A new Strategy for open cadastral maps for Europe

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Hellenic Cadastre

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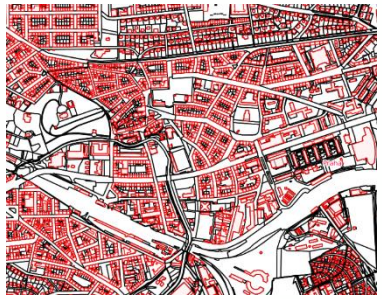
Vision

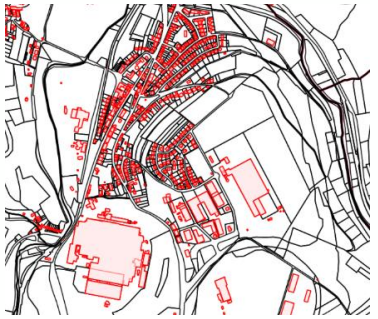
To have a single point of accessing cadastral map data at a pan-European level


Czech Republic


Denmark


Greece


Latvia


Luxemburg

Themes
- Cad. parcels
- Buildings
- Adm. Units
- Addresses


Netherlands


Poland


Slovakia


Slovenia


Spain

Next
Five (5) additional countries scheduled for 2025

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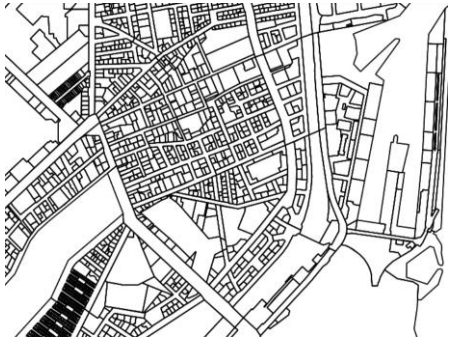
Mission

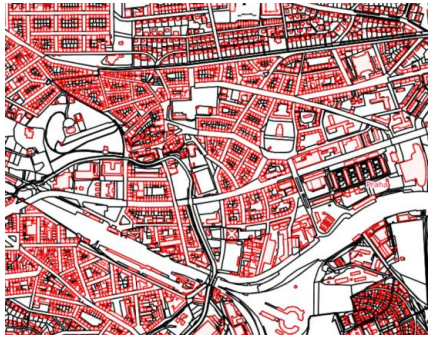
To provide an open and user-friendly access to European cadastral map data

- NCMAs are custodians of a very valuable, yet underused, resource
- Cadastral specialists are *cognoscente* of the domain and know its potential usefulness
- Modern day societies need cadastral information and we must provide it openly

Netherlands



Denmark



Czech Republic

Poland

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Goals

- Sustain current operation of the Open Cadastral Maps (OCM)
- Increase geographical coverage
- Maximize use of the data
- Increase thematic coverage
- Increase functionality of the Open Cadastral Map
- Improve homogeneity of the data
- Optimize the OCM production process
- Support major initiatives at the national and transnational levels
- Achieve financial sustainability


Greece


Poland


Spain

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PEST Analysis

Political

- INSPIRE Directive
- Public Sector Information
- Open Data Directive (2019/1024)
- High Value Datasets Regulation
- European Data Strategy
- UN-IGIF
- Volatile environment
- Highly unpredictable and concerning
- Introverted

Economic

- Generally, favorable in Europe
  but
  highly unstable due to various exogenous causes (pandemic, regional conflicts, accumulating political tensions, trade wars etc.)
- Shrinking purchasing power of the households and unrest for future prospects
- Reduced of public funds due to increases in demand in other sectors (e.g. defense, natural disasters, public health, etc.)

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PEST Analysis

Social

- Increasingly polarized at the intranational and transnational levels
- Demographic instability (aging population in Europe, migration)
- Introverted societies (changing values)
- GDPR issues

Technological

- Very favorable
- Outstanding advances in the ICT domain
- Advent of AI, IoT, B2B, G2B, G2G
- Cybercrime

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SWOT Analysis

Strengths

- Cadastres are powerful social, political and financial institutions
- OCM builds on previous initiatives
- Existence of organizational infrastructure (Eurogeographics) and diversified support
- The initiative is supported by prominent agencies
- The core information is, to a large degree, similar across countries
- Cadastral parcels:
  - constitute a stable data fabric
  - partition space at a very fine granularity, suitable for attaching other information and do geographical or other types of analyses
  - embody strong social and institutional agreements and concessions

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SWOT Analysis

Weaknesses

- Existence of diverse policies, views and agendas among involved stakeholders
- Decisions to support OCM, sometimes, are made outside the realm of the cadastral institutions
- OCM operation requires contributions from many agencies
- Existence of diverse institutional settings across countries (organizational structures, coding schemes, languages)
- No obvious way to finance development and operation of the OCM ("*Free ridership*" situation)
- No firm case that demonstrates usefulness.
- No proven financial benefit (particularly for the involved institutions)
- Previous efforts weren't sustainable
- Absence of certain large countries in the initial development

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SWOT Analysis

Opportunities

- Elevate public prominence of the cadastral institutions
- Technological enablers (AI, ICT, IoT, B2B)
- Digitalization of cadastral information
- Could be used social stabilizing institution
- Act as an enabler to other applications (urban zoning, licensing, monitoring)
- Catalyst for European cohesion
- In alignment and support of prominent EU Directives (INSPIRE, Open data, PSI, HVD)

Threats

- Political instability and frequent changing of policies
- Rapid changes in economic, social, political and technological environment which may not facilitate robust development of OCM
- Proliferation of similar or pertinent initiatives which may undermine the OCM or even act competitively
- Impact (actual or potential) of rivalry private sector benefactors

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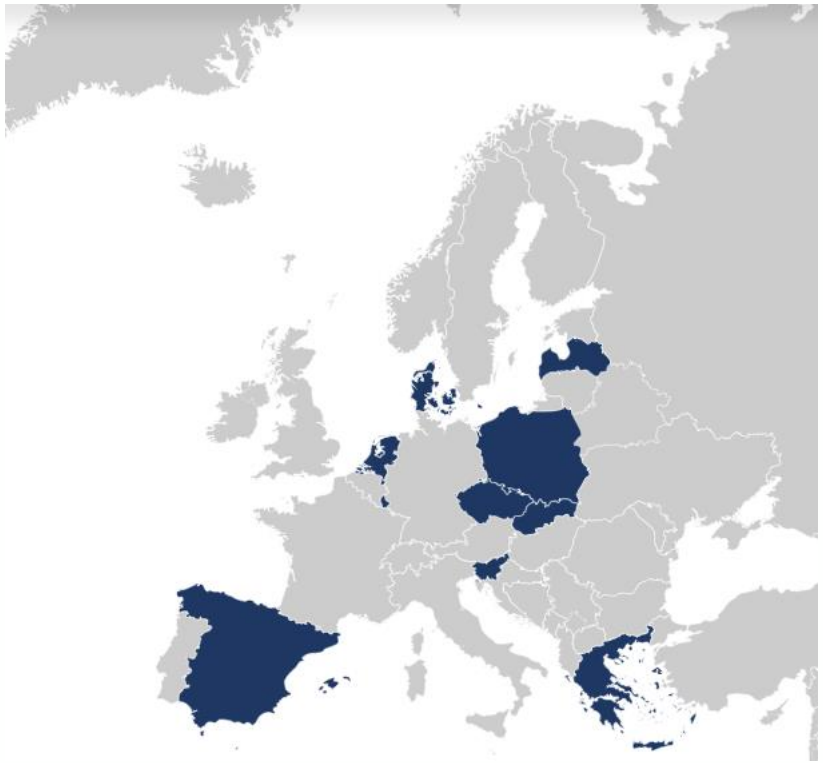
Action plan

Goal: Sustain the current operation of the Open Cadastral Maps (OCM)

- Action 1
  - Engage with countries already in the OCM to commit continuation of support (providing and updating the data)
- Action 2
  - Secure IT facilities to store data and provide services
- Action 3
  - Secure a facilitator for updating and processing data, and managing the operation



Source: https://www.mapsforeurope.org/datasets/cadastral-all

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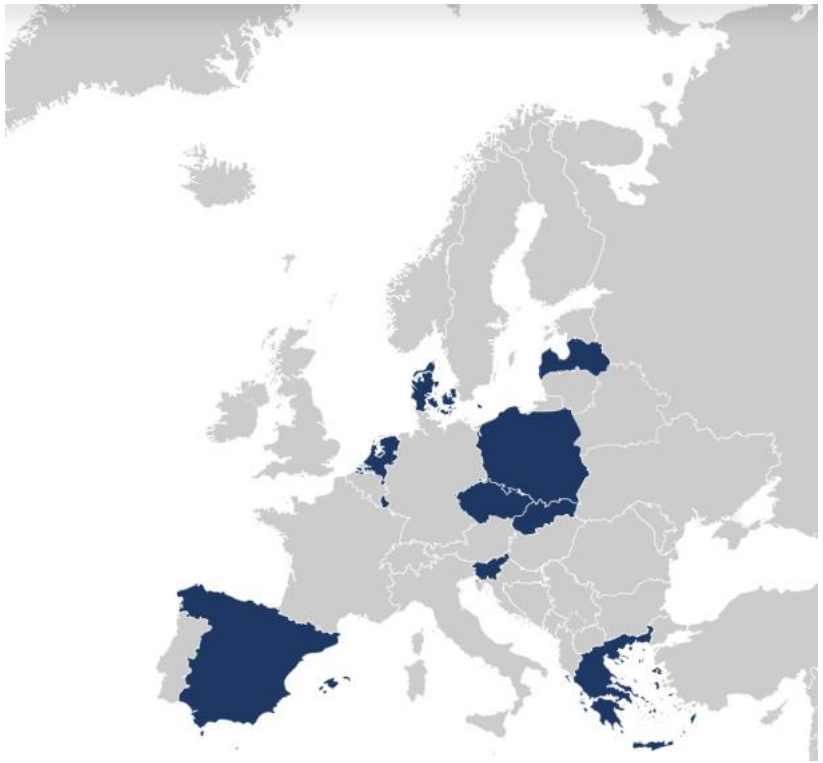
Action plan

Goal: Increase geographical coverage

- Action 1
  - Engage with countries that have readiness with respect to data and willing to participate
- Action 2
  - Engage with countries that have readiness with respect to data but are hesitant or unable to participate
- Action 3
  - Engage with countries that are not ready with respect to data but need assistance to participate
- Action 4
  - Engage with the remaining countries to bring them on-board



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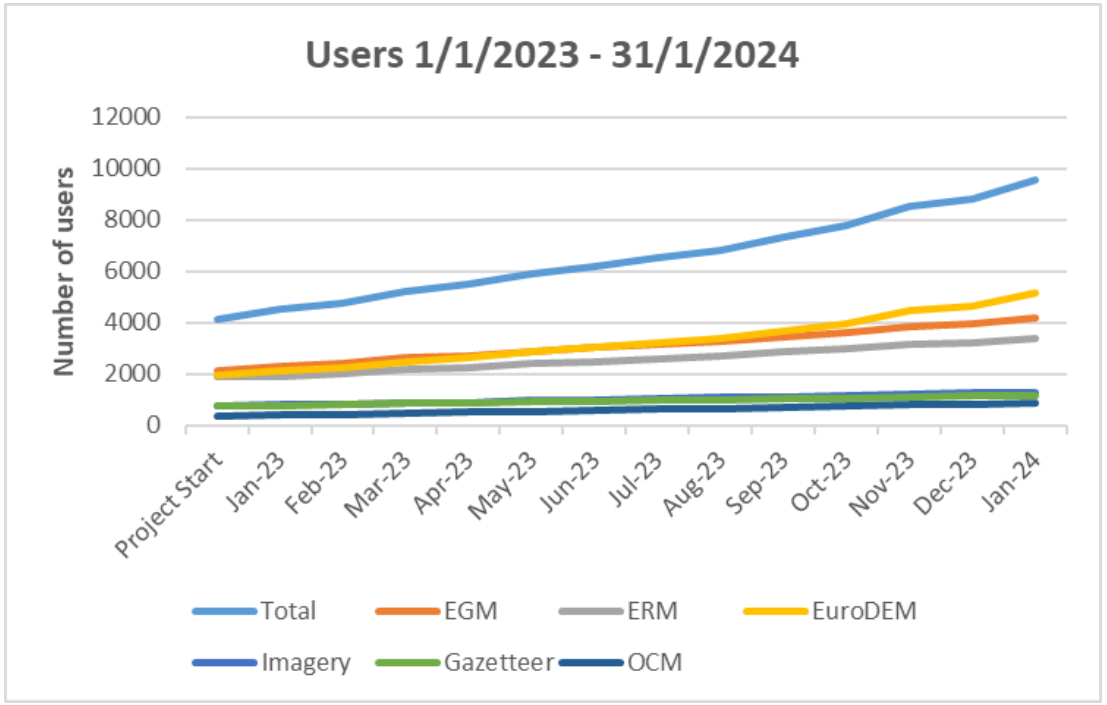
Action plan

Goal: Maximize use of the data

- Action 1
  - Make real world use cases (particularly in high profile applications, such as, disaster management and environmental monitoring)
- Action 2
  - Engage with major geospatial firms to use the OCM as a dataset available to their users
- Action 3
  - Contact major stakeholders to incorporate OCM data into their functions and operations
- Action 4
  - Carry-out communication activities, particularly hlighting success stories



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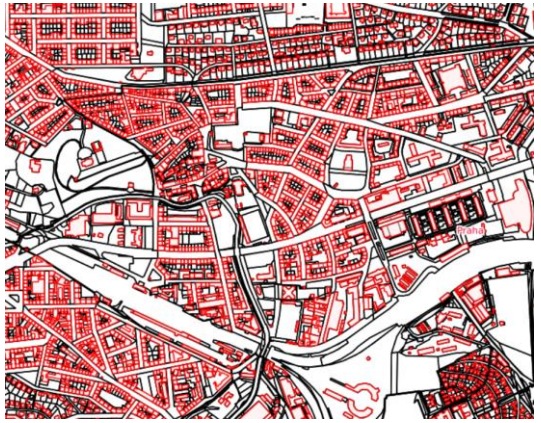
Action plan

Goal: Increase thematic coverage

- Action 1
  - Engage with NCMAs to encourage them enrich their provided data with additional layers of information or themes
- Action 2
  - Launch activities for getting selected available data from alternative sources (e.g. open data repositories)
- Action 3
  - Launch activities promoting importance and usefulness of having homogeneity in the cadastral data across Europe



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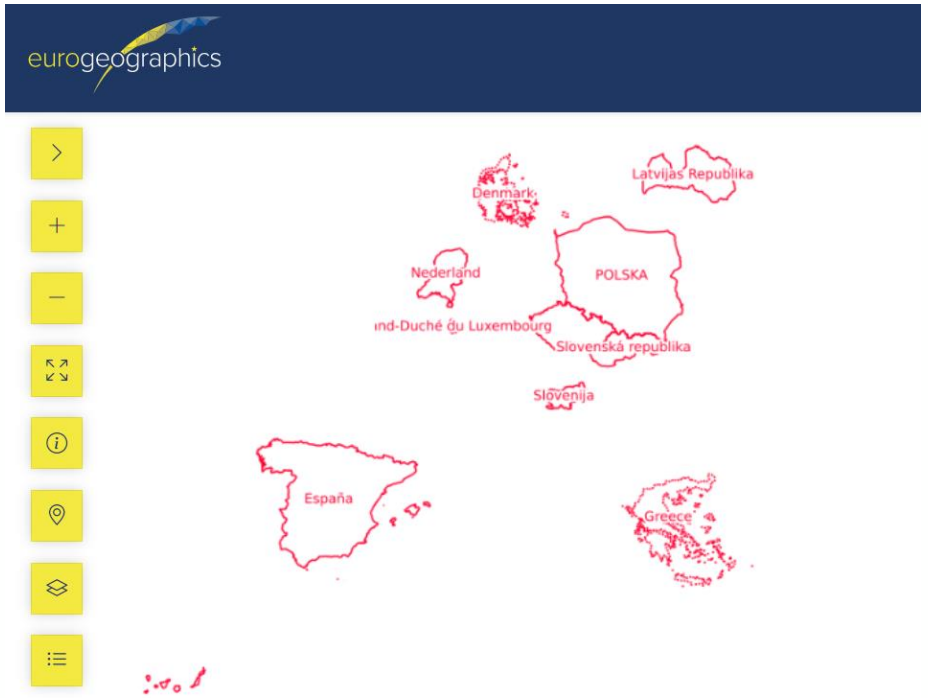
Action plan

Goal: Increase functionality of the OCM

- Action 1
  - Add new functions in the system (searching, selections, retrievals, language translation)
- Action 2
  - Use novel technologies to enhance user experience (e.g. AI)



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Action plan

Goal: Improve homogeneity of the data

- Action 1
  - Carry-out a study that would identify aspects that can be improved with respect to homogenization of data and that would assess the feasibility of implementation
- Action 2
  - Implement the outcomes of the study

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Action plan

Goal: Optimize the OCM production process

- Action 1
  - Identify steps in the process that can be improved (elimination, by-passing, automation)
- Action 2
  - Expand the range of options for getting the data from providers and streamlining them to the OCM platform (Atomfeeds, WFS,…)
- Action 3
  - Incorporate new tools and technologies that speed-up the process

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Action plan

Goal: Support major initiatives at the national and transnational levels

- Action 1
  - Monitor the development of major initiatives, such as the HVD initiative, at the transnational level and engage in placing/including the OCM data wherever it is appropriate
- Action 2
  - Provide support on the use of OCM data whenever there is request

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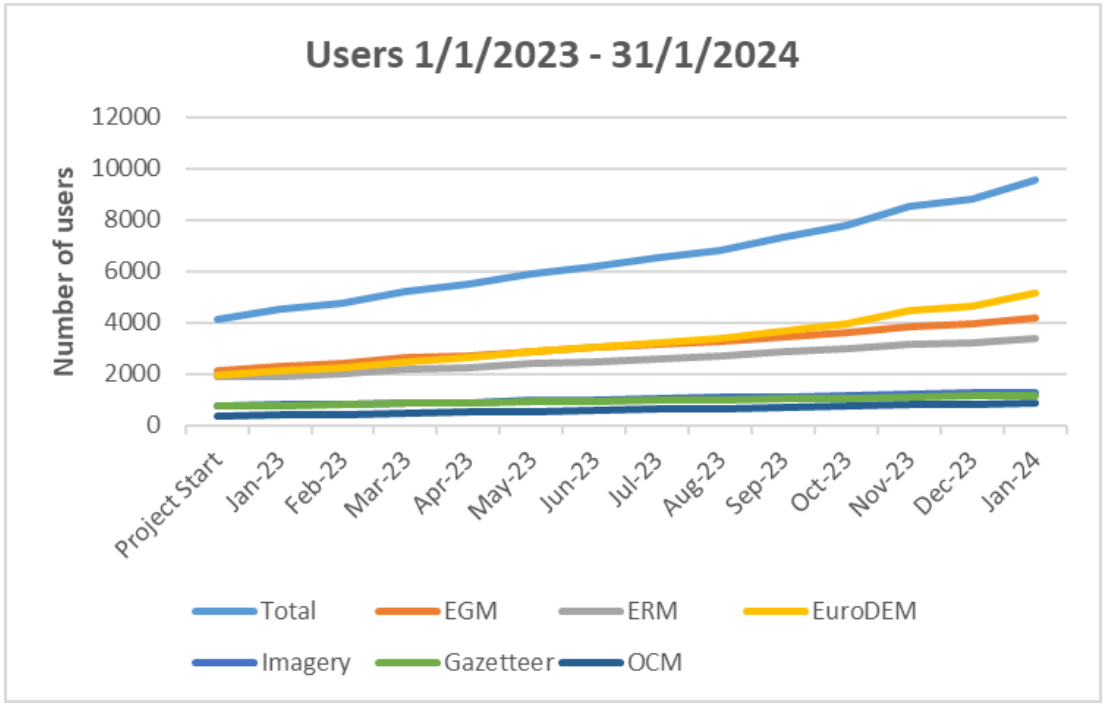
Action plan

Goal: Achieve financial sustainability

- Action 1
  - Carry-out a study for identifying and assessing the various options
- Action 2
  - Reduce operational cost (or at least minimize increases)
- Action 3
  - Implement a short-term plan until the system matures and reaches a “critical mass” level
- Action 4
  - Implement a long-term plan



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Key Performance Indicators (KPIs)

- Number of overall updates annually (>=1)
- Number of new areas incorporated
- Number of OCM data users
- Number of communication activities for promoting OCM
- Number of geospatial domain firms providing OCM
- Number of thematic layers by country added in the OCM
- Number of thematic fields by country added in the OCM
- Number of new functions added
- Number of homogenization actions implemented
- Number of procedural steps involved in the updating process
- Number of alternative options provided for getting data for incorporation in the OCM
- Number of major transnational activities supported
- Annual OCM investment
- Annual OCM cost
- Annual OCM revenues

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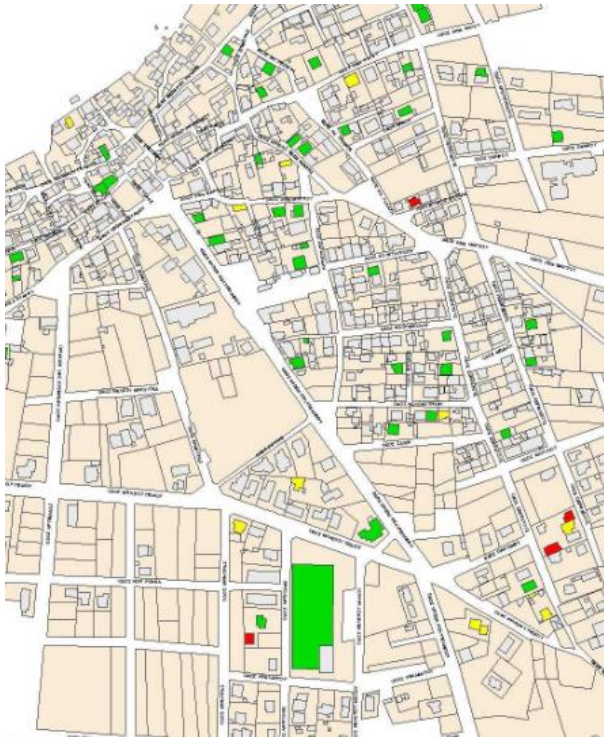
Envisaged outcomes

- Increase the value of the cadastral data in governmental and societal operations

- Establish the OCM as a widely available tool for planning and decision-making (particularly at a trans-national level)



Use of cadastral map data in recording earthquake damaged buildings in Magoula, Attica, Greece, 1999

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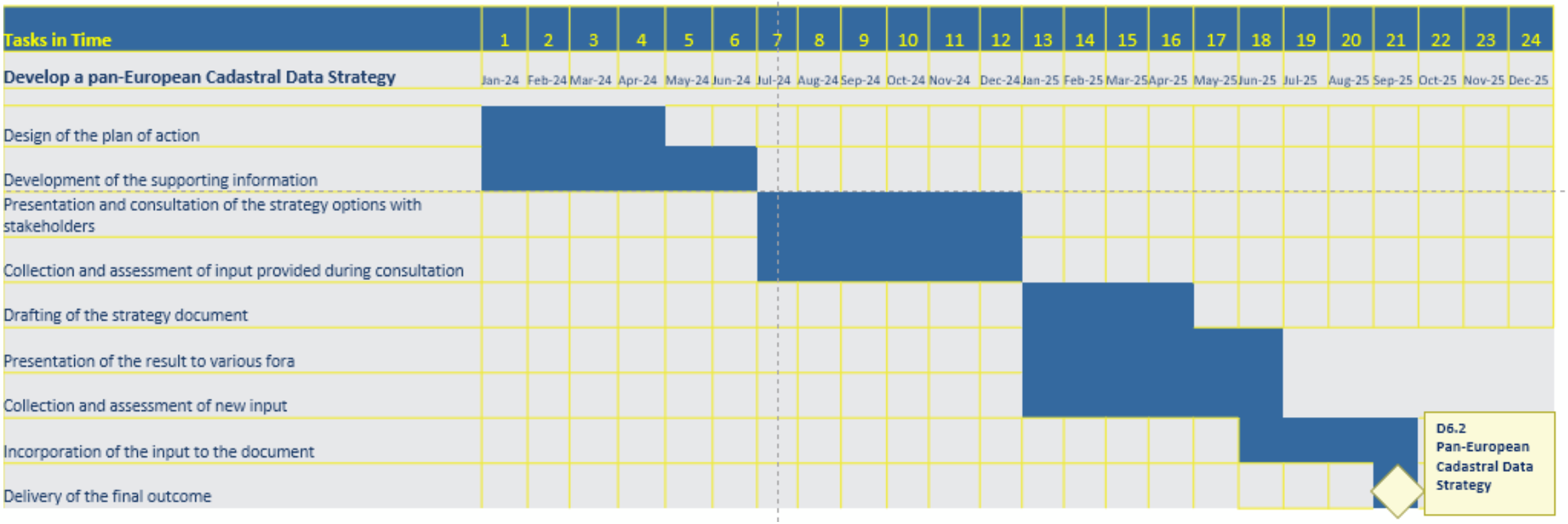
Timetable for developing the Strategy



Thank you for your attention!

Contact: plolonis@ktimatologio.gr

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