

# OME2 – WP6

## OME2 - Open Cadastral Map



## Work Package 6 Objectives



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The Objectives of the WP6 align with the OME2 project main objective:

**Connecting users to Open Maps for Europe from official national sources**

### The objectives of the WP 6

- Sustain the new production process for Open Cadastral Map (OCM) updating the existing country datasets
- Enhance the production process for the Open Cadastral Map (OCM)
- Increase the coverage of the existing Open Cadastral Map (OCM)
- Increase the harmonization of the access to cadastral data (OCM)
- Promote the Open Cadastral Map (OCM) to EuroGeographics members, and external audiences to explore requirements and homogenization



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Grant Agreement No 101100625

# The Open Cadastral Map

<https://www.mapsforeurope.org/datasets/cadastral-all>



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**Vision:** Become a single point to access pan-European cadastral data and address the challenge of easily finding authoritative pan-European high-value geospatial data.

**HVD available:** Cadastral Parcels, Buildings, Addresses and Administrative Units

**Extend:** 9 additional countries by the end of 2025

**Enhance:** New functionalities

**Common process for all countries used to integrate data**

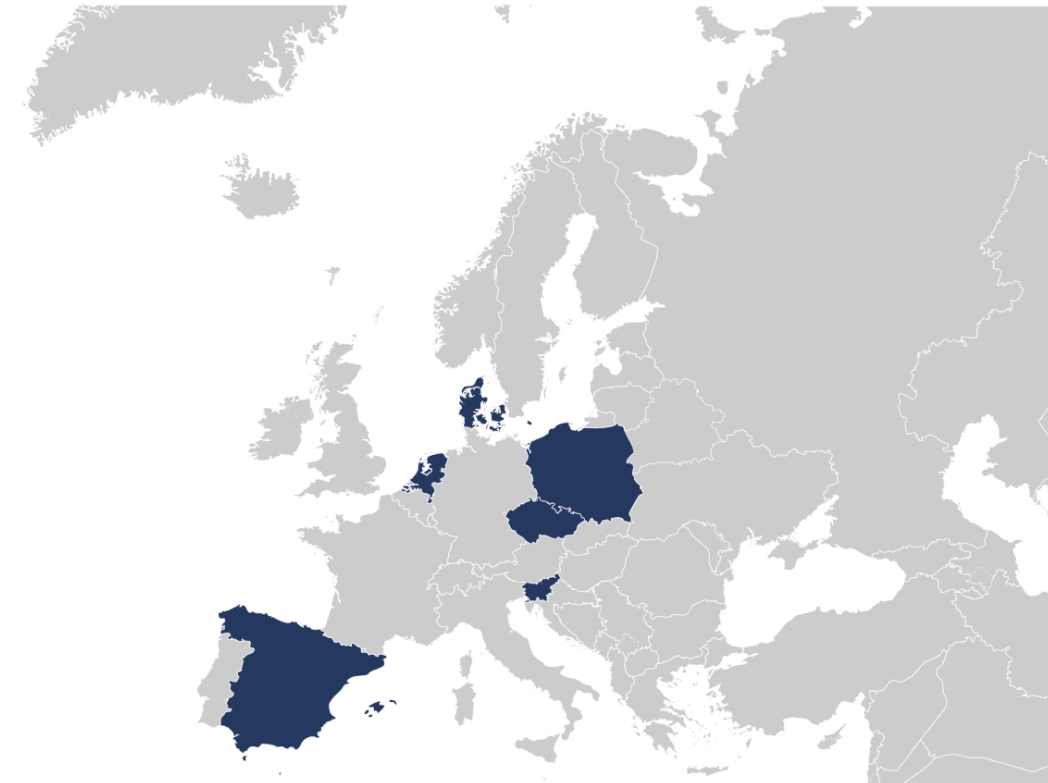
Czech Republic  
Denmark  
Netherlands

Poland  
Slovenia  
Spain



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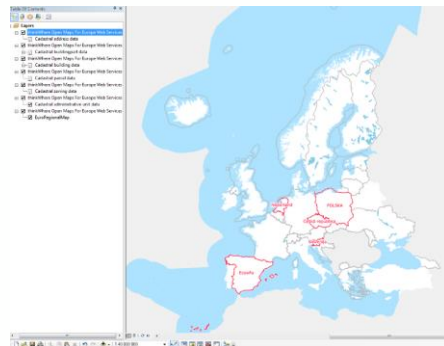




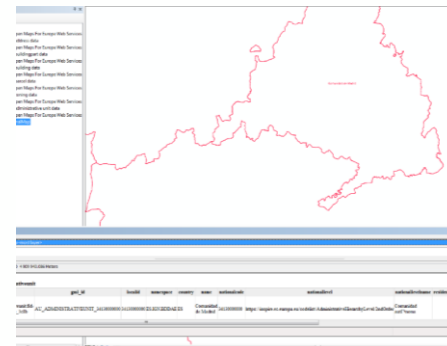
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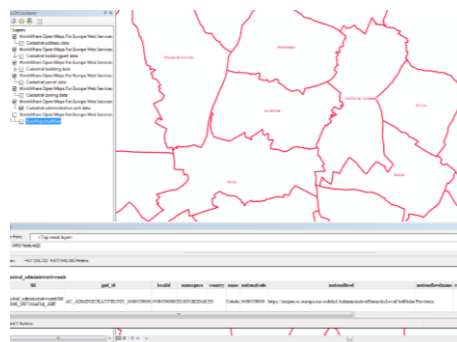
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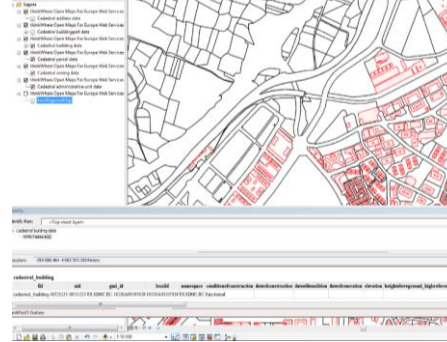
Scale 1:2.000.000



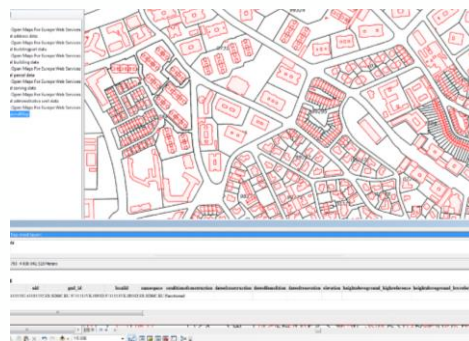
Scale 1:1000.000



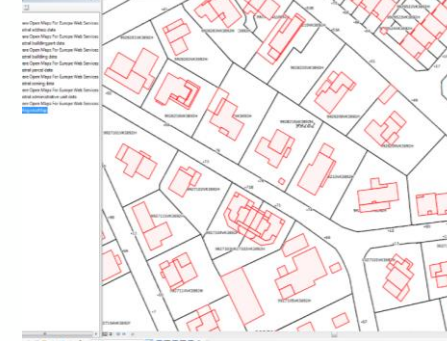
Scale 1:100.000



Scale 1:10.000



Scale 1:5.000



Scale 1:1.000

Map Scale	Visible Layers	Labeled
1: 2.500.000	Administrative Units / AUHierarchyLevel /1 <sup>st</sup> Order	Yes
1:1.000.000	Administrative Units / AUHierarchyLevel/2 <sup>nd</sup> Order	Yes
1:100.000	Administrative Units / AUHierarchyLevel/3 <sup>rd</sup> Order	Yes
1:10.000	Administrative Units / AUHierarchyLevel/3 <sup>rd</sup> Order	Yes
	Cadastral Zoning	No
	Cadastral Parcels	No
1:5.000	Buildings	No
	Administrative Units / AUHierarchyLevel/4 <sup>th</sup> Order	Yes
	Cadastral Zoning	Yes
1:2.500	Cadastral Parcels	No
	Buildings	No
	Building Parts	No
	Postal Addresses	No

**GetFeatureInfo (GFI)** for cadastral parcel returns information provided through the national service like the national cadastral reference and if possible a hyperlink (URL) to access the national portal.



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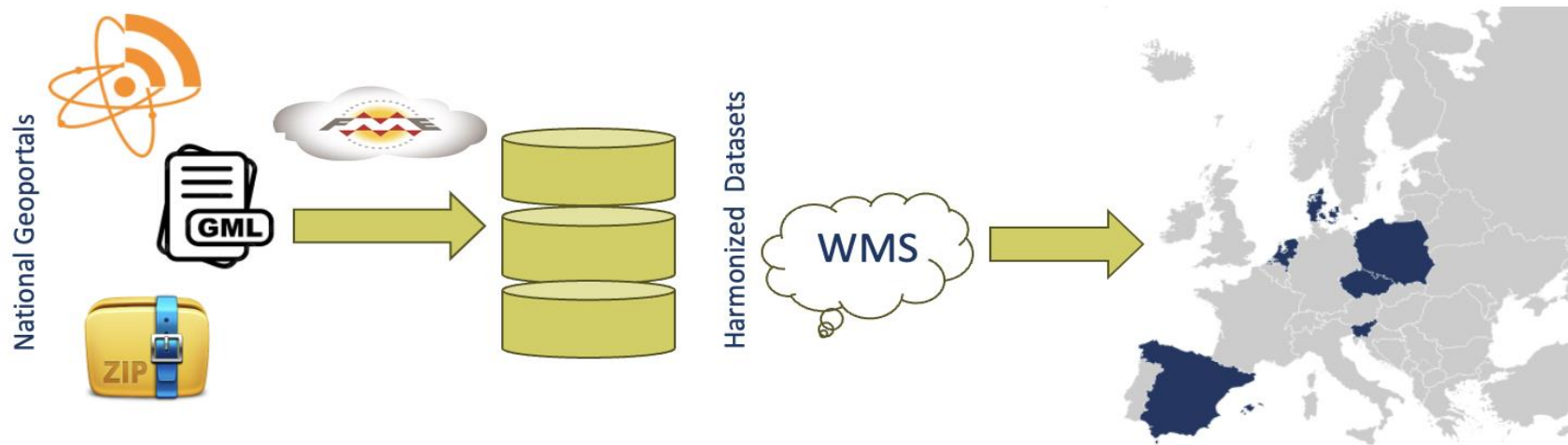


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## Current specifications and process for the OCM



### OCM production process had to impose further specifications

Other requirements for OCM :

- download from AtomFeed Service
- download files need to be in .gml
- the entries in the Atom Feed which link to the download itself must contain the \*category\_label\* 'ETRS-89'
- the download must either return a zip file, or the URL must end in \*.zip to be identified within the process.

### Need for common rules to accomplish one harmonized view from different national authorities

INSPIRE sets some common regulations which help streamline the existing data from countries that comply with the Directive and thus, make the OCM possible.



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# Enhance the production process

## View data & Get information online: getFeatureInfo



### Identify Feature

08900A012  
namespace  
ES.SDGC.CP.Z  
label  
012  
nationalcadastralzoningreference  
08900A012  
estimatedaccuracy  
1.0  
estimatedaccuracyom  
m  
level\_xlink\_href  
<http://inspire.ec.europa.eu/codelist/CadastralZoningLevelValue/2ndOrder>  
originalmapscaledenominator  
5000  
beginlifespanversion  
2022-05-23T00:00:00

cadastral\_cadastralparcel.fid-  
**5276166\_188d897ccd0\_11b9**  
gml\_id  
ES.SDGC.CP.9538105DF2893H  
localid  
9538105DF2893H  
namespace  
ES.SDGC.CP  
label  
9538105DF2893H  
nationalcadastralreference  
9538105DF2893H  
areavalue  
187.0  
areavalueom

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**GetFeatureInfo (GFI) for cadastral parcel** returns information provided through the national service like the national cadastral reference and a hyperlink (URL) to access the national portal.

### How?

As part of the OME2, GML files contain a clickable link to the national cadastral portal as an attribute

**OCM acts as getaway point from the European level to the national cadastral portals.**

### Identify Feature

building\_externalreference.fid-  
**5276166\_188d897ccd0\_11bb**  
bu\_localid  
9538105DF2893H  
bu\_namespace  
ES.SDGC.BU  
externalreference\_informationsystem  
<https://www1.sedecatastro.gob.es/CYCBienInmueble/OVCListaBienes.aspx?rc1=9538105&rc2=DF2893H>  
externalreference\_reference  
9538105DF2893H



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# Guide for Data Suppliers



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## OPEN CADASTRAL MAP

Guide for Data Suppliers V.1.3

July 2024



Czech Republic  
Denmark  
Netherlands

Poland  
Slovenia  
Spain

Figure 1: The current view of the Open Cadastral Map with 6 European countries  
(<https://www.mapsforeurope.org/datasets/cadastral-all>)

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### 1. Scope of the Document

This document contains a simple description of how to generate the necessary files to incorporate the national cadastral datasets to the Open Cadastral Map that EuroGeographics is developing within the OME2 project (Open Maps for Europe2).

### 2. What is the Open Cadastral Map

The Open Cadastral Map (<https://www.mapsforeurope.org/datasets/cadastral-all>), is part of the Open Maps for Europe project and aims at providing an easy access to open, authoritative, harmonised pan-European cadastral datasets provided by the National Mapping Agencies and Cadastral & Land Registries of Europe (NMCAs).

Upon completion of the on-going Open Maps for Europe project, it is envisaged to establish and operate openly a single pan-European map that would depict the principal cartographic features of

The Guide for Data Suppliers is an informative document describing how to generate the necessary files to incorporate a country's national cadastral datasets to the Open Cadastral Map.

It was developed within the scope of the OME2 project and was shared and presented to members, in order to provide them with all the necessary technical specifications required by the OCM production process.



This project has received funding from the European Union's Digital Europe program under grant agreement No 101100625



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# Member Engagement to Increase Coverage of OCM

## Initial survey of national cadastral datasets

- ✓ inquiry and assessment of information already available online as open geospatial data
- ✓ availability of INSPIRE compliant data for Cadastral Parcels and, if possible, for Administrative Units, Buildings and Addresses
- ✓ the sources that were initially explored were the cadastral data found available: on the European INSPIRE geoportal and on the national geoportals
- ✓ a list of 14 candidate countries was compiled: Luxemburg, Slovakia, Greece, Latvia, Estonia, Austria, Cyprus, Switzerland, Belgium, Croatia, Finland, Germany, France, and Sweden.
- ✓ those countries formed the primary target for further investigation and contact in order to select the nine (9) countries that need to be incorporated into the OCM platform within the scope of the OME2 project.



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# Member Engagement to Increase Coverage of OCM

## Invitation letter from EuroGeographics senior management to the Heads of the European Cadastral Organizations

- ✓ the letter was sent on May 15th 2023, and explained the objectives of the Open Cadastral Map and its importance to the Digital Europe initiative
- ✓ 35 letters were sent
- ✓ 15 official written replies were received
- ✓ many more verbal confirmations of participation in the project
- ✓ several members, mostly technical personnel, attended the OCM webinar which took place on June 21, 2024



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# Member Engagement to Increase Coverage of OCM



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- **Luxembourg** – Already mature regarding the OCM requirements. A few emails were enough to achieve data compliance as described in the Data Suppliers Guide.
- **Slovakia** – Cadastral data available and very close to the requirements needed for the OCM. Details for Slovakian data incorporation in the OCM were discussed in emails exchanged.
- **Greece** – AtomFeed service was already available, but the data was in ESRI FGDB format instead of GML. Data has been transformed in GML format and is now provided via AtomFeed Service for download. No official correspondence was needed, as the Hellenic Cadastre is one of the partners that work for the WP6.
- **Latvia** – Latvia provides downloadable cadastral data through OGC WFS. Exchange of emails as well as an online meeting were the means to provide the technical information needed for data implementation according to the OCM requirements.



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# The Open Cadastral Map in 31.12.2024



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## Based on

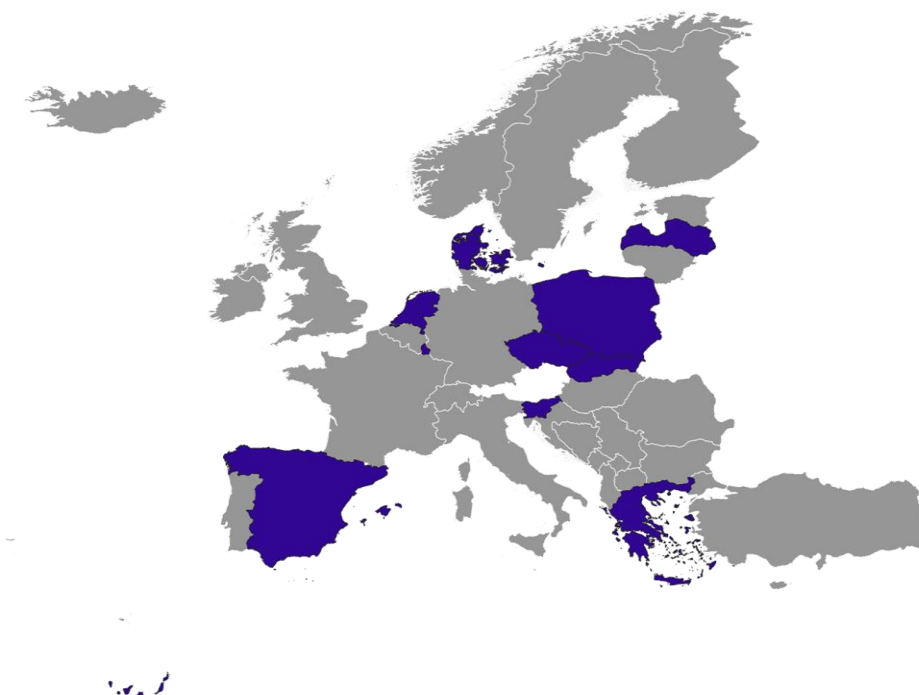
the feedback from the invitation letter and the webinar attendees

## And

in conjunction with the initial list of candidate countries



Targeted contacting was made repeatedly, to assess the potential of certain countries data inclusion in the OCM



## Data provided in 2024 from:

- Greece
- Latvia
- Luxembourg
- Slovakia

## Data provided in 2025 from: ?

- Five additional data providers

## The primary criteria for making the selection to be included in the first round were:

- readiness of data
- willingness of the corresponding agency to engage and participate in the process.



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## Challenges Encountered

Most members understand the usefulness of the OCM and embraced the initiative

- ✓ Some members had legal restrictions in opening their data
- ✓ Few members were already compliant
- ✓ Most members needed to make adaptations to the OCM requirements
- ✓ Many members expressed their wish for a more flexible process
- ✓ Some members recommended the migration to new forms of data and services



**We work with members one by one to reach compliance**



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# Common Cadastral Data Strategy

## Deliverable D6.2 – Pan European Cadastral Data Strategy

<b>Deliverable Number</b>	D6.2	<b>Lead Beneficiary</b>	5. HC
<b>Deliverable Name</b>	Pan European Cadastral Data Strategy		
<b>Type</b>	R — Document, report	<b>Dissemination Level</b>	PU - Public
<b>Due Date (month)</b>	36	<b>Work Package No</b>	WP6

Description
Format: Electronic, Language: English

- Develop Support for a long term strategy in delivering of pan-European cadastral data (enhance further the awareness of the OCM)
- What members think about the potential of specifying common deliverables and applying standardization approaches in order to homogenize datasets that are going to be integrated in the OCM.
- Develop Guidelines
- Propose Best Practices
  - Auto-translation, edge-matching handling e.t.c.
- Identify current and future OCM users (public, such as European Commission and other international organizations, and private, companies and citizens
- Identify related needs





## Pan-European Cadastral Data Strategy

Define the technology, processes, people and rules required to manage NMCAs information assets.

Outline the long-term vision for collecting, storing, sharing, and usage of the information assets.

Make working with cadastral data easier for everyone who needs it.

**Data engineers / Scientists / Analysts/ Business managers**

**Specific guidelines for geospatial data in Europe**

**Overcome existing technical barriers to data sharing**

**Focus on FAIR data**

## The Open Cadastral Map beyond OME 2



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### The Open Cadastral Map needs to be sustainable

- In terms of finance
- In terms of a well-established process that ensures data quality, up to date, authorized, easy to use and combine cadastral data

### Adapt to members' needs and expectations

- Identify current and future OCM users (businesses, researchers, public administrations)
- Identify their needs and expectations
- Adapt respectively the process when possible.



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Consortium.



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# The future Open Cadastral Map



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## Examine the alternatives to create common processes for delivering pan-european cadastral data

- Do nothing and continue with the same process
- Keep a similar process but become more flexible (e.g. regarding the data formats and the services provided)
- Adopt an entirely new process
- Do not create a european cadastral map



## Identify the Resources needed

- Time
- Budget
- Personnel
- Technology

## Identify Risks and Vulnerabilities

- Risk Mitigation Measures



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## Evaluate the Proposed Strategy



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- Raise awareness
  - Present the pan-european cadastral data strategy proposal to major events
  - Organize workshops
- Assess the view of members
  - Conduct assessment of members' views through structured questionnaire(s)
  - Collect feedback from members
  - Analyse results
- Evaluate stakeholders needs / satisfaction (***Aligned with the EG strategy plan***)
  - Engage with key stakeholders to confirm options for the future sustainability of the outputs of the Action
- Feedback loops for continuous improvement



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## A European strategy for cadastral data



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### Who needs Pan-European Open Cadastral Data?

#### Only a few examples:

- Governmental Agencies
- European policy makers
- Financial Institutions
- Real-Estate insurance companies that operate across Europe
- International companies specializing in the property data and location intelligence industry
- Companies specializing in environmental services, sustainability, renewable energy
- Researchers and Academics
- Telecommunication Companies
- Citizens – Property owners

### MORE DETAILS IN THE UPCOMING PRESENTATION



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**Thank you for your attention!**

Contact: [hpapadak@ktimatologio.gr](mailto:hpapadak@ktimatologio.gr)

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