

# **Artificial Intelligence developments: issues relate to immobile transactions. Land Registry aspects**

## **Result of research among ELRN Contact Points**

ELRN Seminar, Madera 24th November 2023

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## Artificial Intelligence and EU countries – short introduction and general overview

The topic of artificial intelligence (AI) is currently one of the most discussed when it comes to setting trends and directions for countries in Europe.

European Commission tabled a proposal containing a draft Regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (draft **Artificial Intelligence Act**) and amending certain legislative acts of the Union (21 April 2021)

## **Artificial Intelligence and EU countries – short introduction and general overview**

However, EU countries are at the different stage of a set on AI legislation at the national level.

Sometimes they are focused on international declarations, most of them on strategies and policy documents, sometimes they work on national legislation or are planning to have it.

## **Artificial Intelligence and EU countries – short introduction and general overview**

Most of the EU countries have already introduced some IT projects in land registries or geodesy: some of them are the most advanced and based on AI solutions, most of them are based on a very advanced software projects.

Some countries are still waiting...

## **Artificial Intelligence and EU countries – short introduction and general overview**

Many EU countries at this stage experienced a lot with AI and IT projects and can see some pros and cons of these solutions.

Lets' come to the details.

## Artificial Intelligence and ELRN / ELRA activities

ELRN and ELRA take an active part in that process and at Stockholm ELRN Seminar of 24th May 2023 initiated the studies on the issue.

The initiative started from the short presentation: *„Legal and technological aspects of the implementation of proposed EU law on Artificial Intelligence in the land registry systems“* by Marta Rekawek-Pachwicewicz

The topic found its continuity and in August 2023 the Board decided to develop it by the simplified research method based on the CPs Questionnaire titled *„Artificial Intelligence“*

## Artificial Intelligence and ELRN – the methodology and target group

- **Research methodology:** the Artificial Intelligence CP's questionnaire by the ELRA Board/Secretariat and researcher – dr Marta Rekawek-Pachwicewicz;
- **Target group:** ELRN Contact Point located in **the 22 EU countries:** Austria, Belgium, Bulgaria, Croatia, Cyprus, Greece, Estonia, Finland, France, Ireland, Italy (Agenzia delle Entrate) and Italy (Libro Fondiario), Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal (Instituto dos Registos) and Portugal (Assoc Sindical Consv Registos), Romania (Ancpi) and Romania (the Romanian Land Registry Association), Slovakia Republic, Spain, Sweden and **25 organisations in EU countries;**
- **Duration of the study:** 3,5 month (August - November 2023)

## Artificial Intelligence and ELRN – the methodology and target group

- **Content of the questionnaire:** short introduction and 3 questions
- **Senders of survey results: 17 EU countries and 19 organisations**  
Austria, Bulgaria, Croatia, Cyprus, Estonia, Finland, Ireland, Italy (Agenzia delle Entrate) and Italy (Libro Fondiario), Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal (Instituto dos Registos) and Portugal (Assoc Sindical Consv Registos), Romania (the Romanian Land Registry Association), Slovakia Republic, Spain, Sweden
- **No response: 4 countries:** Belgium, Greece, France, Luxembourg
- **No comments** on the questionnaire



## Artificial Intelligence and ELRN – the questionnaire:



### Artificial Intelligence Marta Rękawek-Pachwicewicz CP's Questionnaire

Artificial intelligence (AI) is a fast-growing group of technologies with the potential to deliver a wide variety of socio-economic benefits across all industries and areas of social activity. Draft of law on Artificial Intelligence in its' explanatory memorandum shows the history, reasons, and specific objectives of this regulation. Attention should be paid to the specific objectives, as the construction of 85 articles of the draft is based on them.

These include:

- To ensure that artificial intelligence systems placed on the Union market and in use are safe and comply with applicable fundamental rights law and Union values.
- Providing legal certainty to facilitate investment and innovation in the field of artificial intelligence.
- To improve governance and effective enforcement of existing fundamental rights legislation and security requirements applicable to artificial intelligence systems.
- Facilitate the development of a single market for lawful, safe and reliable applications of artificial intelligence and prevent market fragmentation.

It is very important to introduce Artificial Intelligence in public institution, LRs among them, in aware and effective way, based on good examples coming from other countries.

That is why, CPs are asked to answer these 3 simple questions:

1. Does your State have any national legislation or is planning to introduce one (as e.g Estonia) regulating artificial intelligence in the public sector with a special dedication to land registers? If yes, please shortly describe the initiative.
2. Can you give some examples of the use of AI in the LRs you represent, related to land registry management/functioning (e.g. special automatic algorithm)?
3. If yes, what opportunities and risks are involved into that project/s? If not, what possible, useful solutions could be implemented?

### Survey results Q1:

**Does your State have any national legislation or is planning to introduce one (as e.g Estonia) regulating artificial intelligence in the public sector with a special dedication to land registers? If yes, please shortly describe the initiative.**

**I. „No” answers – no legislation, no plans: 9 countries:** Ireland, Italy (Agenzia delle Entrate), Latvia, Lithuania, Poland, Romania (the Romanian Land Registry Association), Slovakia Republic, Spain, Sweden

**II. „Yes” answers – legislation or plans: 10 countries,** however large discrepancy in answers must be found, law generally not directly related to land registry, but to the application of AI in the public sector

- 1. international common declaration: 1 country**
- 2. national legislation: 1 country**
- 3. national implementation documents: 1 country**
- 4. Strategies, policy documents, programmes, charters, declarations, white papers (so called „soft law”): 7 countries**

### **Survey results Q1:**

**Does your State have any national legislation or is planning to introduce one (as e.g Estonia) regulating artificial intelligence in the public sector with a special dedication to land registers? If yes, please shortly describe the initiative.**

#### **II.1 „Yes” answer - international common declarations : 1 country – Cyprus**

*„Innovation Minister will support the adoption of the EU Law on AI in general, and already signed the common declaration among the 9 EU Mediterranean countries meeting in Malta this month.”*

#### **II.2 „Yes” answer - national legislation: 1 country – Finland**

*„However, in Finland there is legislation on automatic decisions in the public sector”*

### Survey results Q1:

**Does your State have any national legislation or is planning to introduce one (as e.g. Estonia) regulating artificial intelligence in the public sector with a special dedication to land registers? If yes, please shortly describe the initiative.**

**II.3 „Yes” answer - national implementation documents: 1 country – Netherlands:  
a specific and unique case**

*„Pending the creation of this legislation, on 21 December 2022 the Dutch government launched a first version of **an algorithm register**, where government organisations can publish their algorithms. The algorithms that are used by the Dutch Cadastre are already published in this register.*

*Furthermore, **Dutch Cadastre has published the algorithms that are (primarily) used** on its own website: <https://www.kadaster.nl/over-ons/beleid/algorithmeregister>.”*

*the Dutch government is working towards **a legal framework for the registration of algorithms** - to prevent discrimination and arbitrariness and transparency of the algorithms - coming AIA.*

### Survey results Q1:

**Does your State have any national legislation or is planning to introduce one (as e.g Estonia) regulating artificial intelligence in the public sector with a special dedication to land registers? If yes, please shortly describe the initiative.**

**11.4 „Yes” answers - strategies, policy documents, programmes, charters, declarations, white papers (so called „soft law”) – 6 countries : Austria, Bulgaria, Croatia, Estonia, Italy (Libro Fondario), Portugal (Instituto dos Registos) and Portugal (Assoc Sindical Consv Registos).**

#### **General summary:**

1. Strategies: Estonia, Italy (Libro Fondario), Portugal,
2. Policy documents: Italy (Libro Fondario), Croatia,
3. Programmes: Bulgaria,
4. Charters: Portugal,
5. Declarations: Austria,
6. White papers: Italy (Libro Fondario).

### Survey results Q1:

**Does your State have any national legislation or is planning to introduce one (as e.g. Estonia) regulating artificial intelligence in the public sector with a special dedication to land registers? If yes, please shortly describe the initiative.**

#### II.4 „Yes” answer – example – the case of Bulgaria:

*„The National Development Programme BULGARIA 2030 adopted by Protocol No. 67 of the Council of Ministers of 2 December 2020 is a strategic framework document of the highest order in the hierarchy of national programming documents.”...“Successful implementation of interventions in these areas will address **Goal 16** “Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels” from the UN Sustainable Development Goals. Efforts for the implementation of **e-government services** will continue by completing the necessary infrastructure, **interconnecting key registers** and ensuring interoperability for the transition to automated data and electronic document sharing”...” An important element will also be the transition to the use of shared e-government resources, such as **the State Hybrid Private Cloud and the Unified Electronic Communications Network**. Active work will be done on the implementation and application of new technologies in the administration based on **the Internet of Things, artificial intelligence, blockchain, and others**”.*

### Survey results Q2:

**Can you give some examples of the use of AI in the LRs you represent, related to land registry management/functioning (e.g. special automatic algorithm)?**

**I. „No” answers – no examples in Land Registries: 5 countries + 1 organisation:**

Austria, Italy (Agenzia delle Entrate), Ireland, Lithuania, Poland

**II. „Yes” answers – given examples – 13 countries, huge variety of projects which generally could be divided into:**

- 1. AI projects – 7 countries:** Estonia, Latvia, Malta, the Netherlands, Bulgaria, Croatia and Spain;
- 2. Other IT projects – 6 countries:** Romania, Italy (Fondario Libro), Portugal, Slovakia, Finland, Sweden.

### Survey results Q2:

**Can you give some examples of the use of AI in the LRs you represent, related to land registry management/functioning (e.g. special automatic algorithm)?**

#### II.1. „Yes” answers AI projects – examples:

the case of **the Netherlands** (wide range of projects – 12 on-going):

- the Dutch Cadastre uses AI to automatically extract certain data from notarial deeds that are registered by Cadastre,
- a standardised process where certain notarial deeds are registered automatically by Cadastre (KIK),
- the project ‘Cadastral Map Next’ Dutch Cadastre is working towards a more accurate cadastral map,
- image recognition (deep learning) to analyse sun potential on roofs to maximise the generation of solar power,
- an algorithm called ‘Transfer’ to look for a good solution to organise land in a new way (land consolidation),
- for the website of the Dutch Cadastre a chatbot is in the making, in order to give answers to questions of citizens regarding information from several cadastral data sources
- few more projects in piloting



### Survey results Q2:

**Can you give some examples of the use of AI in the LRs you represent, related to land registry management/functioning (e.g. special automatic algorithm)?**

II.1. „Yes” answers AI projects – chosen examples:

The case of **Estonia**:

- the Estonian Land register public portal uses AI based machine translation - Estonian language into English (machine translation),

The case of **Croatia**:

- by the end of 2024 a **virtual assistant system** will be implemented in order to provide information on the possibilities of searching and using services, as well as obtaining information on the procedures and tools that are available for arranging the condition of real estate e.g. for authorized users, courts and public law bodies: enables a more precise search of the system, simpler **submission of proposals for alignment of registration** with valid regulations and **display of all relevant data** for a specific area;
- an automatic algorithm, where the workload of employees with land registry cases is taken into account, and the system **automatically assigns the cases to the next employee** (case management)
- when certain information about land registers is needed, for example vineyards **the algorithm will automatically display the requested data**

### Survey results Q2:

**Can you give some examples of the use of AI in the LRs you represent, related to land registry management/functioning (e.g. special automatic algorithm)?**

#### II.2. „Yes” answers - IT projects – example

##### The case of Finland

- in NLS there are two types of applications that can be handled automatically:
  - 1) Mortgage applications
  - 2) Transferring of electronic mortgage documents,
- the property transaction service checks that the applicant owns the property and that there are no encumbrances which prevents approving the application,
- NLS is currently planning to start **using more automatic decision**, e.g. registration of title in simple matters could be implemented near future.

##### The case of Sweden

Swedish land registry has introduced **automatic decisions in some categories of land registration applications**, mainly regarding mortgages.

### Survey results Q3:

**\_If yes, what opportunities and risks are involved into that project/s? If not, what possible, useful solutions could be implemented?**

A general summary of answers to this question leads to the conclusion that **4 types of answers** can be distinguished:

1. **chances/opportunities of implementing AI/IT projects in land registries (10 countries);**
2. **risks of implementing AI/IT projects in land registries (8 countries);**
3. **general/specific comments (7 countries);**
4. **no answer (1 country).**

However, it should be borne in mind that most of the CPs gave mixed answers, including both risk and opportunity assessments, possibly comments or there were responses with only comments. Therefore, the sum of responses does not equal the sum of the represented in ELRN EU Member States or EU Member States and organizations.

### Survey results Q3:

**If yes, what opportunities and risks are involved into that project/s? If not, what possible, useful solutions could be implemented?**

- 1. Chances/opportunities of implementing AI/IT projects in land registries (10 countries):** Bulgaria, Cyprus, Estonia, Finland, Italy (Libro Fondiario) and Italy (Agenzia delle Entrate), Latvia, the Netherlands, Poland, Spain, Sweden.

The most frequently used arguments:

- improve the customer experience and speed up processing (Finland),
- to help work more efficiently and helps to improve quality of work (the Netherlands),
- to save human resources in performing uniform and monotonous activities. Improves data quality, statistics and load balancing (Latvia).

Spain gave detiled analysis of positive effect:

1. task automation;
2. improved decision making;
3. personalization;
4. operational efficiency;
5. security;
6. transparency and trust

### Survey results Q3:

**If yes, what opportunities and risks are involved into that project/s? If not, what possible, useful solutions could be implemented?**

#### **2. Risks of implementing AI/IT projects in land registries (8 countries):**

Croatia, Cyprus, Estonia, Italy (Libro Fondiario), Latvia, the Netherlands, Spain, Sweden

The most frequently used arguments:

- violation of GDPR and the possibility of unlawful or erroneous decisions (Sweden),
- machine translation makes poorer quality of translation, problem to train AI proper translation (Estonia),
- technology is still at the early stages and very important is the data you keep feeding (AI) in your model to be better trained in order to derive better results (Cyprus)
- it is important to know with what data the system is supplied and how the algorithms work (how the algorithms make a decision and on the basis of which considerations), so it is important to develop the algorithms in house and not use ChatGPT (the Netherlands).

### **Survey results Q3:**

**If yes, what opportunities and risks are involved into that project/s? If not, what possible, useful solutions could be implemented?**

## **2. Risks of implementing AI/IT projects in land registries - Spain gave detailed analysis of negative effect:**

1. Lack of understanding;
2. Costs;
3. Regulation and compliance;
4. Security;
5. Cultural resistance;
6. Talent shortage;
7. Interoperability;
8. Ethics and privacy.

### **Survey results Q3:**

**If yes, what opportunities and risks are involved into that project/s? If not, what possible, useful solutions could be implemented?**

### **3. General/specific comments (7 countries):**

The most frequently used comments:

- country is prepared to deal with AI but have to wait for necessary legal provisions (Austria);
- there are no specific plans for AI solutions, potential areas of application of AI in the activities of the organization and possible AI solutions are currently under consideration (Lithuania);
- The Portuguese Government provides a set of documents at <https://tic.gov.pt/areas-tematicas/inteligencia-artificial> , which include a reference guide for the responsible use of Artificial Intelligence (AI) in Public Administration (PA), and the development and provision of a risk assessment application, with two strands: identification and mitigation (Portugal).

### **4. No merit respond: Ireland**

### Survey results conclusions (thesis based only on responses):

- **First**, representatives of the land registries of the EU member states of the ELRN are very aware of the processes taking place in the field of IT and AI;
- **Second**, in most of the surveyed countries there are already normative initiatives related to the regulation of AI issues, but they are rather of declarative in nature due to the expectation of regulation at the EU level (AIA draft);
- **Third**, none of the countries have national legislation or is planning to have referring directly to Land Registries, however there is one country which regulate automatic decisions (Finland);
- **Fourth**, land registries already have at least IT (machine learning, automated decision design, blockchain) or AI (deep learning) solutions being designed and implemented on a national project basis that are either part of national or local projects designed for specific LR/Cadastral institutions;
- **Fifth**, only one country (the Netherlands) provides specific register of algorithms (very important for AI security and ethics) – draft of AIA goal;
- **Sixth**, most of the countries see the advantage of using AI/IT solutions over risk, the applicability is very wide - from the use of virtual assistants (Chat bots), through case management and other projects discussed, to automatic entries in land records;
- **Seventh**, countries see more advantages than disadvantages of IT/AI solutions, they are preparing good bases for EU legislation and secondarily at the national level.



**THANK YOU FOR YOUR ATTENTION**

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