



EuroGEOSS Showcases: Applications Powered by Europe

## D5.5 – Sustainability Support Package



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STATUS / DISSEMINATION LEVEL			
STATUS		DISSEMINATION LEVEL	
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## 1 INTRODUCTION

This document provides a detailed framework and methodology for assessing the economic and non-economic aspects pertaining to the implementation and sustainable exploitation of the EO services developed by the pilots within e-shape. This process will be carried out within Task 5.1 “Sustainability Support”. In this context, pilot partners will be supported by WP5 Leaders to develop their own business or economic sustainability plans. The first step in that direction is associated with this deliverable “Sustainability Support Package”. This package will provide the framework within which the WP5 Leaders will exchange with pilot leaders and guide them to develop their business/economic sustainability plans further in the project. To that end, “Economic Sustainability Sheets” are presented as tools to be used by pilot partners to lay out key information about their activities and pave the way for fully-fledged plans. Before presenting these economic sustainability sheets (chapter 4), it is instructive to present the relationship of this activity to the rest of e-shape (chapter 2), and explain some key considerations around economic sustainability and business planning as applicable to e-shape (chapter 3). This report concludes with a presentation of the steps (chapter 5) that will be followed in the subsequent phases of economic sustainability support.

## 2 PURPOSE AND RELATIONSHIP TO OTHER ACTIVITIES WITHIN E-SHAPE

“Economic Sustainability” is one of the key concepts driving the work performed under e-shape. This should be first and foremost understood as referring to the long-term exploitation of the results produced in the context of the e-shape showcases and their respective pilots<sup>1</sup>. In that regard, e-shape has brought together key European EO actors to develop with and for users a series of EO-based services that support a wide variety of sectors. As an Innovation Action, the starting point of these services is quite advanced – each of them builds on existing solutions developed in the context of important European GEO projects as well as other activities. Moreover, each of them should aim at reaching the highest possible level of maturity and delivering the highest possible value to its directly engaged users but also, potentially, to a wider community of them.

It is within this context, that Work Package 5 “Sustainability and Upscaling” operates. Its main mission is to help e-shape partners involved in the different pilots to strengthen the economic sustainability and/or business potential of their solutions and promote their uptake and penetration in the respective markets. To that end, task T5.1 “Sustainability Support” will provide the necessary support and tools. The first of these tools is the **Sustainability Support Package** described in this report. Its purpose is to lay out the concept and need for sustainability and/or business planning for each pilot within e-shape. In addition, this package entails the custom-designed “*Economic Sustainability Sheets*” which are introduced herein along with a guide on their use and application.

In that regard, the Sustainability Support task is closely linked with multiple other activities:

- WP2 (Co-design): The outputs of the “Follow-up of co-design process” per pilot have been studied. These outputs pertain to aspects such as value proposition for different users, service provision scheme and relationship with users over time. As such they could eventually inform economic sustainability considerations even if they have not been raised as such.
- WP3 (Implementation): The outputs of initial assessment (Task 3.1) leading into the 1<sup>st</sup> Pilot Sprint (Task 3.2) have been also studied. Here, too, contextual information (e.g. types of data used, platforms used, challenges) that can eventually inform economic sustainability aspects

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<sup>1</sup> It should be noted that e-shape is also generating a series of other “strategic outputs” which bring their own strong value to the EO community and for which involved e-shape partners will also strive to develop long-term exploitation plans. These, however, are not within the scope of this report.

have been produced. This task will complement these outputs by focussing directly on economic sustainability perspectives.

- WP4 (User Uptake): The efforts of this work package will provide significant support to the realisation of sustainability of pilots, to the extent that engaged communities can become actual users of the services. No direct consideration has been considered in this deliverable but synergies will be explored within the business/economic sustainability plans of pilots in the future.

In view of all the above this document will act as a guide and reference for inputs to:

- **D5.11 – First Sustainability or Business Plans per Pilot** – due in M24
- **D5.25 – Final Sustainability or Business Plans per Pilot** – due in M40

**Note:** The actual economic sustainability or business planning activities themselves will be documented within deliverables D5.11 and D5.25. Therefore, the economic sustainability or business planning activities for each pilot are not undertaken within this deliverable; instead the function of this deliverable is to provide the tools, methods and understanding necessary to guide these activities.

### 3 ECONOMIC SUSTAINABILITY AND BUSINESS PLANNING

In order for each of e-shape’s pilot EO services to reach its maximum value and continue to deliver it post-project completion, economic sustainability or business planning must be undertaken so as to give each innovation the best chance of continued success and longevity. Given that deliverables D5.11 and D5.25 are to be submitted in months 24 (i.e. in a year from the publication of this deliverable) and 40 respectively, the economic sustainability and business planning activities will be an ongoing and dynamic process. This evolving system will ensure that project R&I activities, developments and achievements are well connected to outside technological developments and the exploitation activities are consistent with the current demands of the market and/or the user community. Economic sustainability planning in particular will aim to prevent the project results from losing relevance given the ever-changing trends of the EO sector and its rapidly developing competitive landscape. Exploitation activities, such as economic sustainability or business planning within Horizon 2020 projects also serve to collate, communicate and promote the findings and accomplishments of the project. In that regard, it is important to note that within activities performed under WP3, 12 out of 27 pilots underlined their need for marketing/business planning.

At this point the distinctions between “**Economic Sustainability Planning**” and “**Business Planning**” will be defined. This distinction is done in recognition of the fact that not all pilots developed within e-shape are going to pursue a commercialisation path.

#### 3.1 Economic Sustainability Planning

Economic sustainability planning refers to the non-commercial but “future-proofing” planning activities for a given innovation or service. Economic sustainability planning considers and analyses criteria such as value propositions, key data sources, target users, regulatory and IP considerations, funding opportunities and future partnerships. It also aims to maximise the positive and minimise the negative impacts of services on the economy, environment and society.

Despite the fact that a number of e-shape’s partners do not envisage bringing the services developed within the project to the market in a commercial sense, economic sustainability planning is still required to ensure that the strengths, weaknesses and opportunities relating to each service are understood. Economic sustainability means services will remain “economically” viable and robust



enough to maintain stand-alone operations post-project while not seeking profit in a commercial sense. This will improve the service and ensure its survival and success in its relevant ecosystem, whatever that may be. It also ensures that the innovation continues to remain relevant and impactful in its field.

### 3.2 Business Planning

Business planning includes the commercial planning activities along with the economic sustainability planning activities for a given innovation or service. In addition to the criteria analysed under economic sustainability planning, business planning considers and analyses all commercial or “profit-making” aspects of a service, such as potential business models, target markets, market sizing, market entry strategies, pricing schemes, revenue models, business generation processes and financial projections.

For the partners and services within e-shape that are willing and able to develop their products with a view to ultimately launching them commercially into the market, business planning is required. It helps to define the positioning of an innovation or service in a commercial market relative to its competitors. It also helps guide how the most impactful and financially beneficial business decisions can be made.

### 3.3 The concept of a “Business Model Canvas”

A “Business Model Canvas”<sup>2</sup> is a management and planning tool used to help understand and visualise potential sustainability or business models for one’s own innovation or the innovations and services of others. It generally involves a graphical blueprint which maps different elements or “building blocks” of a given entity, such as value propositions, resources, partners, finances and customers onto a structured chart. The business model canvas helps to illustrate the positioning, structure, opportunities and weaknesses of an innovation. It also serves to promote understanding, discussion, analysis and creativity within an organisation. Business model canvases help ensure that the concept of “economic sustainability” remains core to the thinking and planning of a given idea, innovation or service.

## 4 ECONOMIC SUSTAINABILITY SHEETS – APPLICATIONS & USE

WP5 Leader Evenflow have developed “Economic Sustainability Sheets”, which are custom designed canvases, similar to a business model canvas, but with significantly wider and deeper coverage of several aspects. The economic sustainability sheets presented herein are specially tailored for the needs of e-shape. The economic sustainability sheets have been designed with the aim of helping the service providers in the consortium present all economic sustainability or business aspects pertaining to their proposed services in a complete yet concise manner.

Ultimately, the aim is to use these sheets to facilitate the discussion with pilot leaders, incorporate their feedback and fine tune the service offering towards maximising value propositions.

### 4.1 Process for the application of the economic sustainability sheets

The process for the application of the economic sustainability sheets within e-shape will be as follows:

1. With reference to their respective services, each pilot partner will first fill in an economic sustainability sheet each to the best of their ability. The answers provided do not have to be

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<sup>2</sup> Originally proposed by Alexander Osterwalder in 2005 – see here: [https://en.wikipedia.org/wiki/Business\\_Model\\_Canvas](https://en.wikipedia.org/wiki/Business_Model_Canvas)  
e-shape

perfect nor must everything be answered if not applicable or currently unknown. The filled in economic sustainability sheets will then be submitted to WP5 Leaders Evenflow.

**Note:** Partners who do not envisage bringing their services to the market in a commercial sense are not required to fill the financial elements of the economic sustainability sheet in full.

2. The partners involved in the economic sustainability or business planning activities, in collaboration with the pilot partners, will review and discuss each of the initial economic sustainability sheet submissions and updates will be implemented as necessary. In practice, WP5 Leaders will reach out to each pilot leader individually and discuss potential gaps or open questions. This will ensure that the economic sustainability sheets will be filled in to the maximum extent possible.
3. WP5 Leaders will take the learnings from the reviewed economic sustainability sheets and use this information as inputs to D5.11 “Business or Sustainability Plan per pilot”, for submission in M24.
4. This process will be repeated again after M24 at a time when the service definitions are deemed to have become clearer and the project has matured. The timing of this will be decided for each pilot following discussions between WP5 Leaders, Showcase Leaders and Pilot Leaders. The final iteration of the “Sustainability or Business Plans per Pilot” deliverable (D5.25) will take information from the more detailed and more exhaustive economic sustainability sheets completed in this step and will be submitted in M40.

**Note:** Throughout this process the pilot leaders and the partners involved in each pilot hold the responsibility of developing the corresponding “Sustainability or Business Plan per Pilot”. WP5 Leaders will provide the necessary support and tools to facilitate and strengthen this effort for each pilot.

## 4.2 Use of the economic sustainability sheets

The economic sustainability sheets are quite self-explanatory and intuitive to use. The pilot leader simply replaces any text, which is presented in italic and highlighted in yellow, where applicable, with their response to the question or statement. **Rows or columns can be added or deleted as necessary.** There are a number of open questions at the end of the economic sustainability sheet to allow for feedback or questions from the pilot leader to be documented. The open questions serve as a starting point for discussion around economic sustainability and business planning.

The pilots who are filling out the economic sustainability sheets can repeat or “re-use”, where relevant, the information and insights which were provided during the co-design and pilot sprint activities in WP2 WP3 respectively. This implies that not all information supplied by the pilots is required to be completely novel when filling out the economic sustainability sheets.

The economic sustainability sheet that will be used within e-shape is presented below.





Economic Sustainability Sheet			
NAME OF THE PILOT			
<p><b>Short Service Description:</b> <i>Please fill in a short description.</i></p>			
<p><b>Business Case Description:</b> <i>Please fill in a short description of the reasoning for initiating the pilot service and why users will find it valuable.</i></p>			
<p><b>Service Provision Scheme:</b> <i>e.g. “As a service”; “Software tool”; “Subscription based platform” etc.</i></p>			
<p><b>Key Data Sources:</b> <i>Please list in bullets the key data sources integrated/exploited in this service (see some examples below)</i></p> <ul style="list-style-type: none"> <li>▪ <i>e.g. Earth Observation Data (VHR, HR, Optical, SAR..)</i></li> <li>▪ <i>e.g. In-field sensor data</i></li> <li>▪ <i>e.g. Meteorological data</i></li> </ul>			
Target Users	User	Value Proposition	Channels to reach customers
	User 1 (e.g. Farmers)	<p><i>Please provide brief description of the value proposition for the specific user (see some bullet point examples below) – this <b>is very important</b></i></p> <ul style="list-style-type: none"> <li>▪ <i>Improved thematic classification of the target of interest</i></li> <li>▪ <i>Improved change detection service chains</i></li> </ul>	<i>Please provide brief description of how customers can be reached and the product/service delivered</i>



	User 2 (e.g. Government agency X)	<p>Please provide brief description of the value proposition for the specific user (see some bullet point examples below) – this <b>is very important</b></p> <ul style="list-style-type: none"> <li>▪ Improved thematic classification of the target of interest</li> <li>▪ Improved change detection service chains</li> </ul>	Please provide brief description of how customers can be reached and the product/service delivered
Market Sizing	Total addressable market	Serviceable available market	Obtainable/Target market
Sizing of markets in terms of relative percentages. <b>Note: Responses only need be best estimates.</b> See example given. (€ values can be added if applicable)	Total demand for the product/service e.g. "Global precision agriculture market sized at €14 billion by 2025" (information like this can be found on market research websites and reports)	The segment of the total addressable market that could be served by the specific product/service in question e.g. "European share of global precision agriculture market is 35%."	The segment of the serviceable available market that could realistically be achieved e.g. "Precision agriculture services for organic soybean farming accounts for 10% of European market. We estimate that 5% of this market could realistically be captured for the following reasons...."
Supply Chain	Organisation	Role	
Organisations involved in providing/delivering the solution	Organisation A	Provider of XYZ data	
	Organisation B	Provider of technical platform	
	Organisation C	Consultant	
	Organisation D	....	
Partnerships	Please provide information on foreseen partnership scheme required to set-up and run the service.		
Costs			
Please fill in below the cost items and an estimation of the volume for each of them – add rows as necessary. <b>CAPEX</b> = costs that you incur to set up the business. <b>OPEX</b> = costs incurred by running the day-to-day business which increase for each unit used of the cost item in question			



<b>Capital Costs (CAPEX)</b>	<b>Cost Item</b>	<b>Estimated volume</b>	<b>Total Costs</b>	<b>Justification</b>
<b>Note:</b> If there is no CAPEX to report, because it was covered by previous projects, rows can be deleted or left unfilled.	<i>e.g: Setup of web interface</i>		<i>Cost x Volume</i>	<i>Please provide some justification to how these values were derived</i>
	<i>e.g: Equipment</i>		<i>Cost x Volume</i>	<i>Please provide some justification to how these values were derived</i>
	<i>e.g: One-off customisation</i>		<i>Cost x Volume</i>	<i>Please provide some justification to how these values were derived</i>
<b>Operational Costs (OPEX)</b>	<b>Cost Item</b>	<b>Estimated Volume</b>	<b>Total Costs</b>	<b>Justification</b>
<b>Note:</b> OPEX costs can be fixed (e.g. rent) or variable, meaning they change with output or use (e.g. usage of utilities)	<i>e.g: Data Acquisition</i>		<i>Cost x Volume</i>	<i>Please provide some justification to how these values were derived</i>
	<i>e.g: Personnel Cost</i>		<i>Cost x Volume</i>	<i>Please provide some justification to how these values were derived</i>
	<i>e.g: Rent and utilities</i>		<i>Cost x Volume</i>	<i>Please provide some justification to how these values were derived</i>
<b>Revenues</b> (Note: These are optional and may only be applicable to pilots who are seeking to commercialise. Also, “revenue” does not mean “profit”; it could refer to income which is used to maintain operations, therefore, non-profit or non-commercial entities can also report revenues if deemed applicable) Please describe the expected/potential revenue streams in a timeframe you see fit e.g. 1/2/3 years after commercialisation.				
<b>Revenue Item</b>	<b>Estimated volume</b>	<b>Comment</b>		
<i>Item 1</i>	<i>XXX</i>	<i>Short comment on how you got to that number (make sure you specify if this is a one-off revenue, or a recurring one; if the latter is true explain if you provide annual figures, or different timeframe)</i>		



Item 2	XXX	Short comment on how you got to that number (make sure you specify if this is a one-off revenue, or a recurring one; if the latter is true explain if you provide annual figures, or different timeframe)
<b>Non-economic considerations</b> Please fill in the fields below for environmental, societal, regulatory, legal, privacy, etc. aspects <b><u>affecting the provision of the service</u></b> . Add rows as necessary.		
<b>Type</b>	<b>Item</b>	<b>Comment</b>
<b>Regulatory</b>	Item 1	This affects the service in this way...
<b>IP considerations</b>	Do you have any IP asset which needs to be considered in the context of providing this service?	If yes, please list this here, explaining the IP asset, and providing a short note on whether you would be willing to license it within the consortium, outside the consortium (i.e. the user) and how much that would cost.
<b>Funding opportunities for further R&amp;D</b> Please fill in the fields below if you have identified any other funding opportunities that could be relevant.		
Horizon Europe and other European projects	Name of call	
	Relevant Target Users	Please list which of the above target users you believe could fund this service through call for tenders
	Indicative timeframe	Please provide a rough estimation of the relevant timeframe
	Comments	Please provide any additional comments



National projects	Name of call	
	Relevant Target Users	<i>Please list which of the above target users you believe could fund this service through call for tenders</i>
	Indicative timeframe	<i>Please provide a rough estimation of the relevant timeframe</i>
	Comments	<i>Please provide any additional comments</i>
Other funding	Name of call	
	Relevant Target Users	<i>Please list which of the above target users you believe could fund this service through call for tenders</i>
	Indicative timeframe	<i>Please provide a rough estimation of the relevant timeframe</i>
	Comments	<i>Please provide any additional comments</i>
Other funding	Name of call	
	Relevant Target Users	<i>Please list which of the above target users you believe could fund this service through call for tenders</i>
	Indicative timeframe	<i>Please provide a rough estimation of the relevant timeframe</i>
	Comments	<i>Please provide any additional comments</i>
<p><b>Open Questions – Assumptions requiring validation</b></p> <p><i>A set of open questions and/or assumptions requiring validation are presented below. The responses by users or external parties to these will allow the development of a stronger value proposition and fit-for-purpose implementation plan.</i></p>		
<b>Technical Questions</b>	<i>Please list on the right any technical questions (e.g. in relation to data provision, interoperability with existing platform, etc.)</i>	<ul style="list-style-type: none"> <li>▪ Q1</li> <li>▪ Q2</li> <li>▪ Q3</li> </ul>



<b>Business Questions</b>	<i>Please list on the right any business questions (e.g. in relation to procurement, costs/revenues, perceived added value, etc.)</i>	<ul style="list-style-type: none"><li>▪ Q1</li><li>▪ Q2</li><li>▪ Q3</li></ul>
<b>Assumptions requiring validation</b>	<i>Please list any assumptions in your provided answers that require validation by the users</i>	<ul style="list-style-type: none"><li>▪ A1</li><li>▪ A2</li><li>▪ A3</li></ul>
<b>Miscellaneous Questions</b>	<i>Please list on the right any other questions related to economic sustainability or business planning</i>	<ul style="list-style-type: none"><li>▪ Q1</li><li>▪ Q2</li><li>▪ Q3</li></ul>

**Table 1: The Economic Sustainability Sheet to be used within e-shape**



## 5 NEXT STEPS & CONCLUSION

The next step is to begin the process outlined in section 4.1 of this document i.e. each of the pilot partners shall fill in an economic sustainability sheet relevant to their respective service and return the document to WP5 Leaders. This should be completed as soon as possible to allow for the economic sustainability or business planning process to begin in earnest. The initial filling of the economic sustainability sheets will be followed up with a direct discussion between WP5 Leaders and Pilot leaders (other partners involved in the pilots will also be welcome to join this discussion – this decision shall be made by the Pilot leaders). After these discussions, WP5 Leaders will create the relevant entries in D5.11 “Sustainability or Business Plan per Pilot” which will be then populated over time by each Pilot with the help of WP leaders.

Ultimately, the information gathered within these economic sustainability sheets first and in the corresponding plans subsequently will allow for e-shape and its pilot services to carve niche positions and influence the EO sector in the most impactful and positive manner possible.