

**Project Acronym: ODEON**

**Project title: Open Data for European Open iNnovation**

**Grant Agreement number: 3MED17\_1.1\_M2\_061**

## **D.4.2.3**

# **Model of Protocols to strengthen the DATA HUBs` operativeness**

WP n°:	4
Task n°:	1
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Type:	R
Dissemination level:	PU
Revision:	
Due Date:	09/2020
Date of submission:	<b>31.12.2020</b>

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This deliverable history should be removed from the document once it has been finalized. It can then be stored as a separate document on the server, next to the final version.

Version	Date	Status	What’s new?
0.1	29/12/2020	Work version	All sections

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### Summary

The protocol is a kind of recommendation for defining the agreements of cooperation with the public and private actors interested to join the Data HUBs, with the objective of formalizing Data Hubs in each project area, as well as at MED level, to develop an actual transnational exchange of service offer.

Using the proposed guidelines, a consolidation a long-term membership could be established. In the document, the protocols are presented in the chronological order of the steps important for the existence of the data hub, ie from the preparations for the establishment of the data hub and the selection of staff to the event itself and the follow-up activities.

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## 1. Abbreviations & Glossary

**OD:** Open Data

**LOD:** Linked Open Data

**PPP** = Public Private Partnership

**SMEs** = Small and Medium Enterprises

**HUB:** the effective centre of an activity, region, or a network. Data Hubs across the ODEON area will be created in order to formulate a network.

**CLUSTER:** a geographically proximate group of interconnected companies and associated institutions, in a particular field, linked by commonalities and complementarities. Under the Med Open Data Cluster umbrella, there will be a network of Digital Hubs created.

**Open Data:** Data freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control.

**Open Linked Data:** Open data, published in a way that can be read automatically by computers.

**Quadruple Helix:** Innovation model that involves institutional bodies, research sphere, business sector and citizens in the process (industry - research bodies - public authorities - civil society). This new generation of open innovation leads to stronger economic impact and better user experience in Europe.

## 2. Introduction

### 2.1 Open data for OPEN society

The trend towards opening up data by public bodies has long been pursued both within European Union (EU Directive on the re-use of public sector data) and at a broader global level (e.g. Open Government Partnership, G8 Open Data Charter). In the age of digitization and the World Wide Web, it has become important not only that data held by public bodies is made available to the public, but also in what formats it is made available. It is recommended that they be in machine-readable form and in open formats. Only in this way can the connection of open data be guaranteed, which is available to everyone for unlimited further use and as such can form an integral part of, for example, the semantic World Wide Web.

By opening up public data, the public sector is focusing on education with various actors in the information society, both local government (smart cities), the data-based economy (data economy), academia (open access), educational institutions and non-governmental organizations. The publication of open data enables citizens and businesses to participate more actively in legislative changes and to make informed public interpretations. Statistics, spatial data or business reports help us make more informed decisions, build innovative services and gain new insights into public affairs.<sup>1</sup>

Open data in the public sector brings many benefits:

- easier access to and sharing of whole sets of raw public sector data,
- the development of new digital services,
- better insights into how the public sector works and how public money is spent,
- new solutions and increased quality of life,
- collaboration with various stakeholders: Business, start-ups, local government, researchers, NGOs, universities, schools, cultural organizations, etc.

With the introduction of European Data Strategy, which among other things announces new regulations for data and common European data spaces, it is very important that in each country / region / country a stakeholder ecosystem is built and networked that is prepared for (necessary) changes. It is the stakeholder ecosystem that can justify and represent DATA HUBs.

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<sup>1</sup> Strategija razvoja informacijske družbe 2020.

<https://www.gov.si/assets/ministrstva/MJU/DID/Strategija-razvoja-informacijske-druzbe-2020.pdf>

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## 2.2 Context and objectives

The report summarized and represented:

1. recommendations for defining a cooperation agreement with public and private stakeholders wishing to join Data Hub;
2. protocols as individual steps in chronological order relevant to the long-term existence and effect of each liaison, in stages:
  - i) before Data Hub,
  - ii) launching of Data Hub
  - iii) operativeness of Data Hub;
3. Activities for the exchange of services at international level, in the Mediterranean.

### 3. Recommendation for defining cooperation agreement with public and private sectors

#### 3.1 Recommendation for Open Data portal owners<sup>2</sup>

Requested by the European Commission, in the context of the European Data Portal, sets out what makes Open Data portals sustainable in four key areas: governance, financing, architecture and operations. Recommendations are based in interviews, secondary research and practical experience.

##### Governance

- Have a business plan and clear governance structure in place
- Bring publishers and data users together to address specific challenges, using Open Data from the portal
- Build responsiveness to government priority changes into your governance structure
- Create hard levers to set and enforce data quality and metadata standards, and pursue data updates from publishers
- Create a non-ministerial leadership role to champion data publication and respond to issues



Picture: Recommendations to make governance model more sustainable, Recommendation to open data portal, from setup to sustainability, p. 18,

<sup>2</sup> [https://www.europeandataportal.eu/sites/default/files/edp\\_s3wp4\\_sustainability\\_recommendations.pdf](https://www.europeandataportal.eu/sites/default/files/edp_s3wp4_sustainability_recommendations.pdf)



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### Finance

- Be open about your funding strategy, so that people publishing and accessing data from the portal can identify future needs, use cases and potential funding shortfalls
  - To maximise scope for portal improvements, and reduce the impact of funding cuts, ensure your priorities (training, support for publishers, user engagement) align with those of your funding source(s)
    - Ensure that your own role as portal owner includes responsibility for setting funding strategies and budgets
    - Perform, commission or identify research into the impact of your portal's current or potential activities, to develop and support a business case for future funding.



Picture: Recommendations to make portal financing more sustainable Recommendation to open data portal, from setup to sustainability, p. 27,

### Architecture

- Select open source software solutions, and solutions that offer archiving/downloading options for all data published via the portal
  - Contribute to the development of standard APIs, that could be used across all Open Data platforms, for sharing, summarising and presenting data
  - Build links to data held in other portals into yours, where they could be relevant for your local users
  - Even if not responsible for the publication and maintenance of data, research your user needs and their preferred data formats to drive data improvements
  - Build upon recognised standards to foster interoperability and comparability of metadata across Europe

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Picture: Recommendations to make portal architecture more sustainable Recommendation to open data portal, from setup to sustainability, p. 36,

### Operations

- Manage publication operations to support different types of publishers from small- to largescale, enabling automation where possible
- Manage technical operations to include effective monitoring and reporting systems for inaccessible data, preferably through publicly accessible lists for users to track progress
  - On-board new end-users, publishers and monitors with effective User Experience design, clear publication processes, feedback loops and training
  - Automate functions to ensure seamless integration of a diversity of data sources, increase user friendliness and limit overheads for stakeholders
  - Capture and share lessons learned, and be open to best practices and standards developed by other portal operators

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Picture: Recommendations to make portal operation more sustainable Recommendation to open data portal, from setup to sustainability, p. 45,

### 3.2 Recommendation for public sectors

A key objective for public sector stakeholders and policy makers in establishing Open data Hubs and platforms is to support and develop the open data ecosystem.

The main steps that the sector can take to contribute to this goal are the:

- development of open and linked data standards,
- training of public administration staff,
- support for public administration institutions to open data,
- open collaboration in the development
- completion of the national catalogue of open data,
- and ongoing dialogue between public institutions administration and other stakeholders.

In supporting the development of the Open data hub, it is crucial that representatives of policy makers and the public sector are effectively involved in the hub and promote it through various events,

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conferences or supporting elements such as hackathons. At the same time, it is crucial that editors and users meet regularly to discuss challenges in the development of open data.

The fundamental challenge of Open data Hubs, as also the portals, is certainly sustainable funding, otherwise they may become side projects that never develop. One of the solutions is systemic funding through legislation or as part of larger consortia, such as DIH / EDIH.

### **3.3 Recommendation for private sectors**

The private sector needs to understand the role of open data in developing open innovation and the potential for creating new market products. Too often, companies do not realize the benefits of open data and the opportunities to leverage it in their work/marketing processes.

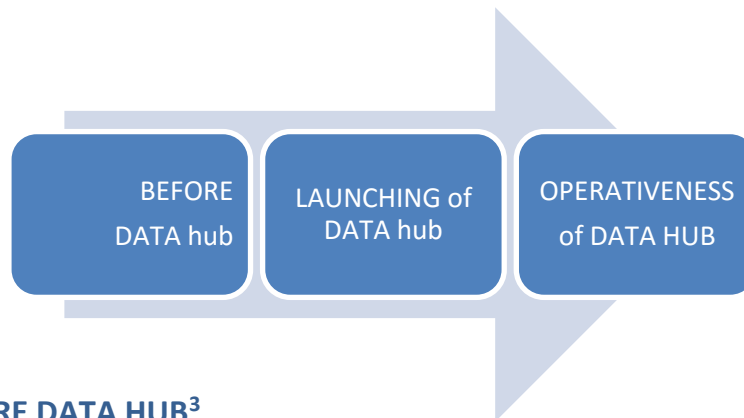
Involvement in Open data Hubs offers companies exceptional opportunities to learn about the sector and, most importantly, to internationalize and collaborate with new partners in international projects.

At the same time, it is necessary to be aware of the many limitations faced by SMEs in their work, so through inclusion in the Open data Hubs they can significantly influence the acquisition, openness, transformation and exploitation of open data and their use as raw materials for evolving digital economy.

Indeed, the essence of open data is precisely in their use or re-use in the private and business sectors.

Recently, another very important segment has been developing rapidly, namely the opening of data by companies themselves. From this point of view, their involvement in the Open Data Hub and the sharing of experience and knowledge is even more important.

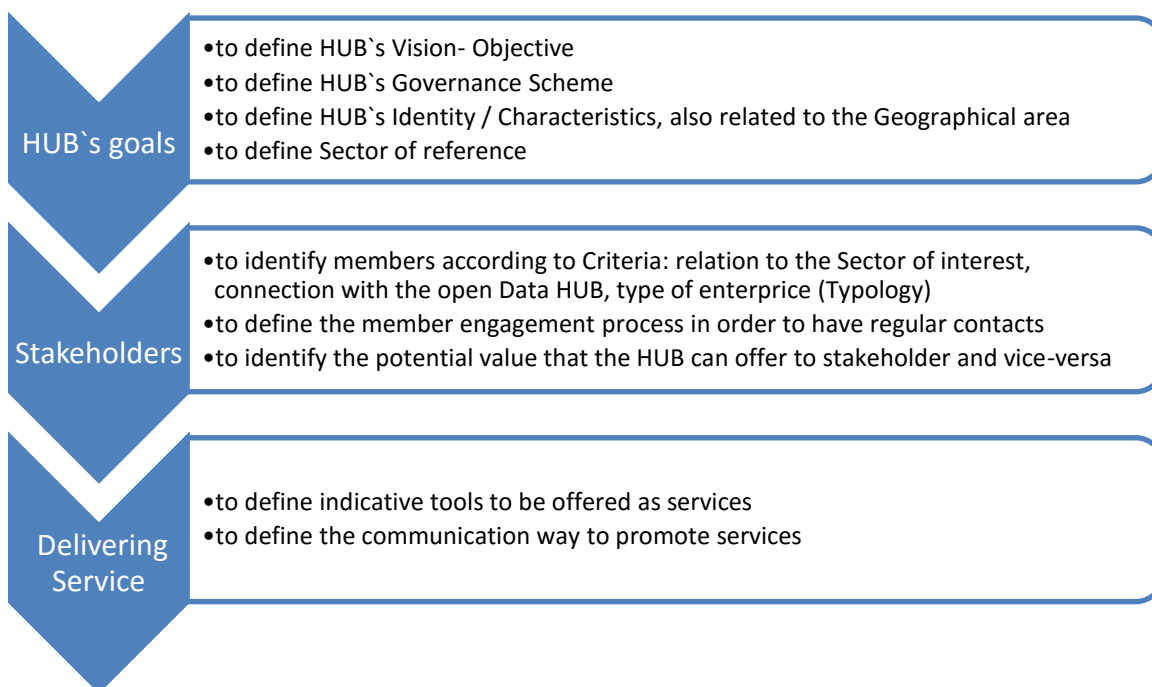
#### 4. Steps to strengthen the DATA HUB's operativeness



##### 4.1 BEFORE DATA HUB<sup>3</sup>

The main objectives of activities related to Before Data Hub phase are:

- Hub's goals
- Stakeholders
- Delivering service



<sup>3</sup> FINAL\_ Elaboration of the methodology and the set of services to be implemented with a Data Hub (3.3.1), contributed by GFOSS, ODEON project internal documentation, <https://docs.google.com/document/d/1XzjM8wm7Uw8lGpFJuYPIvoips3NTWHTi/edit>

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### 4.1.1 HUB`s goal

#### **Define Hub`s vision-objective**

Setting up a Hub, demands a clear view of what the Hub`s vision should be. In the ODEON area, each Data Hub should set its own goals and objectives, adjusted to its country`s special characteristics. In order to support the Hub`s Vision, Mission and Objectives elaboration, interaction and opinion exchange with selected stakeholders may be established through a focus group, a survey with the use of a structured questionnaire or a structured interview that will result in the profile of actors, stakeholders and potential members and their needs. Finally, by setting as a goal the promotion of the extended use of Open Data by the Private Sector, an example will be set for the Public Sector to follow and provide good quality Open Data.

#### **Define Hub`s Governance scheme**

To achieve the aforementioned vision, a well-defined Governance plan must be provided. In order to ensure Hub`s capability to meet the expectations, the Governance Scheme should also have the flexibility to adjust to each region`s specific characteristics. Key actors of the Governance Scheme will be the following:

- Hub Coordinator
- HUB Coordinator Representative

#### **Define Hub`s Identity / Characteristic**

There is a certain list of characteristics that have to be clarified so as to form each Hub`s identity.

#### **Define Sector of reference**

Each Hub have to appoint its services to the Sector(s) of reference:

- Blue Growth
- Green Growth
- Cultural and Creative Industries or others.

### 4.1.2 Stakeholders / members

#### **Identification of stakeholders / members**

The first step in order to identify the members of the HUB, is to identify those participants that can be

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influenced and can influence the Open Data Hub. The search will be done through desktop research. The identification of the HUB members on National/Regional level needs to be completed by the HUB Coordinator. Of course, a 4-helix approach is recommended with SMEs, startups being in the center of interest.

Some of the Criteria, can be:

- Relation to the Sectors of interest
- Connection with the Open Data Hub.
- Type of enterprise.

### **Define engagement process for stakeholders / members**

Throughout the whole process of delivering activities to the Data Hubs members, there has to be a constant effort to raise their level of engagement to the ODEON project. On a regular basis, a contact with all the HUB members should be maintained. In order to understand members' expectations and constraints, they should be asked frequently, for feedback on the effectiveness of the HUB and how it could be enhanced.

### **Identify potential value that Hub can offer and vice - versa**

#### **4.1.3 Delivering service**

##### **Define tools to be offered**

Every Hub will have a variety of tools, in order to provide its services. Each Hub should prioritize these tools, according to its own characteristics and make suggestions about the extent of their use.

Some indicative tools are:

- On-line Instruments
- Workshops
- Thematic Workshops
- Local study visits
- Pitching events
- Coaching
- Local working groups
- Hackathons

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- Capacity building seminars
- Training courses
- Technical seminars
- Tracking funding opportunities
- Marketplace Creation
- platform use

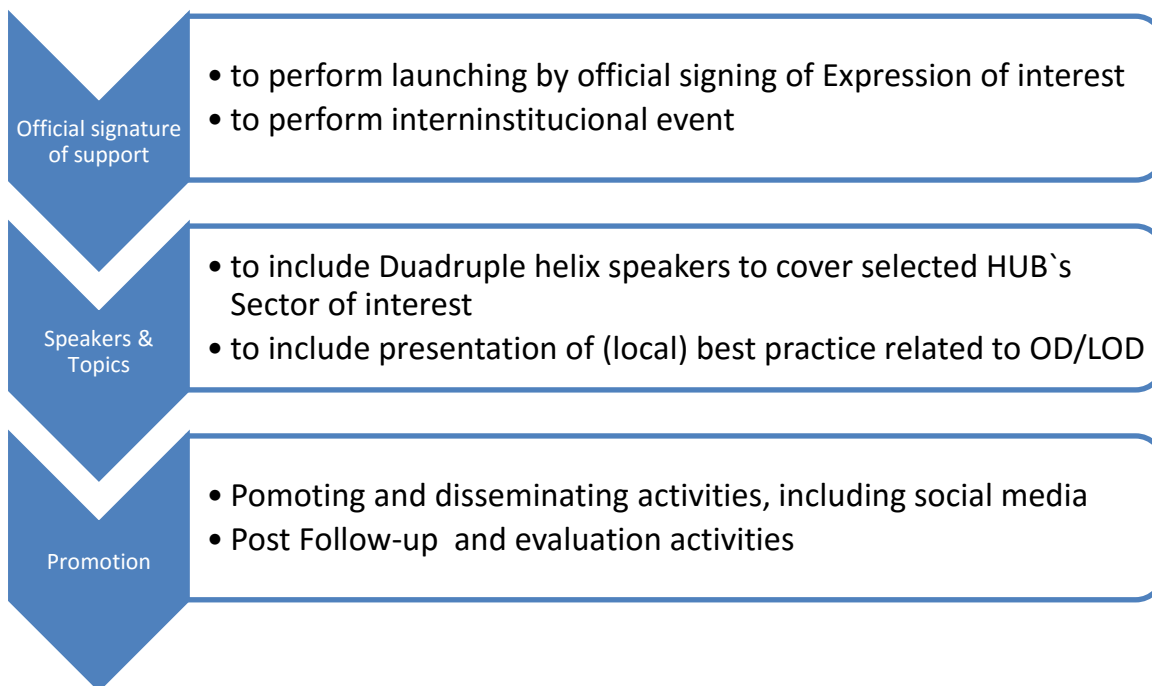
## **Define the way of promotion**

All the necessary information concerning the activities of the HUB, is to be constantly circulated to the members, who should be kept up-to-date concerning the upcoming HUB’s activities.

### **4.2 LAUNCHING ACTIVITIES<sup>4</sup>**

The main objectives of activities carried out during launching phase are:

- Official Signature of support / Letter of interest
- Speakers & topics
- Promotion



<sup>4</sup> FINAL\_ Definition of the HUB`s members and operations (3.3.2), contributed by GFOSS, ODEON project internal documentation, <https://docs.google.com/document/d/1wGk5Jo4uQ3STfrRflyOOecx7rnF2nI-/edit>



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### 4.2.1 Official signature of support / Letter of interest

#### **Performing launching by official signing of Expression of interest**

An indicative Declaration of participation/Expression of interest to join the HUB activities could include the below info:

- Participating Organization (Organization Name, Address/City)
- Organization's Representative (First name, Surname, Position, E-mail, Tel. No.
- informing about the terms of reference any privacy conditions (GDPR related) before joining the HUB.

#### **Performing interinstitutional event**

Making the event as a collaboration of different organizations & institutes contributes in raising awareness of results.

### 4.2.2 Speakers & topics

#### **Include Quadruple helix speaker**

Include recognized national leaders and good speakers and presenters in event planning.

#### **Include local best practice**

Include local best practice related to OD/LOD in order to strengthen regional/ national ecosystem as well as to include, if possible international best practice.

### 4.2.3 Promotion

#### **Social media**

Use networking to all possible social media and keep in mind that on-line events could results in more diverse and mass participation.

#### **Follow up**

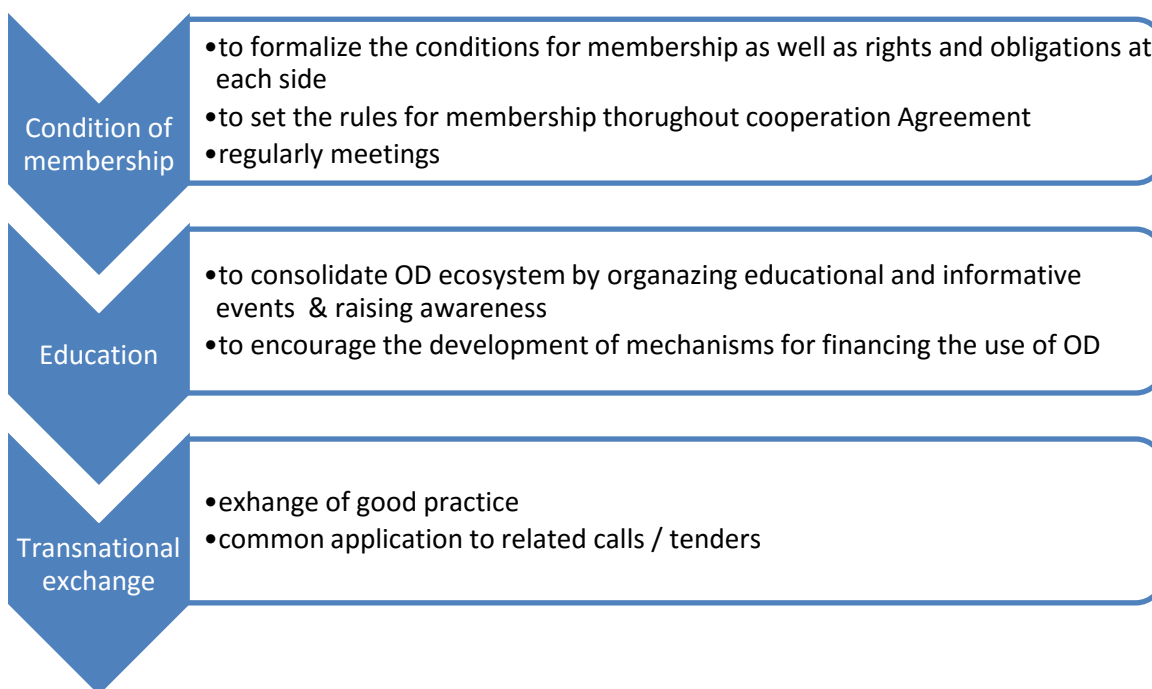
Follow up activities should contains all documentations (ppt, links, recordings, thanks...) as well as concerning the upcoming HUB's activities.

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## 4.3 OPERATIVENESS OF DATA HUB<sup>5</sup>

The main objectives of Data Hub`s operativeness phase are:

- Condition of membership
- Education
- Transnational exchange



### 4.3.1 Condition of membership

#### **Formalize condition**

Conditions for membership is an important parameter in order members to be in line with Data Hub`s values and vision. Data Hubs are taking care of the cluster members` interests, facilitate innovation and knowledge sharing as well as set and implement the strategy. Consequently, Data Hubs should provide need-oriented services which will cover members` needs. However, it is very important for members to be able to follow their own agenda.

#### **Cooperation agreement**

A way to ensure the conditions of membership but also to define the rights and the obligations of each side is with the Cooperation Agreement. The cooperation agreement set the rules for membership and

<sup>5</sup> FINAL\_Sustainability plan for Data Med Cluster (4.4.1), contributed by GFOSS, ODEON project Internal documentation, <https://drive.google.com/drive/folders/1JWBFaUJb5AtLRqvZKU1fM74s0zJuy0Eq>

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ensures legal security for both entities; by specifying issues such as production, voting rights, cluster services, governance structure, finance, etc.

### **Regularly Meetings**

Regularly meetings result to make members / stakeholder having a power to impact and to contribute to the Data hub.

### **4.3.2 Education**

#### **Organizing events**

By organizing educational and informative events & raising awareness a consolidation of OD ecosystem is enabled.

#### **Mechanism for financing**

Local hubs can also be one of the main sources of information on the possibility of using open data, access to financial resources available at national and EU level.

### **4.3.3 Transnational exchange**

#### **Exchange of good practice**

Organizing joint study visits could be a good way to increase collaboration between Open Data HUBs and provide an opportunity to showcase the services provided by SMEs - this can also be done online (the example of good practice we did in the Odeon project was a very successful study visit in 4 countries), which could also be organized annually within the community of participating countries. The aim of the event is to transfer experience and knowledge both at the level of policy makers and at the level of the supporting environment, and to present examples of good practice in the use of open data in the business environment.

#### **Common Calls / Tenders**

Transnational connections & networking need to be used to focus on common Calls / tenders applications.

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### 4.4 What leads to Hub`s sustainability?<sup>6</sup>

*“Hubs (DATA HUBs) are primarily intended to:*

- empower and promote the importance of open innovation, the data economy and the transfer of the use of OD to entrepreneurship and industry,*
- contribute to the education and empowerment of all stakeholders in the OD ecosystem. ”*

As recorded throughout the questionnaire of OPEN DATA hubs main future goals are related to three main objectives:

- benefits of stakeholders and target groups
- making synergies on local / regional / national level
- promoting and dissemination national as well as international.

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<sup>6</sup> FINAL\_HANDBOOK to support transferring activities (4.2.2), contributed by TPLJ, ODEON project internal documentation <https://drive.google.com/drive/folders/16jdsSt3STxPcOxXZRFXuq-Mukb3jWmAF>

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### Benefits for stakeholders

- to strengthen SMEs/start-ups/spin-offs in the development and promotion of new products/services,
- to provide access to information and knowledge into a single entity
- to create further opportunities of actions connecting digitalisation, open data and industrial sectors (tourism, manufacturing, etc
- to improve the capacity for distribution and use of open data by organizing educational and informative events for policy makers and actors involved in innovation;

### Making synergies

- to develop synergies in the Open Data and Data Economy sector
- to strengthen the coordination at regional level between Public and Private stakeholders
- to create synergies and collaborations with other regional innovation stakeholders and initiatives
- Encouraging the development of mechanisms for financing the use of OD
- Involvement of regional / national actors in the initiatives

### Promotion and dissemination

- Encouraging the exchange of information, joint projects and networking among the members of the national DataHub, as well as partner DataHubs;
- Preparation of special national reports through analysis of market opportunities;
- Publishing material on this topic through social media and other communication channels
- Promoting of opening of data in public sector
- Preparation of special national reports through analysis of market opportunities;

### 5. **Activities for the exchange of services at the international level, in the MED area**

One of the keys to a successful exchange of open data services at international and Mediterranean level is certainly a common online platform [Opendatahubs.eu](http://Opendatahubs.eu), which we have established through the project ODEON. By connecting with national / regional e-government platforms, the platform ensures a constant flow of data in three thematic areas of the project (Green and Blue Growth and in the Cultural / Creative area).

The platform hosts open data freely available from the administration, training content for awareness and capacity building activities, and tools and instruments that can support SMEs, startups, etc. for their entrepreneurial initiatives to develop joint cooperation and innovation pathways.

The platform also provides access to services developed by local data hubs, while providing relevant information on tools, knowledge and networks to improve the business use of open data / related open data.

Of course, a common platform is only the first step towards a sustainable and successful cooperation and exchange of services on an international level, and regular joint activities by all stakeholders are essential for success.

Activities for the exchange of services and knowledge that could be carried out on an annual basis in the Mediterranean area or even more broadly with the support of Open Data Hubs are the following:

- Joint announcement of hackathon winners at the level MED. The hackathons that Hubs organize annually in different Mediterranean countries could be upgraded by presenting the winners at a joint transnational event, where we would then determine the Open Data winner of that year. The date for such an event could be sometime in November / December, when all the hackathons are completed, and more activities are done and developing of ideas is already in progress.

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- Organizing joint study visits has also proven to be a very good way to increase collaboration between Open Data HUBs and provide an opportunity to showcase the services provided by SMEs - this can also be done online (the example of good practice we did in the Odeon project was a very successful study visit in 4 countries), which could also be organized annually within the community of participating countries. The aim of the event is to transfer experience and knowledge both at the level of policy makers and at the level of the supporting environment, and to present examples of good practice in the use of open data in the business environment.
- One of the important dates for all 7 local data hubs, where they could have major activities and some visible promotion to contribute to the entrepreneurial, social and environmental value of open data on the international / MED level is the March 6 - World Open Data Day.
- For long-term successful cooperation and development of new services, stronger cooperation with the academic sector and increasing economic growth and fostering innovation, further cooperation between the Hubs in jointly formulating strategies, acquiring EU projects or participating in international consortia such as the Open data DIH is crucial.
- Local Open data Hubs have another important role at the international level, namely that they can play an important intermediary role through various mechanisms also mentioned on the platform, both in connecting entrepreneurs who want to collaborate with entrepreneurs from other participating countries and in connecting companies with investors at the national and international level.
- Local hubs can also be one of the main sources of information on the possibility of using open data, access to financial resources available at national and EU level, and at the same time co-responsible for actively communicating and promoting cooperation on open data field between all stakeholders.

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- The last but perhaps the most important role, is addressing common challenges, such as higher quality or better access to open data... etc.. One of the examples of good practice in building APIs, which we are already addressing with the DEAS project.