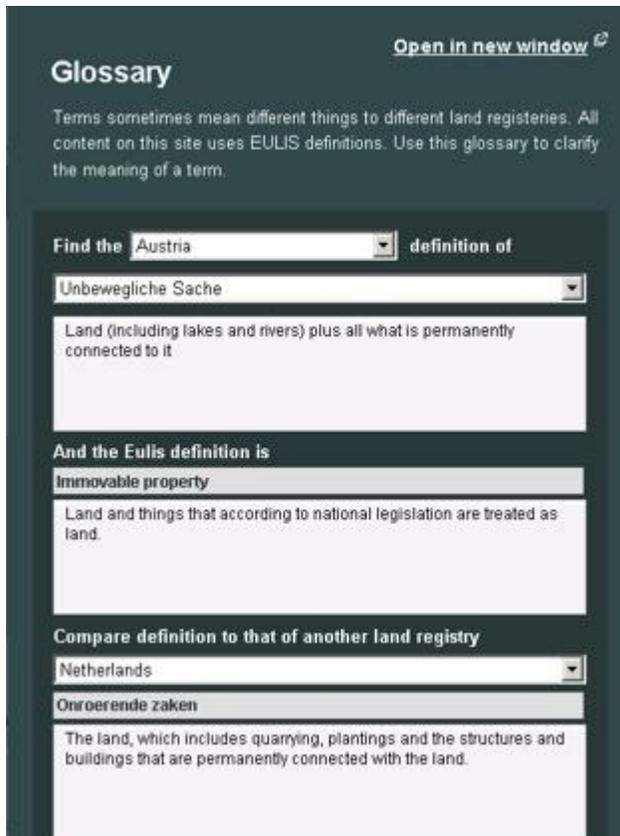


Figure 6. Glossary: source EULIS website

The scope for developing more multilingual facilities is an area that has interest for the future. Also this aspect is covered by the IMOLA II project.

### 3.3 Funding

Funding the development of the portal has been an important consideration for EULIS organisation, because it is formed of public sector bodies, most with strict rules governing the sources and application of funds, and limits on the extent to which they can finance developments for the wider benefit of Europe as a whole.

European Union funding has therefore been a key enabler, initially in supporting the demonstrator project and, more recently, in helping to introduce EULIS to the stakeholders in Europe.

Ongoing running costs to maintain the portal are relatively modest and are shared equitably between the participating organisations. It is expected that running costs will be covered by income from sales of information through the EULIS portal – for which participants' usual fees and charges will apply, plus optionally a small surcharge to domestic customers for information supplied from other countries. The keys to success was to achieve customer take-up and adequate European rollout during the initial years of operation.

## 4 The Land Registry Interconnection project

### 4.1 Introduction

In December 2015 the EU Commission started the Land Registry Interconnection (LRI) project that will eventually deliver a completely renovated and extended interconnection portal. In February 2016 the basic design and global requirements were presented to a special expert group. Early 2017 the detailed design of the portal and user interface were delivered. Currently the first phase is almost ready and testing can start. Two countries will be involved in the pilot phase of the project. Functionality will be evaluated and fitness for purpose is a key criteria

The basic concept of the portal is quite simple. The EU has a portal that provides all kind of judicial information (see screen shot) in figure 5. One of the entries pertains to the 3 key registers (1) and land information can be reach through entry on European level (2)



Figure 5. Screen shot European portal for e-Justice

### 4.2 Design of the portal

Based on the EULIS-portal design, the European Commission defined the basic flow of information. Figure 6 illustrates this basic flow and functionalities of the LRI-portal.

Member State “B” manages its Land Register reference information for the Portal. The Portal provides translations of this information [1]. A user from Member State “A” (e.g. a notary) registers on the Portal entry point and, after agreeing on terms and conditions provided by Member State “B”, asks for interconnection with Member State “B”’s register [2]. If needed (according to Member State “B” terms and conditions), the portal requests certification of the user’s professional capacity from a competent

authority, which may belong to Member State “A” [3]. The competent authority certifies the user’s professional capacity [4]. The certification is forwarded to Member State “B” [5]. Member State “B” assesses compliance and decides to authorize access (or not), according to its own conditions [6]. The user fills the query form and the relevant available land register communicates information, if any, in a synchronous (preferably) or asynchronous manner. Information is communicated with the applicable disclaimer, legal value, conditions of use. The e-Justice Portal will facilitate understanding (for example: standard translation of applicable conditions) [7]. If there is a fee to be paid, an electronic payment system is implemented [8].

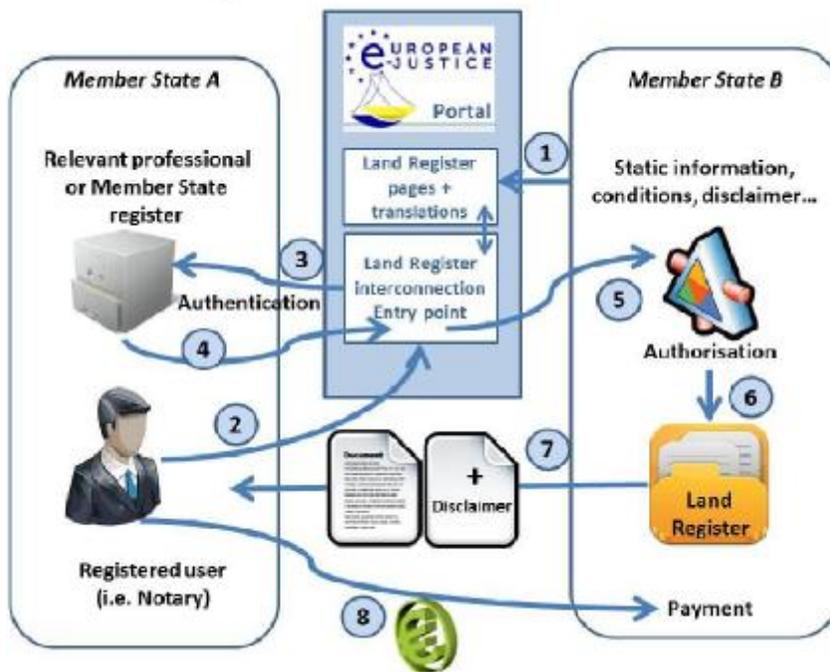


Figure 6: Flow of information and payment

There is a few fundamental difference between the EULIS-portal and the concept use for the LRI-portal. In essence the EULIS-portal supports to connect between a user and a national portal directly. In the LRI-concept the portal always stays in the chain and all communication is routed through and controlled by the portal.

Another difference is the fact that EULIS provides a secured environment: after initial authentication, the users can select any country to make a search in any country without further authentication. In the LRI-portal the authentication must be repeated every time a new country is selected. Finally authorization and is a point of attention. EULIS used the “circle of trust”: if you allow me to see the information, you will get permission to view my information. In practice this means that once a user is authorized in his home country, he is allowed to obtain information from any of the connected countries.

The payment is also arranged differently. In EULIS payment is done based on monthly invoices, with no interference of the portal. In the LRI-portal the payment is done by credit card via a payment facility offered by the portal.

### 4.3 Search facility

The LRI portal integrates with national/regional land registers, for the retrieval of property information and documents (European Dynamics, 2017). When we have a closer at the flow of a search request, we note that a well-orchestrated communication takes place. This functionality is based on web-services. The summary of the exchanged messages is presented in the below figure.

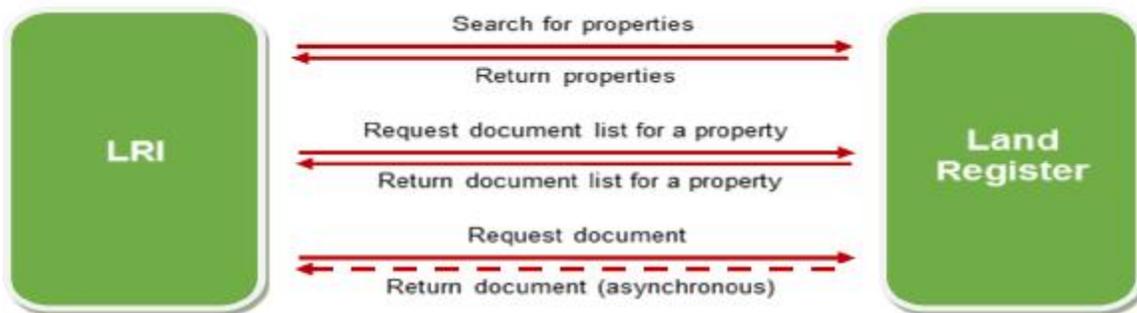


Figure 7: Messaging model for land information

The users has a great variety of selection option: address, name, parcel numbers, coordinate, etc.). Ones he has inserted a number of criteria the national portal will be requested to match these criteria with a specific property. One of the interesting steps is the option where the user can select a specific document (see figure 8). For a single property he has various information products at a specific price. Detailed on the report can be viewed. A user can add the desired document to the LRI shopping cart.

**Documents**  
This page presents documents of one property:

Property ID		Regional ID	
Property ID	1000	Regional ID	1200
Inspire ID	1100	Parcel ID	1300
Cadastral ID	1400		

Property address			
Country	Austria	Province	West Flanders
Municipality	Die Haan	Postal Code	8420
Street Name	August Pauwelslaan	Floor Number	2
House Number	2	Apartment Number	3
Building Name	Rokelara		

Documents					
+ Add to shopping cart					
<input type="checkbox"/>	Title	Price	Document ID	Immediate Delivery	Further details
<input type="checkbox"/>	Document 1	10 EUR	1000		<a href="#">View Details</a>
<input type="checkbox"/>	Document 2	15.30 EUR	2000		<a href="#">View Details</a>
<input type="checkbox"/>	Document 3	Free	3000		<a href="#">View Details</a>

3 records found, displaying all records - Page: **1**

Number of results per page:

Figure 8. Screen shot of the view list of documents

## 5 Conclusions

Based on the previous chapters we can draw the following conclusions:

1. The EULIS portal has proved to be a very important service for all kind of cross border activities and for various groups of professional users all over Europe.
2. The attractiveness of the portal is dominated by the number of (large) countries connected to the portal. Users find bilateral alternatives if the number of countries is less than 10 or when large economies like England are not connected to the portal.
3. Apart from the integration, future developments will focus more on customer needs and requirements. Simply providing data via a portal is not enough. The kind of information available is more important as market research proved.
4. Additional information needs, pertain to location bound information, tax and market values of properties, land use type, zoning plans, topographic maps, etc.
5. The portal can not only be seen as a piece of infrastructure. It is also important to maximize its use and it is therefore more important to stimulate national land registers and cadastre organisations to provide information for cross border use and to find out what kind of information really serves the public.
6. It is important to promote the use of the central information portal to customer groups such as banks, real estate agencies and notaries, to make sure that the portal is known to interested groups and also to stimulate usage.

## 6 References

**Atkey, Jon** 2006. EULIS Goes Live. Internal publication.

**Commission of the European Communities**, 19.07.2005. COM(2005) 327 final, Green Paper – Mortgage Credit in the EU, presented by the Commission.

**ELRA**, 2017. <https://www.elra.eu/prior-announcement-imola-ii/>

**European Dynamics**, May 2017. Land Registers Interconnection (LRI): Integration documentation

**European Dynamics**, October 2017. European e-Justice Portal: Land Registers Interconnection (LRI): User Manual

**Forum Group on Mortgage Credit**, 2004. The Integration of the EU Mortgage Credit Markets, DG Internal Market, European Commission.

**iLICONN Consortium**, September 2014. Land Registers Interconnection feasibility and implementation analysis.

**Mercer Oliver Wyman**, 2003. Study on the Financial Integration of European Mortgage Markets, commissioned by the European Mortgage Federation.

**Wouters, H.J.**, December 2015. Vital Spaces, EULIS: A BRIGHT FUTURE AHEAD?