





INFO/RAC National Focal Points Meeting

Towards a Knowledge Management Strategy: the upcoming Knowledge Management Platform and linkages with Digital Transformation process







Outline

- Depicting the knowledge management strategy: main elements
- Guiding principles
 - What is Knowledge Management?
 - How knowledge should be managed?
- Strategy implementation: the KMP
 - KMaP architecture
 - Digital Transformation actions
 - KMaP attended products
 - Implementation steps
 - Users' profiles
- Mockup demo
- A survey for the platform









- 1. Individuation of guiding principles underlying the strategy.
- 2. Set a path to catalogue and harmonize data, information and knowledge across UNEP-MAP.
- 3. Fix sharing common practices for UNEP-MAP knowledge in a way that MAP heritage could be reused more than the possible.
- 4. Trace a path to ease the application of UNEP-MAP data policy at different levels
- 5. Create a unique access point to UNEP-MAP knowledge.
- 6. Create a cooperation network, composed by UNEP-MAP components, Contracting Parties, and relevant stakeholders.





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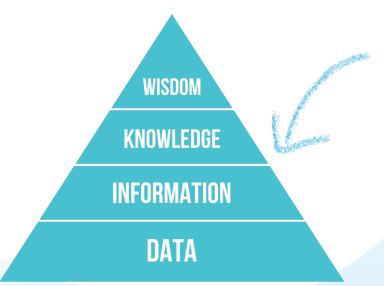
Guiding principles: what is knowledge management?

From business environment:

"The systemic and organizational process of acquiring, organizing, and communicating knowledge for employees who may use it in order be more effective and productive"1

With the aim to generate, preserve, exchange, discover, acquire, use, and evaluate knowledge²

KM is the method of extracting value from an organization's intellectual capital.



Value is based on data and keeps growing while enriching data with context and experience, generating knowledge.



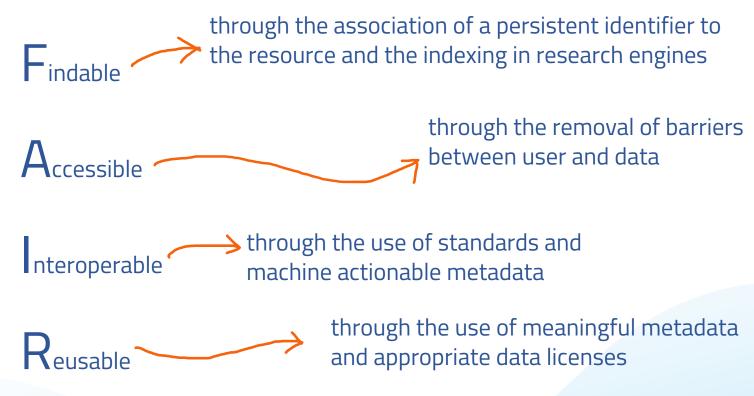






Guiding principles: how knowledge should be managed?

Where **FAIR** stays for:







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The MAP Knowledge Management Platform (KMaP) is the implementation instrument of the strategy, following commitments shared in the adopted Data Policy.

Prodromicactivities

- Data discovery: structured and unstructured data
- Data quantification and qualification
- Data metadatation and application of standard common practices (towards harmonization)



Data Management Task Force work









Presentation

Presentation text of the project. Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. tum zzril delenit augue duis dolore te feugait nulla facilisi.





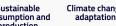




Integrated coastal



consumption and production



















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November 2022

Focus on structured data:

- Databases
- **Geographical Layers**
- **Applications**
- **Platforms**









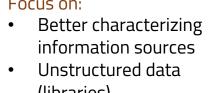




December 2022 February 2023

Focus on:

(libraries)







March 2023

Focus on:

- Integration of information sources and possible improvements
- Raising needs from the RACs
- Data policy implications
- Foreseen steps



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Choice of standards (and other relevant actions) in line with the adopted Data Policy



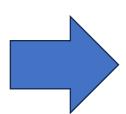




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Next step: Data Management Plan









Which data have a long-term value?

Value is also proportional to sampling or elaboration time

Covers the entire lifecycle of data

Are these data unique?

Data Management

!= «preserve all data»

Consider maintenance VS reproduction costs

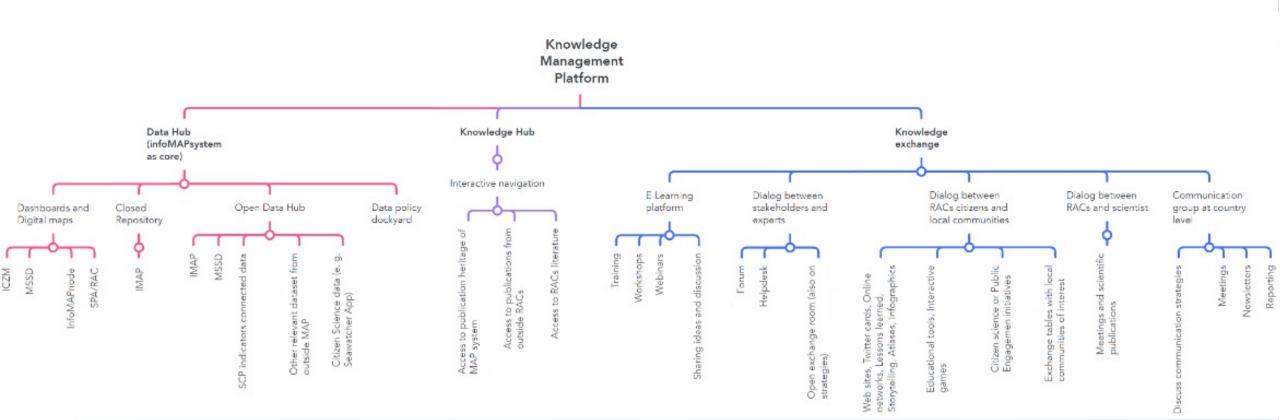
Temporal constraints on thirdy-parties data

Are data easily reproducible?

KMaP architecture

Aiming to be a unique access hub to Mediterranean knowledge, it is composed by three parts:

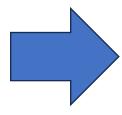
- 1. Data Hub: managing «geographical objects»
- 2. Knowledge Hub: managing «non-geographical objects» (documents, videos, leaflets, etc.)
- 3. Knowledge Exchange: connecting the KMaP to stakeholders' community



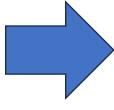
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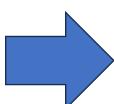
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Implemented in GeoNode, InfoMAPNode will be the core of the Data Hub



For the Knowledge Hub we are currently studying the possible integration with a semanthic knowledge engine able to better classify and retrieve documents



For the Knowledge Exchange an integration with a Project management tool is probable









KMaP architecture

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The digital transformation we are pursuing through concrete actions reflects on the study and choice of the most advanced digital

Sor the Knowledge Hub we are currently studying he possible integration with a semanthic knowledge.

For the Knowledge Hub we are currently studying the possible integration with a semanthic knowledge engine able to better classify and retrieve documents

These technologies are more and more improving knowledge

For the Knowledge Exchange an in management tool is probable









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KMaP architecture & Digital Transformation actions

GeoNode implements most known Open Geospatial Consortium standards for geographical data sharing

For the Knowledge Hub we foresee to implement a triple store system based on **RDF** thesauri

To enhance cooperation with partner we foresee to integrate a **Project Management Tool**



Redefine digital delivery models to increase accessibility of information across and outside the MAP

In line with OBJ1 and OBJ4 of Digital

Transformation: Unleash knowledge within MAP system cataloguing, connecting and sharing MAP knowledge

In line with **OBJ2 of Digital Transformation**:

Enhance digital co-creation and collaboration models to improve collaboration methods

...mentioning some examples only.





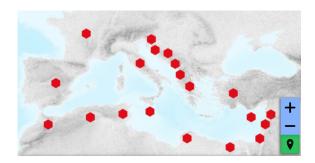




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Geographical Objects are:

Layers



Coastday - past events

(b) a dataset from PAPRAC - / May 12th 2023

This dataset refers to all the past Coastday events country by country. Coastday is an event of awareness rising organized yearly by PAP/RAC and involves Contracting Parties from the whole MAP. Category. MSP





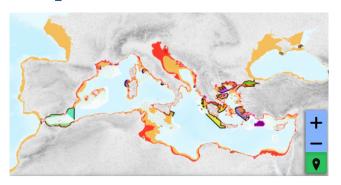
♣ ✓ View dataset

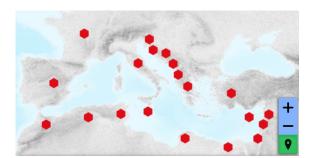


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Geographical Objects are:

- Layers
- Maps (overlay of layers)





■ Species distribution analysis

≺ View map

(a) a map from INFORAC Editor / February 13th 2023

Spatial analysis of species distribution by crossing SPAMI areas, species distributions of horse mackerel and Mediterranean mussel.

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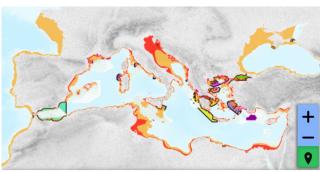
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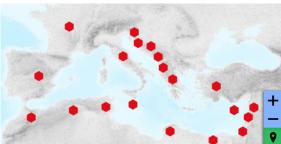


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Geographical Objects are:

- Layers
- Maps (overlay of layers)
- Geostories

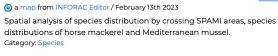




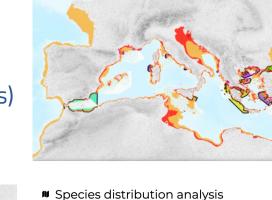
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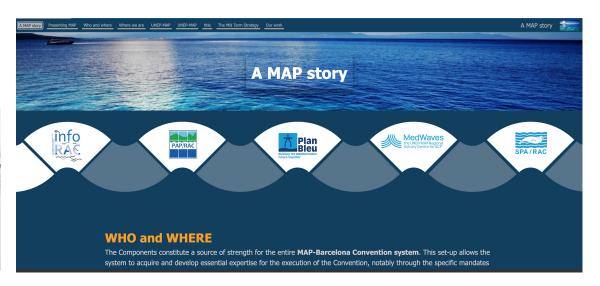






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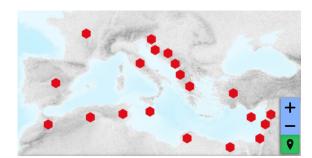




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Geographical Objects are:

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- Maps (overlay of layers)
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- Dashboards



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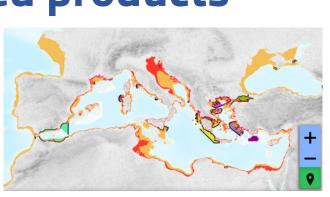
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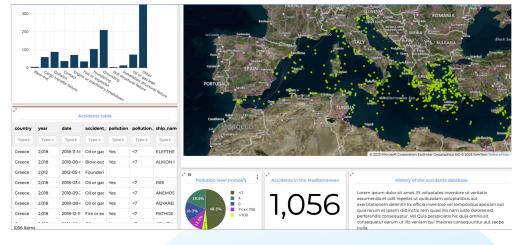
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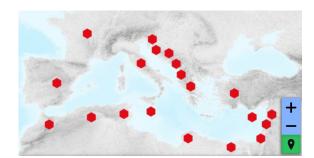
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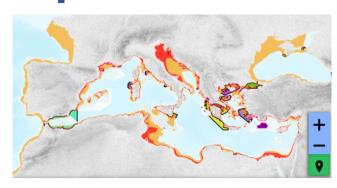


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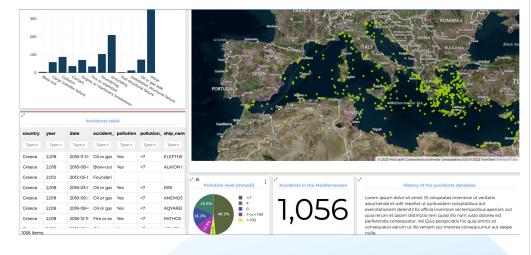


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They could be more or less «complicate to read» (Geostories and Dashboards, for example, have a clear divulgation aim) so intended to be used by specialized or generalistic public.



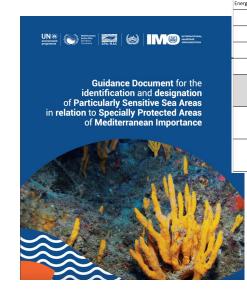






Non-geographical Objects are:

- Technical documents:
 - Guidelines
 - Reports
 - Scientific papers
 - Tables



Diversity and Distributions, (Diversity Distrib.) (2016) 22, 694–707



Biogeography

Mapping the impact of alien species on marine ecosystems: the Mediterranean Sea case study

Strategies for the

Development of Infrastructure, Networks and Transport, Ministry of Infrastructure and designated officials

designated officials

CPs / % of CPs having Stakeholders designated officials CPs / % of CPs having

designated officials

Number of newly trained

rsonnel per

newly trained

rsonnel per

CPs / % of CPs having
Stakeholders designated officials
CPs / Number of peer reviews
Stakeholders the region
CPs / Number of newly trainer

Stakeholders

Stakeholders

Stakeholders

Stelios Katsanevakis^{1,2}*, Fernando Tempera¹ and Heliana Teixeira¹

¹European Commission, Joint Research Centre (JRC), Institute for Environment and Sustainability (IES), Water Resources Unit, 21027 Ispra (VA), Italy, ²Department of Marine Sciences, University of the Aegean, University Hill, 81100 Mytilene, Greece

ABSTRACT

Aim To develop a standardized, quantitative method for mapping cumulative impacts of invasive alien species on marine ecosystems.

 $\boldsymbol{\mathsf{Location}}$ The methodology is applied in the Mediterranean Sea but is widely applicable.

Methods A conservative additive model was developed to account for the Cumulative IMPacts of invasive ALien species (CIMPAL) on marine ecosystems. According to this model, cumulative impact scores are estimated on the basis of the distributions of invasive species and ecosystems, and both the reported magnitude of ecological impacts and the strength of such evidence. In the Mediterranean Sea case study, the magnitude of impact was estimated for every combination of 60 invasive species and 13 habitats, for every 10×10 km cell of the basin. Invasive species were ranked based on their contribution to the cumulative impact score across the Mediterranean.









Non-geographical Objects are:

- Technical documents:
 - Guidelines
 - Reports
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 - **Tables**
- Information documents:
 - Video
 - Posters
 - Leaflets







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rsonnel per

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the region Number of newly trained

Stakeholders

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Green Entrepreneurship: exemplary innovative alternatives undertaken in the

Mediterranean and abroad.

air, the depletion of fisheries and biodiversity, over-construction, poor waste management, and water shortages. Furthermore, the economic, social and political transition adds up to the increasingly palpable impact of environmental issues, creating a context of great uncertainty.

However, these changes have also given rise for green entrepreneurs, institutions, organizations and governments to search for great opportunities of innovation, expansion and differentiation. Exemplary initiatives have been undertaken in the Mediterranean to solve the most pressing issues in the region. Below, we present some of the challenges we are facing, and how innovative initiatives are solving them, both in the Mediterranean and also in other regions of the world.

Mediterranean Cases



A project of Ibrahim Abouleish (Founder)

Ibrahim Abouleish has the vision to make the desert come alive thanks to organic agriculture. At the same time, he also creates education and health projects in order to raise awareness of Egyptian people and their culture. Currently, SEKEM is a worldwide example of the successful re-generation of a

Inspiring Future Green Entrepreneurs



"Adopting the ecosystem approach in the Mediterranean by the World Wild Fund

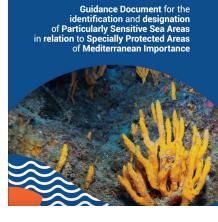
Mediterranean coast and macro-regional strea...

fishermen in Kalymnos are taking steps to ensure healthy seas for future generations. In doing so, they adopt the ecosystems approach, which proves to be quite a successful

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The first prototype (to be delievered later this year) will cover parts 1 and 2: **MAPS** (Data Hub) and **LIBRARY** (Knowledge Hub).











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The **NETWORK** (Knowledge Exchange) will be implemented starting from the next year.



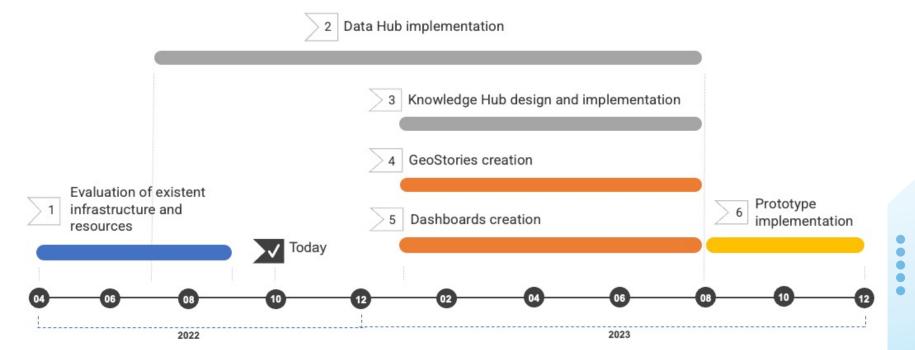


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The timing for the first prototype is the following:





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- Phase 0) Definition of **users** and **requirements**, definition of users' **potential interests**, identification of **use cases**Aim: ease the implementation of the attended products (Dashboards, Geostories and Knowledge Hub).
- Phase 1) Four parallel actions for the creation of **Dashboards**, **Geostories** and the **Knowledge Hub** and the completion of the **Data Hub**<u>Aim:</u> preparation of prototype whole infrastructure.
- Phase 2) Preparation of the Prototype with a **unique visual interface** + **feedbacks** from expert users group Aim: test a first version of the prototype.











KMaP users' profiles

	User	Is registered?	Can Upload?	Can Edit/Delete?	Can View?	Can Download?	Can Set Privileges?
Contracting Parties	СР	Yes	Yes	Yes, their data	Yes. Public and restricted material (following sharing regulations)	Yes. Public and restricted material (following sharing regulations)	No
	MAP CU and RACs (except INFO /RAC)	Yes	Yes	Yes, their data	Yes. Public and restricted material (following sharing regulations)	Yes. Public and restricted material (following sharing regulations)	No
MAP compo	INFO/RAC	Yes	Yes	Yes, all the material on platform	Yes, all the material on platform	Yes, all the material on platform	Yes
MAP partners	Stakeholders and researchers	Yes	No	No	Yes, Public and restricted material (following sharing regulations)	Yes, Public and restricted material (following sharing regulations)	No
Other users	Anonymous	No	No	No	Yes, only public material	Yes, only public material	No









News from the Mock-up: KMaP live demo



In this short video are shown mockups of:

- Data Hub: geographical layers and maps catalog, filters and visualization of files
- Data Hub: dashboards catalog, and dashboard preview
- Data Hub: geostories access map, and geostory visualization
- Knowledege hub: library catalog, and document preview









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INFO/RAC is currently working to visualize how the future Knowledge Management Platform could be used and from whom. We designed some workflows to depict users' journey inside the platofrm, that offers a lot fo possibilities indeed!

Here below a graph representing the possible products you can find inside the platform and the possible seach method you can use to achieve them.





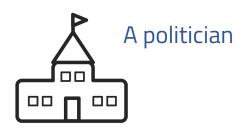












We hypothesized some **users**

We hypothesized some **use cases** for the platform

We designed the **logics** behind **products search and retrieval**

We need **your help** for testing these assumptions ©









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The head of a large field

The head of a large field

enterprise in the field

for the field

enterprise in the field

en

A scuba diving association had to plan their future excursions, looking for corals.

A **journalist** has to interview the new Ministry of the Environment and Coasts asking for...

A National Focal Point
has to Write a report to
Pollutant at Sea...

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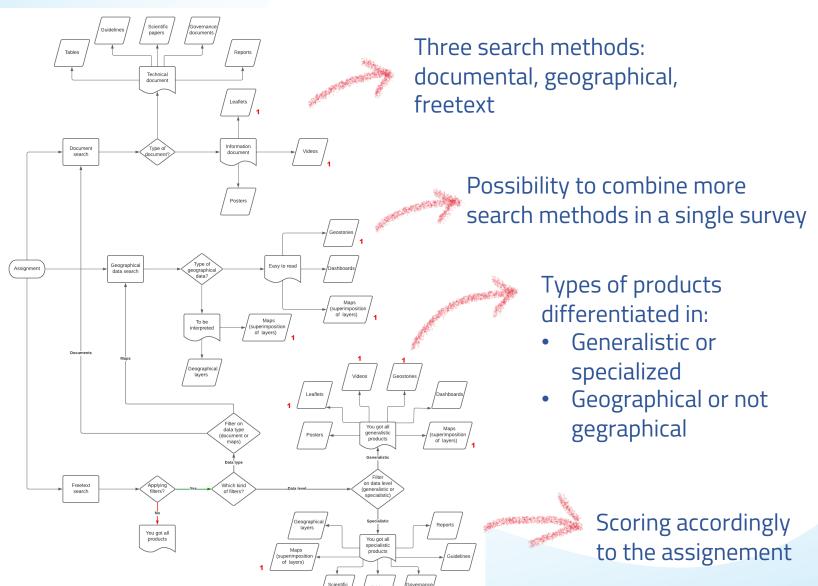








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So, let's participate!

- Get into the meeting website
- > Search for the «KMaP logics survey» section in the top right menu
- > Read the description and go to assignments preview
- Choose the one you prefer and feel free to get the survey more than one time if you ejoy it!

YOU ARE A CITIZEN...

YOU ARE A STAKEHOLDER...

YOU ARE A CP/NFP...

YOU

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- Rome, Italy **7-8 June 202**



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The survey is directed **firstly to you**, because we think that your expert feedback would be really useful for KMaP, but it will also be shared **with the large public later**, once this first roud of tests will be over.

We will discuss about the **results** of the survey in follow-up communications.

Thanks for your participation!

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Thanks for your attention



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References

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