OPEN SCIENCE HUB

DELIVERABLE 7.3

Monitoring Reports

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Abstract	This deliverable corresponds to D7.3 Monitoring Reports and describes the identification and assessment about the sustainability model of the OSHubs.
Keywords	OSHub, Open Schooling, Sustainability, Activity, Space, Network, Capitalisation, Replication, Transferability, Scalability.

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List of Acronyms

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ACRONYM	DEFINITION
AE	Unternehmensgruppe Der Stadt Linz Holding Gmbh (Ars Electronica)
CCSTI	Centre de Culture Scientifique Technique et Industrielle de Grenoble
EC	European Commission
EU	European Union
FAB	Onl'Fait
MFCR	Município de Figueira de Castelo Rodrigo
MS	Member States
SCICO	Epistimi Epikoinonia
IH	The Hub Sicilia Societa Cooperativa
OSHub	Open Science Hub
OSHub.Network	Open Science Hub Network
SBC	Social Business Canvas
SCIN	Science In Cz Sro
STE(A)M	Science, Technology, Engineering, Art, and Mathematics
TCD	Trinity College Dublin
ULEI	Leiden University
WP	Work Package

Executive Summary

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This report documents the Monitoring Report of the eight OSHubs that have been created in the context of the project by eight of the nine partners involved. It follows the path already started with D.7.1 Vision and Value Proposition[1] and D.7.2 Business Models[2].

This document is the Monitoring Report on the progress and future of activities, spaces and the network.

Within the text is the description of the OSHub framework as described through interactions and activities with partners. They endeavoured to understand how they could be useful at this stage, and also tried to respond to the activities within this report by striving to decipher the specifics as best they could.

In addition, during the activities carried out at the OSHub.Network Summit, that took place in Figueira de Castelo Rodrigo, the Impact Hub team was able to collect not only updates from the partners, i.e. additional material from them, but also to include in this report insights from meeting with teachers who participated in OSHub's activities. Despite this common goal though, the approaches of the hubs are different and change depending on three main variables: the type of organization, the previous experiences and the local ecosystem. In the report it is shown the willingness of the hubs to continue the work done so far and to implement the results in terms ofsustainability of activities, space and network. In addition, to maintain the sustainability of the project it was seen that it is important to guarantee the economic sustainability of the hubs, which was already reflected in D7.2 Business Models.

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1   D.7.1 Vision and Value Proposition: https://opensciencehub.net/download/D_7.1.pdf

2   D7.2 Business Models: https://opensciencehub.net/download/D_7.2.pdf

Table of Contents

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1. INTRODUCTION

1.1   Background: about OSHub.Network

The Open Science Hub Network (OSHub.Network), a consortium of nine partners across Europe, engages schools and local stakeholders in research and innovation as a tool for sustainable community development.

More specifically, the OSHub.Network is establishing a European network of community hubs – OSHubs, in communities that traditionally do not engage with research and nnovation due to various barriers, geographical location, socio-economic status, or ethnic minority group background. OSHubs inspire, empower and engage citizens – from school children to senior citizens – in STEAM (Science, Technology, Engineering, Arts and Mathematics) learning and research opportunities, grounded on collaboration with societal agents.

As such, local OSHubs work as mediators in their local communities, positioning schools as active agents for collaboration between civil society, enterprises, research institutes, and families. This is performed by promoting an open schooling approach grounded in community-based participatory research practices: throughout this process, schools and communities identify local relevant challenges, which are then transformed into relevant research and innovation projects, led by students and teachers, in collaboration with local stakeholders.

The OSHub.Network is developing a common methodological framework, that allows each OSHub to identify and analyse local needs, issues, opportunities and relevant actors, in order to address socio-economic, geographical, gender equity issues, and untapped growth potential. Inspired by the "Mission-Oriented Research & Innovation in the European Union"[3] approach, developed by Mariana Mazzucato, OSHub.Network will define a set of Open Schooling Missions, aimed at addressing local relevant challenges linked to the Sustainable Development Goals. These Open Schooling Missions will then constitute the basis for the creation and development of the open schooling projects, enabling real collaboration across communities.

Importantly, to ensure diversity, inclusion and sustainability, in each OSHub location, there will be a local management board with representatives from local stakeholder groups – schools (including students), families, research institutes and universities, enterprises, industry, media, local governments, civil society organizations and wider society – which will be involved in all key processes and decisions regarding local OSHub programmes and initiatives.

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3   Mariana Mazzucato (2018), Mission-Oriented Research and Innovation in the European Union – A problem solving approach to fuel innovation-led growth', European Commission, Retrieved from: https://ec.europa.eu/info/sites/info/files/mazzucato_report_2018.pdf

By supporting local schools and communities with the tools and network to tackle relevant challenges, OSHub.Network aims to create local impact while simultaneously promoting an active global citizenship attitude, thus contributing to community development, innovation and well-being.

To encourage usage and maximise impact in Europe and beyond, all resources, products and solutions developed by OSHub.Network will be fully based on Open Standards, such as open education, open technology, open science, open hardware, open design and open architecture. Also, OSHub. Network will create an online platform to share OSHub expertise, resources, and best practices with all OSHubs, their partners and the communities they serve. To ensure the legacy and reach of the project, all OSHub.Network resources will also be shared on existing large online educational repositories, and relevant national networks and repositories.

Finally, OSHubs will develop a legacy and sustainability plan, and will work closely with local governments, to ensure that each local OSHub has the tools and resources to continue beyond the lifetime of the project, and that the Open Schooling approach is incorporated in the school vision and organizational structure.

By the end of the project, it is expected that the OSHub.Network will have impacted 25 000 students, 1 250 teachers and 4 000 members of the community, through involvement in more than 150 school-university-industry-civil society partnerships in open schooling projects and activities.

In the long-run, we envision OSHubs as education brokers in their local communities, supporting local school networks to incorporate Open Schooling in their vision and organizational structure, leading to sustainable quality of education. Most particularly, OSHubs will facilitate the bridge between the needs and realities of schools and their local context and resources, as well as brokering for implementing national/regional policies, passing along signals from schools when policies are failing and advocating for context-sensitive policies.

1.2   Purpose of this report

This Report aims to identify and evaluate the sustainability model of the OSHubs. This is done through a studied and specific methodology that is developed through an activity process (all designed by the Impact Hub (IH) team).

Furthermore, the model that IH seeks to describe in its connotations is intended to highlight the three-dimensionality of the OSHub Model which is composed of the activities developed and im-

plemented, the places/spaces in which the open schooling was carried out and finally the current and future network.

The intention is to describe the OSHub model to the point of being able to best operate the sequence of the four parameters of OSHub sustainability, namely: replicability, transferability, scalability and capitalisation. In this way, we can have a useful tool to accomplish the legacy of the project, i.e. to create the conditions for OSHubs to continue operating even when the project is concluded.

2. IDENTIFYING AND ASSESSING THE SUSTAINABILITY MODEL OF THE OSHUBS

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2.1   Methodology

The first step was to start with the Social Business Canvas (SBC), to create the foundations that, as the definition of open schooling underlines, allows to achieve the objectives that better respond to the needs of the community and produce impact. In particular, this deliverable focuses the attention on the Business Models that each Hub has built to assess and observe the levels of sustainability and feasibility after the end of the project.

As also stressed in other deliverables, the Deliverable 7.2 Business Models[4] shows that the OSHubs are living, breathing social entities, and therefore mutate and respond to the changes of the environment that surrounds them. That's why we continually studied the sustainability of the activities, spaces and network, due to the continuously evolving, or work in progress, of SBC.

After the SBC, the focus was on "Identifying and assessing the sustainability model of the OSHubs", where three dimensions of sustainability have been better defined:

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4   D7.2 Business Models: https://opensciencehub.net/download/D_7.2.pdf

— Sustainability of the activities carried out by the OSHubs;

— Sustainability of the OSHubs as a "space" (physical or virtual);

— Sustainability of the OSHubs as a network.

How to get it!

The feasibility study of the process developed by the IH team has four parameters through which the above three dimensions were analysed. The four parameters are the answer to a specific question: what is the sustainability formula?

Transfer + Replicate + Capitalise + Scale = Sustain

Not necessarily all four aspects need to be covered. Beyond similarities the four dimensions focuses on different aspects, as follows:

Table 1: Description of the four parameters for measuring sustainability.

Replicate

— copy and paste ready-to-use solutions
— serialize the model
— export content

Transfer

— export the model rather than the contents
— apply a tailor-made readjusting method
— adapt from one context to another

Scale

— the number of stakeholders involved increases
— grow the OSHub or its businesses in size and impact
— propagates the effects in continuity with the original project

Capitalise

— transfer solutions from one area to another (innovate)
— make the most of different experiences
— build new prototypes based on elements that come from various experiences

2.2   Process of activities

The process of activities was the following:

— Design of the sustainability parameters (capitalisation + replicability + transferability + scalability = sustainability)

— Design and approval of the diagnostic tools

— Interviews with the OSHubs (SBC + diagnostic tool)

— Data processing

— Reporting

— Presentation of the three sustainability models identified by Impact Hub
  — Model 1 – Sustainability of the hub as an agency or physical space
  — Model 2 – Sustainability of the activities carried out by the OSHubs
  — Model 3 – Sustainability as an active partner of the network
  — Data and rating processing

— Reporting

Table 2: Description of task and timeline of OSHubs engagement. The table represents the plan that was initially presented to the partners, however, changes are being made work in progress.

OSHUBS ENGAGEMENT

FEBRUARY	MARCH	MAY – JUNE	JULY – AUGUST
Design phase	Implementation phase	Evaluation phase	Restitution phase
Get to know the plan	1 hour interview with each OSHub	– Attend workshops on the three dimensions of sustainability (May) – 1 hour evaluative interview with OSHubs (June)	Be ready for results!

3. Model 1 – Sustainability of the activities carried out by the OSHubs

The interviews were conducted with all partners and began with an analysis of the sustainability of the activities. The partners answered four questions related to the four parameters of replicability, transferability, scalability and capitalisation. In this section of the report, we start with a general analysis of the data collected and afterwards there is a detailed analysis of the individual partners.

Overall results

The table shows the scores given by the IH team and OSHub partners, on the questions related to the sustainability of activities according to the four criteria of replicability, transferability, scalability and capitalisation.

Table 3: Overall score of the eight OSHubs on the activity dimension.

	ACTIVITIES			
	Replicability	Transferability	Scalability	Capitalisation
AE	5	3	4	3
CCSTI	3	1	4	1
FAB	3	4	3	1
MFCR	3	4	3	2
SCICO	5	5	4	3
SCIN	4	4	2	3
TDC	2	5	3	4
ULEI	5	4	3	2
AVERAGE	3.75	3.75	3.25	2.375

Replicability and transferability, as depicted in the table, are the most successful parameters, followed by the ability to scale the project. Capitalisation of activities is the parameter with the lowest score.

Regarding **replicability**, we asked the question: *Is any of the stakeholders you have worked with autonomously implementing or is planning to implement one of the activities you designed?* The aim of this question was to understand whether copying and pasting of project activities was happening or could happen and, if the answer was positive, to understand the extent of replicability of the activities, i.e. the type/category of implementers. In general terms, can we be satisfied with the data collected?. The partners have told us about several ongoing activities. The results from the interviews indicate the OSHubs are taking the necessary measures to facilitate replicability (or replication) of their hubs.

With regard to **transferability**, the following question was asked: *Has any of your partners designed its own activity based on the know-how you produced and shared?* Is there a real potential for that to happen? With this question, we wanted to understand if the local partners of the hubs would carry on the knowledge of the experiences that were shared. In this sense, we can state that the

transferability of project activities does not follow spontaneously, but takes place under set conditions and with the instilling of its initiation by the OSHub consortium.

We asked the following question about **scalability**: *Has any of your activities expanded in terms of beneficiaries from those originally planned or could any of the activities be turned into a service/ product for multiple stakeholders? Are you planning to work strategically in this direction?*

With regard to this question, we noted a more particular process. The objective was to evaluate whether an activity has become a service or whether the numbers of beneficiaries have been expanded, for example. In this respect, the answers were on average positive, although without outstanding results.

With respect to **capitalisation**, this question was asked: *In your experience has any of the activities you developed in the course of the project has been or has the real potential of being turned into an useful activity in another field of application?*

We wanted to ascertain if the developed activities could have a future in other fields of action. On this front, note that many of our partners did not plan to capitalise on the activities and in some cases this may have happened unintentionally.

Strengths and weaknesses that resulted from the interviews

The table shows the strengths and weaknesses that generally emerged from the interviews, the main positions and particular cases.

Table 4 : Strengths and weaknesses of the eight OSHubs on the activity dimension.

	Replicability	Transferability	Scalability	Capitalisation
Average score	3,75	3,75	3,25	2,37
Highlights	— Best overall score: replicability has proved to be a viable and relatively easy one for most hubs, except where the complex nature of the activity did not allow for autonomous implementation.	— Best overall score: although not the easiest solutions, transferability has been one of the most sought-after strategy for sustainability, with some of the most effective answers to the sustainability conundrum.	— Most creative solution: scalability has proved to resist the mainstream/deviation distinction. In fact, it is the dimension of sustainability in which the highest range of solutions have been put forward.	— Hidden gem: while not an interesting option for most hubs, when sought after, capitalisation has proved to open unexpected opportunities.
Mainstream position	— **Spillover effect through engaged stakeholders** as the most effective strategy for replicability — **Embedding the activities** in the implementing organisations from the very start proves to increase the chances of those organisation retaining the activity after the end of the project — Hard to get other actors on board apart from teachers/students	— For transferability it does not seem like one single way prevails. One of the paths entails exploring the viability of **institutionalising** the activities within the organisational structure of a hosting institution. — For cases where a **physical space** does exist the transfer usually entails embedding the activities in the same organisation (see FAB, SCIN), while where a physical space does not exist the transfer towards an external organisation might be more or less difficult (see TCD, ULEI).	— **Physical space:** the most obvious way to continue the activities undertaken insofar as it allows for: stability of human resources availability of tools and material needed	— **A question of will and goals for most hubs:** most local hubs remain grounded in the idea that the activities should remain addressed to schools or other educational institutes
Deviation cases	— Replicability **is not an interesting option for some hubs:** the nature of the activity is too complex or too process-based to be simply copy-pasted » the viability of replicability depends on the nature of the activity	— Another way to transferability, linked to **an actor-based approach**, entails a **transfer of ownership**, through the creation of a community of engaged people » an idea could be the creation of a group that links all the actors involved so that they can remain connected to OS activities even if they change school or move on to other endeavors	— **External funders** as a way to allow for continuation. But mostly linked to short-term sustainability — Bringing the activity out to the public through **different means:** eg. broadcasting » which also impacts on capitalisation meaning that contamination in other fields of application allows to reach a wider and diverse audience	— **Outcome vs process:** can be that the tool created has more potential for capitalisation compared to the process – and vice versa; identification of the activity capitalisation potential important in this case

According to the table, replicability proved to be a viable solution. Moreover, although not the easiest solution, transferability was one of the most requested strategies for sustainability and scalability is the dimension where the widest range of solutions emerged. Of note, capitalisation proved to open up unexpected opportunities despite not being an attractive option for most hubs.

Since one of the objectives of this activity was to ensure that the project continues even after the end of its Horizon funding period, it is important to take into account the fact that embedding the activities in the implementing organisations proves to increase the chances of these organisations maintaining the activity even after the end of the project. Regarding transferability in particular, it is of value that the institutions/bodies – and not only those directly carrying out the activities – understand the value of the actions in the field; and also that the project activities can become an integral part of the activities of the implementing organisation. Furthermore, capitalising means carrying forward the idea that the OSHub method and activities can contaminate other sectors and have different and varied targets!

We can also briefly analyse the financial situation. It is crucial that there are resources allocated to the ‚new' activities generated by sustainability; in this framework, it is easier to incorporate the new activities within an already sustainable structure, or to become services.

Interview results for each OSHub

The table below shows, for each OSHub, information on assets according to replicability, transferability, scalability and capitalisation. Each partner responded to the questions by highlighting their situation and presenting their ideas on the subject.

Table 5: interview results for each oshub on the activity dimension.

	Replicability	Transferability	Scalability	Capitalisation
AE – Austria	— Co-development of activities with the schools and teachers as a guaranty for replicability	— Real potential for transferability as a consequence of co-development » transferring the process not just the content	— Partners are turning those activities (workshops in particular) into a service which they get revenue from	— Internal spillover effect, especially in terms of the unintended outcomes arising from translating on-site activities into online ones. Innovations arising from OSHub activities now widely used in Ars Electronica.

CCSTI – France	/	/	— Having a **space where to transfer the activities** directly has helped to ensure continuity, reach a wider audience (not only schools but the public of the Fab Lab more generally) and generate revenue (can be included in the economic proposition of the space)	— not really interested
FAB – Switzerland	— **Teachers** are the only group of stakeholders that are going to continue the activities carried out through OSHub – other stakeholders (museum, university, science centre) have been less responsive to the potential of the project	— The methodology and approach that guides OSHub activities is transferred via two main agents: 1) teachers, who unlike other stakeholders have been particularly responsive to the OSHub methodology 2) FAB activities themselves, insofar as the methodology is applied to other projects and activities carried out in the Fab Lab	— Continuity of activities through the physical space	— Low score because of a lack of interest > schools remain the primary target of FAB
MFCR – Portugal	— Similar to transferability » however the content of the activities in this case is less important than the methods and process used, hence a copy-paste solution would be less effective than transferring	— Transferring of the know-how does not happen in a systemic way, but rather through an individualised process. On the one hand this **decreases the formal embedding** of the activities in the organizational structures of the stakeholders (in so far as the continuation of the activities is solely dependant on the willingness of those who have decided to engage in it), on the other hand it **allows for the creation of a community of practice** within the schools,	— Expansion of the activities following a **grassroot approach** – activities expand together with the community of teachers involved and interested in OSHub. (different from a spillover effect in that teachers are not directly passing on the activities to others, the centre of the expansion remains MFCR)	— **It's not within the vision and mission of the programme** to contaminate other fields of application – the activities are strictly designed to work within a school environment — Potential for capitalisation in that the activities carried out by MFCR are a process rather than strictly related to content (ie. a method to co-design activities that are relevant for the stakeholders involved, students and schools in this case)

which allow for a more open and adaptable interpretation of the methods and activities proposed.

— MFCR has identified at least three **ambassadors** of open schooling that could act as mediators after the end of the project.

SCICO – Greece	— The **schools** are already doing everything autonomously – other stakeholders are absent from the picture	— A lot of material and tools have been shared by SCICO to schools to guide the design and implementation of new activities. — This is important in terms of costs as well – with all the tools shared OSHub has drastically **lowered the implementation costs of these activities for schools**.	— Schools are already acting as mentors for other schools that wish to undertake similar activities creating a sort of self-sustaining network	— The focus of the activities is schools, however the end product is circulating within the municipality and local communities — It is the tool itself – rather than the activity – that has the potential for capitalisation (eg. app for emergency numbers that can be used by tourists)
SCIN – Czech Republic	— The activities are embedded in the three local hubs established (two schools, one NGO) and they will continue in those locations after the end of the project	— Same as with « replicability — Co – development: the local OSHub were equipped to develop their own activities before the OSHub projects and will be able to do so after, with the added knowledge and experience developed during the years working on open schooling	— Covid impacted the ability of better connecting with other stakeholders. — **Broadcasting of the tv series** (on the national tv) produced through the programme should have an impact on scalability: he said that there are 120 interested schools in the activity and that they would be able to pay for it	— Capitalisation via the **means of diffusion** of the activity – in this case the national television

TCD – Ireland	— At least one school in the TCD network wants to continue the activity + one of the teachers involved in the Transition Year programme is acting as an ambassador/champion mentoring other teachers. — Still replicability is hard to achieve because of the nature of the activity – which is hard for teachers to implement autonomously without further support or a formal embedding in the school organisational structure	— The school programme is meant to be transferred to another institution – the *Trinity Access Programme* – but it's not going to be an exact copy of what they have been doing in the past three years (**a transfer of ownership**)	— Potential to break down the programme in smaller module that can then reach a wider and diverse audience	— Capitalisation of the tools produced – for example they have been tested at an early stage in an university setting with journalists and policymakers
ULEI – Netherlands	— Both projects are expected to continue beyond the end of the project – **spillover effect** through the university students themselves developing now their own projects starting from the OSHub initiatives	— The key obstacle in this case is being able to institutionalise these activities within the university apparatus – very unclear who is going to coordinate the students for education project after the end of the OSHub	— At the moment the activities are supported by the school boards benefitting from governmental funds – the challenge is to create continuation by finding external investors — Harder for university to support the activity since they cannot get extra money for projects	— Adaptable model but little contamination in practice? So far the project focused on linking primary/higher education with university > but could the results of the exercise be capitalised instead?

The feedback received from the partners started with the filling of the SBC. In the specific case of this table, the content continues the description of the activity box already present in the SBC.

In this section of the report, we will go into the details of the answers given by the interviewees regarding the four parameters by which we tried to interpret the sustainability of project activities. The following information is related to the contents of the previous table.

Replicability:

Partner **AE** responded by sharing evidence of co-development of activities with schools and teachers as a guarantee of replicability. Nevertheless, the **FAB** teachers are the only stakeholder group that intends to continue the activities carried out through OSHub.

According to **TCD**, at least one school in the TCD network wants to continue the activity and one of the teachers involved in the Transition Year programme is acting as an ambassador by mentoring other teachers. TCD also emphasised the idea that replicability is however difficult to achieve due to the nature of the activity, which is difficult for teachers to implement on their own without additional support or formal entrenchment in the school's organisational structure.

For **MFCR**, a copy-paste solution would be less effective than transfer, as the content of the activities in this case is less important than the methods and processes used. According to **SCICO**, on the other hand, schools are already implementing replicability on their own.

SCIN's interview also shows that the activities are integrated in the three established local centres (two schools, one NGO) and will continue there after the end of the project.

ULEI responded by stating that they expect both ULEI projects to continue beyond the end of the project – spillover effect through the same university students now developing their own projects from OSHub initiatives.

Transferability:

According to **AE**, the real potential for transferability is the consequence of co-development, to transfer the process not just the content. For **FAB**, the methodology and approaches guiding OSHub's activities are transferred through two main agents:

— the teachers, who, unlike other stakeholders, have been particularly receptive to the OSHub methodology;

— the FAB activities themselves, insofar as the methodology is applied to other projects and activities carried out in the Fab Lab.

The interview with **MFCR** shows that the transfer of know-how does not take place in a systemic way, but rather through an individualised process. On one hand, this decreases the formal embedding of the activities in the organisational structures of the stakeholders, on the other hand, it allows the creation of a community of practice within the schools, which enables a more open and adaptable interpretation of the proposed methods and activities. Furthermore, MFCR identified at least three open school ambassadors who could act as mediators after the end of the project.

According to **SCICO**, schools have a lot of material and tools to guide the design and implementation of new activities. This is also important in terms of cost: with all the shared tools, OSHub dra-

stically reduced the implementation costs of these activities for the schools. According to **TCD**, the school programme will be transferred to another institution – the Trinity Access Programme – but it will not be an exact copy of what they have been doing for the past three years; however, the main obstacle here is the ability to institutionalise these activities within the university apparatus.

Scalability:

With regard to scalability **AE** stated that the partners are turning the activities (particularly the workshops) into a service from which they derive income. Furthermore, according to **MFCR** the activities are scalable through the connections with the communities of teachers involved and interested in OSHub.

According to **SCICO**, schools are already acting as mentors for other schools wishing to undertake similar activities, creating a kind of self-sustaining network. **SCIN's** response first of all makes the point that covid has had an impact on the ability to better connect with other stakeholders. In contrast, **TCD's** response promotes the possibility of splitting the programme into smaller modules that can then reach a wider and more diverse audience.

According to **CCSTI**, having a space where activities can be transferred directly has helped to ensure continuity, reach a wider audience and generate income (which can be included in the economic proposal of the space). Furthermore, according to **FAB**, the scalability of activities is linked to the physical space.

Finally, **ULEI** states that at the moment the activities are supported by school councils with government funding and the challenge is to create a follow-up by finding external investors.

Capitalisation:

According to **AE** there is an internal spillover effect, especially in terms of unintended results from the translation of on-site activities into online activities.

CCSTI is not interested in capitalisation activities, nor is **FAB**. Above all, according to **MFCR**, it is not within the vision and mission of the programme to contaminate other fields of application – the activities are strictly designed to work within a school environment.

According to **SCIN**, capitalisation comes through the means of dissemination of the activity – in this case national television; for **TCD** and **SCICO**, the capitalisation can occur through the tools produced during the OSHub project. According to **ULEI**, potentially, the results of the activities could be capitalised.

4. Model 2 – Sustainability of the hub as an agency or physical space

The interviews were conducted with all partners and began with an analysis of the sustainability of the space. The partners answered four questions related to the four parameters of replicability, transferability, scalability and capitalisation. In this section of the report, we start with a general analysis of the data collected and afterwards there is a detailed analysis of the individual partners.

Overall results

The table shows the scores given by the IH team and OSHub partners, on the questions related to the sustainability of space according to the four criteria of replicability, transferability, scalability and capitalisation.

Table 6 : Overall score of the eight OSHubs on the space dimension.

	SPACE			
	Replicability	Transferability	Scalability	Capitalisation
AE	5	5	4	2
CCSTI	1	4	2	1
FAB	1	2	5	1
MFCR	1	1	2	1
SCICO	5	4	3	5
SCIN	3	2	4	2

TDC	1	4	1	3
ULEI	3	4	4	2
AVERAGE	2.5	3.25	3.125	2.125

Transferability and scalability, as depicted in the table, are the most successful parameters. We then have the ability to replicate and with the lower score is the capitalisation of activities.

Regarding **replicability**, we asked the question: *Are you planning to replicate your OSHub elsewhere after the end of the project?* The point of this question was to understand whether there is an intention to replicate the OSHub space somewhere at the end of the project, or whether this is in place or could happen and, in case of a positive answer, to understand the degree of replicability of the space.

In general, we can say that the answers regarding the replicability of the space did not yield too promising results. But it is possible that this could happen anyway, in the sense that there are conditions for the replicability of space to happen.

Are you planning to transfer your know-how and methods to another organisations to help them build their own OSHub project? With regard to **transferability**, the question aimed to analyse the possibility to transfer know-how and methods to another organisation to help it build a new OSHub from the existing ones. We can say that transferability scores highest in the 'space'. The potential for this to happen can give hope for a positive continuation and thus a good level of sustainability, in fact, we can say that in some cases transferability is in progress as will be seen below.

With regard to **scalability**, we asked the following question: *Has your OSHub growth in scale (in terms of resources, stakeholders, services, etc..) since the inception of the project to the point it could sustain itself financially? Are you planning to work strategically in this direction?* The intention with this question was to understand what the OSHub developed in terms of resources, stakeholders, services and if it is able to sustain itself financially. We can state that a lot of effort has been made in this direction and that there are positive results as will be seen below.

With respect to **capitalisation**, we have asked: *Has the knowledge and know-how gathered during this experience led your OSHub to considering developing project ideas in other fields of application or including diverse targets/users?* We aim to ascertain if space have a future in other fields of action. On this front, it is important to understand whether the partners have thought about extending the know-how developed for a new field of action with different targets and different users.

Strengths and weaknesses that resulted from the interviews

The table shows the strengths and weaknesses that generally emerged from the interviews, the main positions and particular cases.

Table 7 : Strengths and weaknesses of the eight OSHubs on the space dimension.

	Replicability	Transferability	Scalability	Capitalisation
Average score	**2,5**	**3,25**	**3,12**	**2,12**
Highlights	— The best replicability condition entails the same set up and methodology used in the OSHub project.	— Best overall score: fundamental may be transferring the know-how and network to keep the existing OSHub alive through the transfer of skills and knowledge shared in the physical space.	— There are no problems related to the scalability of space where it is in the full availability of the entity managing the OSHub.	— Hidden gem: the best example of project capitalization is being realized through the use of the methodology, know-how and network set up, co-creation techniques, activating them in other fields and to different users and targets.
Mainstream position	— In about half of the cases OSHubs are trying to accomplish replicability, however, it is not easy. It is critical to the success of this action is to find the economic resources, financial resources are mostly looked for in other calls.	— In some cases, space transferability is in progress, but this must contend with the necessary financial resources of start-up and continuing costs. Where possible, resources already used in the oshub project can be valorised in some cases of replicability.	— There is no doubt that **financial sustainability is a crucial issue regarding the scalability of the project!** — Is important to understand the difference between those who carry out the project activities and those **who make the decisions**, or the entities on which they depend from a strategic and financial point of view. — For many, **finding a solution to best carry out the scalability of the space is in action.**	— Because the actions carried out, especially in the spaces used, are closely related to schools, to places of training, **it is not easy to imagine a real capitalization in terms of targets and users**. — In about a few cases the willingness to open the doors to new fields of capitalization is certainly widespread.
Deviation cases	— In some cases, the replicability of the space is not at all among the missions of the OSHub, or considered only because of the **replicability of the actions performed in the space.**	— Although the most common example of sustainability is precisely about the transferability of space, in one case **"the space"** is the team itself. — There are cases where **it is not an activity that has been discussed** or even ever worked on or has not been a goal.	— Where space coincides with the team, the idea of space scalability is not even under consideration.	— The person with the most difficulties regarding space has in place the action of using the acquired skills to move on to another project that is not strictly related to the open school, but for example in the topic of **active citizenship.**

As it is seen in the table, sharing the methodology and set up offers positive results in each of the four parameters. What was done in the physical space, if shared, creates the impact of the greatest result found in transferability.

With respect to replicability we find two opposite poles. On one hand, we can see those who tried to create it, and on the other hand those to whom it is indifferent. In both cases, however, emerges an awareness that replicating the space means finding the economic resources to bring this action to fruition. Nevertheless, we note that the economic variable matters in all four parameters, according to what emerges from the scalability part of the interview, if the space in which the OSHub wants to be created is in the availability of the implementing entity then the process is easier.

When talking about space capitalization, there emerged other areas and spaces in which the OSHub model can exist.

When we involved the partners in the activities of the SBC, the section in which most support was needed and in which most critical issues emerged, was in the area of costs and the ability and possibility to make the spaces economically sustainable. Although many steps forward have been made and we can claim full awareness of the problem/opportunity of seeking economic resources (which, for example, can be sought in funds or created through delivered services) this is still an intimidating situation. However, this is a difficulty towards which there are options, some of which are already mentioned in Deliverable D.7.2 Business Model, and others in the next Deliverable D.7.4 (in which we also address the sustainability of the network by linking it to the sustainability of the current OSHubs).

Interview results for each OSHub

The table shows, for each OSHub, information on assets according to replicability, transferability, scalability and capitalisation. Each partner responded to the questions posed by highlighting their situation and presenting their ideas on the subject.

Table 8: Interview results for each oshub on the space dimension.

	Replicability	Transferability	Scalability	Capitalisation
AE – Austria	— absolutely yes	— It's something they are doing and it's happening, by collaborating with informal education organization	— They are doing it by dwelling on the financial aspect that has a crucial importance, they are working in this direction with departments that have a different kown from them. They are focusing on the financial solutions that are difficult to solve.	/
CCSTI – France	— The replicability they are doing as an action concerns activities such as workshops but not the whole format of the project. They don't have in their action program to replicate the project.	— Not building a new OSHub but transferring know-how and network to keep the existing OSHub alive – materials are going to stay in the space as well. They have a small space where they go when they work on the project. What they are doing is making sure that the teachers afterwards will be able to continue the project. Yes to the transfer of skills and knowledge.	— They are just working with their partners to find financial solutions to continue the project when it is finished	— Are not working towards that, they are working within their context
FAB – Switzerland	— The space was there before, replicability is not even among their ambitions. The purpose for them in the space was to carve out a space to dedicate to schools, but it is not really in their mission to imagine new spaces.	— In a transferability perspective, they can try without too much effort to transfer their experience.	— The financial sustainability of our space is certainly in progress and they are not in difficult positions.	— Contamination is only targeting spaces (other FABs) like theirs, so it is not targeting different contexts.

MFCR – Portugal	— This is not something they are doing, however they are working on a new call to which perhaps later this could tie in: notwithstanding EU new projects (HORIZON). (They never thought about moving to other municipalities.)	— Again, this is not an activity not only that they are not working on, but that they have not even discussed.	— They are trying to resolve the ongoing issues. The prospect of continuing the project at the moment is not there, they are talking about it but cannot say yet about what will happen in September when the project is finished. Certainly the project to continue needs financial resources for the future that are not there today and have no real prospects. Without the support of the municipality it will be seriously difficult to continue the activities.	— They are working in a specific context and cannot tell real contaminations with different areas, in any case the users are always the same.
SCICO – Greece	— For example they are activating replicability in northern Greece with National Geographic funds, the project they are working on will not be called ohsub but will have the same set up and methodology, they are trying to do the same thing because they find excellent results in the project (the oshub approach is great for creating other oshubs).	— Transferability actions are in place; it is not an action they can consider 100 percent successful or successful, but the work being done certainly produces results.	— They have been discussing this for some time, they are trying to get external funds and private donors. However, they are not financially sustainable on their own, but they are looking for solutions.	— They are using the methodology, know-how and network set up and co-creation techniques in other fields and towards different users and targets. Absolutely in place!
SCIN – Czech Republic	— Is an action in progress, even if it is difficult, they are trying with other external resources or other projects	— It is necessary to understand that in order to start activities, it is essential to have economic resources, they would like those with whom they have come into contact to be beneficiaries of the transferability if the conditions are there to support it	— It is a difficult action without the use of economic resources, it is an ongoing action, they are planning it but it needs financial resources otherwise it is not feasible, we are trying with other national projects	— To share the know how and the activities and therefore also the space what they are trying to do is to capitalise through the dissemination of the project

TCD – Ireland	— They are sure that the entity will be renamed to something else anyway. The goal is therefore not to create an identical copy of OSHub.	— In this case ‚the space' is the team itself.	— No. The OSHub follows a minimal costs structure and has no revenue generating activity. There has been very little growth since the inception of the project.The biggest limit is the insecurity of the human resources working on the project – they have no independence in making strategic planning to make the project jump to the next level.	— The objective is to use the skills acquired to move on to another project that is not strictly related to open schooling – they mentioned engaging with projects of active citizenship.
ULEI – Netherlands	— There are certainly opportunities for this, also with regard to new projects in the pipeline.	— Is an activity they want to pursue, certainly, in fact they are implementing transferability with the school board.	— It is certainly happening that they want to pursue the scalability of the project, and also the expansion of the project. But for them, both the financial dimension (new funds) and the institutional dimension (the university deciding to proceed further) are crucial.	— The sector is education, the target and the users change because there is a turnover of people but in the type of subjects there is no big difference.

The last block of the SBC is dedicated to costs. Once all the blocks are filled, the last step is to draft a financial plan able to sustain the implementation of the project or initiative and to imagine a sustainability plan. All the partners have highlighted the importance of financial sustainability linked to the maintenance of the costs of the space.

In this section of the report, we will go into the details of the OSHub spaces regarding the four parameters by which we tried to interpret the sustainability of project activities. The information that follows takes up and comments on the contents of the previous table.

Replicability:

For **SCICO**, replicability is potentially underway with National Geographic funds.The project they are working on will not be called OSHub but will have the same approach and methodology. For the **SCIN** partner, replicability is ongoing. Although it is difficult, they are trying with other external resources or other projects. According to **AE**, replicability is definitely ongoing. In **CCSTI**, replicability concerns activities such as workshops but not the whole project format. For **TCD**, the goal is not to create an identical copy of OSHub.

ULEI mentioned that there are opportunities for this, also with regard to new projects ongoing.

For **FAB**, replicability is not among their ambitions. **MFCR** referredit is not something they are doing, but they are working on a new call where OSHub could be linked later.

Transferability:

The **AE** partner is collaborating with an informal education organisation to pursue transferability. **CCSTI** is transferring the know-how and network to keep the existing OSHub alive. **FAB** and **SCICO** also have a transferability perspective. **ULEI** is implementing transferability with the school board. Regarding **SCIN**, even though they cannot yet show results concerning transferability, they want to reach their public and stakeholders to be beneficiaries of transferabilitys. **MFCR**, is not working on the transferability of the project.

Scalability:

As far as scalability is concerned, according to **AE** they are implementing it by focusing on the financial aspect. At **CCSTI** they are also working with their partners to find financial solutions to continue the project once it is finished. Similar is the situation in **MFCR** is similar, due to the fact that without the support of the municipality it will be very difficult to continue the activities. Action is also underway for **SCICO** and **SCIN** to start scaling up the project. In **ULEI** they want to pursue the scalability of the project and also its expansion, for which both financial and institutional dimensions are crucial.

For **TCD** it is important to bring out the fact that the human resources working on the project have no autonomy in strategic planning to take the project to the next level.

In **FAB**, the financial sustainability of the space is certainly underway and they are not in a difficult position.

Capitalisation:

With regard to **CCSTI**, **FAB** and **MFCR** capitalisation is not working within this vision. **SCICO** is using the methodology, know-how and networking and co-creation techniques in other sectors and towards different users and targets. Similar is also the ongoing action for **SCIN**. For **TCD**, the aim is to use the skills acquired to move on to another project that is not strictly related to the open school.

The capitalisation of **ULEI** is still in the education sector. However The target and users change because there is a turnover of people, but in the type of subjects there is not a big difference.

5. Model 3 – Sustainability as an active partner of the network

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The interviews were conducted with all partners and began with an analysis of the sustainability of the network. The partners answered four questions related to the four parameters of replicability, transferability, scalability and capitalisation. In this section of the report, we start with a general analysis of the data collected and afterwards there is a detailed analysis of the individual partners. We start from a general analysis of the data collected down to the detail of the individual partner.

Overall results

The table shows the scores given by the IH team and OSHub partners, on the questions related to the sustainability of the network according to the four criteria of replicability, transferability, scalability and capitalisation.

Table 9 : Overall score of the eight OSHubs on the network dimension.

NETWORK

	Replicability	Transferability	Scalability	Capitalisation
AE	5	4	5	2
CCSTI	3	3	3	4
FAB	1	4	5	4
MFCR	5	5	5	1
SCICO	4	3	5	2
SCIN	4	5	5	4
TDC	1	3	4	2
ULEI	5	5	5	5
AVERAGE	3.5	4	4.625	3

In overall view, as depicted in the table, the network is the dimension with above-average overall results, mainly with regard to transferability and scalability.

Regarding **replicability**, we asked partners opinions on the strategy: *Incubating similar actors to create new OSHUBs.* The aim was to understand whether there is the intention and the resources to replicate the OSHubs. In general terms, it emerges that, without the project resources, this becomes a difficult challenge to achieve.

Regarding **transferability**, we asked partners opinions on the strategy: *Involving in the OSHub Network diverse stakeholders active in the field of education that have the potential of adopting the OSHub model (eg. not only schools, but also universities, companies, private institutions, research centers and so on).* The intention to involve new actors is welcomed by the partners. They understand the need to organise themselves for this and they can already imagine some actors to be involved.

With regard to **scalability**, we asked partners opinions on the following strategies: *Creating connections and developing projects together with other networks active in open schooling.* Creating connections and developing projects together with other networks active in open schooling is of great interest, shared by all partners.

Concerning **capitalisation**, we wanted partners' opinions on: *Using the shared know-how of the network to extend the activities of the network to diverse users and targets and to other fields of application.* It might be difficult to find new targets and new areas of action and interest, even though it is not a totally discarded strategy.

Strengths and weaknesses that resulted from the interviews

The table shows the strengths and weaknesses that generally emerged from the interviews, the main positions and particular cases.

Table 10 : Strengths and weaknesses of the eight OSHubs on the network dimension.

	Replicability	Transferability	Scalability	Capitalisation
Average score	3.5	4	4.6	3
Highlights	— Replicability proved to be a viable strategy within the limits of the economic resources required and time available.	— Best overall score: there is no doubt about the intention to involve new stakeholders within the hub network.	— BEST overall score: Creating connections and developing projects? Already in place!	— Potentially the interest is there, but the feasibility conditions are not inspiring.
Mainstream position	— There is interest in incubating similar actors to create new OSHubs, but replicability must be combined with necessary **preconditions** for feasibility.	— **Most creative solution: most partners are interested, but this action needs to be structured in the best possible way. Optimising existing resources and networks.**	— There are plans, there are ideas in the works, there is interest and above all **there is the will to overcome the difficulties to continue working together, and with other networks**, in the field of open schooling availability of tools and material needed.	— Using the shared know-how of the network to extend the activities of the network to diverse users and targets and to other fields of application have some difficulties.
Deviation cases	— Replicability **is not an interesting option for some hubs:** the nature of the activity is too complex or too process-based to be simply copy-pasted.	— **Another way to transferability** is to identify in methodology one of their core strengths, hence it would be a viable option to engage with new stakeholders from a methodological perspective.	/	— The capitalisation of the network is seen by few as **absolutely useful for its sustainability.**

The results of this table reflect higher scores on each parameter of the sustainability. In this case, the partners do not report on their work, but pause to imagine the future of the project and especially in the network – not only the network within the OSHub project but also extended to an international opening.

Starting from replicability, we can state that the partners are certainly interested in incubating new OSHubs. Even though they are aware of the work they have done and what has been useful, they cannot overlook the importance of the financial resources needed and the time they have to spend on this action.

As far as transferability is concerned, in this third dimension it is a winning parameter that probably reflects a situation already in place, likewise scalability – best score. In fact, in terms of scalability, partners are certainly involved in making connections and planning together. Let us not forget that some activities in this vision are already underway.

Finally, the "worst" score concerns capitalisation. In general terms we have to state that the partners are closer to the world of education and speak the language of education as if they were native speakers, so for them imagining new targets that are not students or new areas of intervention that are not school ones, represents a real difficulty.

Interview results for each OSHub

The table shows, for each OSHub, information on assets according to replicability, transferability, scalability and capitalisation. Each partner responded to the questions posed by highlighting their situation and presenting their ideas on the subject.

Table 11: Interview results for each oshub on the network dimension.

	Replicability	Transferability	Scalability	Capitalisation
AE – Austria	— They are mainly interested in entities such as AE and also their stakeholders.	— Yes, for example universities but also other entities working in the world of education.	— This is the most important para-meter for them, in which they are most interested, and from which they are very fascinated, they consider it very creative and are willing to create and strengthen connections. Sharing know-how in the dimension of scalability is very important to them.	— They consider this dimension more difficult to realise.
CCSTI – France	— Would be interested but have neither the time or the human resources because they are alre-ady working on another project.	— Would be interested but have neither the time or the human resources.	— Would be interested but have neither the time or the human resources. In this dimension they point out their strong interest in open schooling.	— They consider the sharing of know-how crucial for the growth of open schooling and the ca-pitalisation of the project. They are interested in the develop-ment of this dimension.
FAB – Switzerland	/	— The interest in growing the network in this dimension is cer-tainly strong.	— They are very interested and be-lieve that this is likely to happen.	— The interest in growing the network in this dimension is certainly strong.
MFCR – Portugal	— They are absolutely interested!	— They are very interested and are imagining how this might be possible.	— They are very interested and are also imagining what the members of a potential network might be. It would surely be in-teresting for them to collaborate on new projects with the expan-ded network.	— They are not sure if in other con-texts this could be possible.

SCICO – Greece	— They are very interested but realise that the feasibility of incubating such actors when the project is completed is difficult, and it is difficult for objective economic reasons.	— They are interested but with moderation because they are still connected to the schools they have worked with and do not have a strong interest in including many others from those with whom they have current relationships.	— They are very interested and connections are already being made.	— They imagine that the other fields of application are within the world of education anyway.
SCIN – Czech Republic	— They are absolutely interested!	— They are absolutely interested!	— Absolutely interested, they also already have plans to create connections with other partners active in the topic of open schooling.	— Definitely interested, they consider this action more complicated but useful to put into practice.
TCD – Ireland	/	— They identify in methodology on of their core strengths, hence it would be a viable option to engage with new stakeholders from a methodological perspective.	— Open schooling is a topic of great interest to TCD, and one in which they have experience and real added value – it would be surely interesting for them to collaborate on new projects with the expanded network.	— They are interested in opening up to a wider community than just schools, but they are not quite at the point where they can say that they would easily jump into that.
ULEI – Netherlands	— They are absolutely interested!	— They are absolutely interested!	— Making connections and developing projects together is difficult, despite the awareness of this difficulty they are really absolutely interested in pursuing this action.	— They are absolutely interested!

In the building of the SBC, an important part is played by the identification of target/beneficiaries, and generally stakeholders, necessary to support the project idea or the initiative. The partners' ability to respond with confidence to the proposed strategies takes shape, also thanks to this activity.

In this section of the report, we will go into the details of the answers given by the interviewees regarding the four parameters by which we tried to interpret the sustainability of project activities. The following information is related to the contents of the previous table.

Replicability:

With the exception of partners **FAB** and **TCD**, all partners show great interest in continuing through the replication of the project. In particular, **SCICO** emphasises the need to take into account the availability of the necessary funds, and the **CCSTI** partner points out that they do not – unfortunately – have the necessary time and human resources to pursue the replicability of the project at this time.

Transferability:

Starting from **TCD**, they identify in methodology one of their core strengths, hence it would be a viable option to engage with new stakeholders from a methodological perspective. Here again, the **CCSTI** partner points out the impossibility of conducting this activity, because of a lack of time and resources for it.

In addition, **AE** also dwells on who are the actors to be involved in adopting the OSHub model. **FAB, MFCR, SCICO, SCIN** and **ULEI** show a common willingness and potential to work towards this.

Scalability:

AE emphasises the crucial importance of the scalability parameter, such as **ULEI** and **MFCR**. We can say that, although in different words and with a similar level of engagement, the people interviewed were very much in support of this strategy.

The **CCSTI** points to difficulties of time and resources.

Capitalisation:

According to **AE** and **MFCR**, approaching different targets and users might be a difficult and not successful challenge; in fact, **SCICO** emphasises that the link with the education context remains. Basically, they are all interested; however, some show some critical feasibility issues.

6. HOLISTIC ANALYSIS FOR EACH OSHUB

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The graphs below show for each OSHub the interview results following the three dimensions of activity (purple), space (green) and network (blue), according to the four parameters of replicability, transferability, scalability and capitalisation.
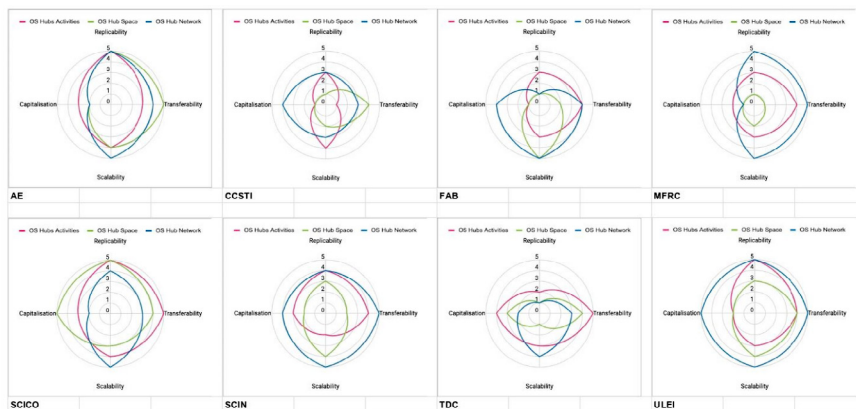

Figure 1: Graphs of all eight OSHubs describing the three dimensions of sustainability according to the four parameters of measurement.

The results in the table show more differences between the partners with regard to activities and spaces. As far as the network is concerned, we can see similar result curves within the compared graphs.

7. Legacy and sustainability – What will and will not remain? Why and why not?

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During the OSHub.Network Summit[5], on the 19th of July 2022, members of the OSHub project consortium as well as local partners who have engaged in the project in the three years of implementation gathered in Barca D'Alva, Portugal, to reflect about the real value, relevance and meaning of the work developed during the project and the potential for sustainability and scalability.

The IH team facilitated this session that was organized in two different parts:

— Impact matching
— Reflecting on the ownership

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5   OSHub.Network Summit, D5.5: https://opensciencehub.net/download/D_5.5.pdf

7.1   Impact matching

The audience was divided into two groups:

—   The OSHub staff, partners and team members who participated in the project and supported with the activities in schools;

—   The teachers and other school staff and practitioners that were supported by the project in their open schooling and open science activities

NGOs, FabLabs, schools, and other people/bodies who were interested in the project were invited to participate as guests, so participants not falling into these two categories were sitting randomly in the hall.

Figure 2: Participants working on the exercise "Impact perception by the OSHub team and respective partners".

Each partner and OSHubs responded with post-it notes, to the following four questions, only revealing the answers at the end:

—   The biggest impact the OsHub project had on schools/teachers;

—   What didn't work as expected;

—   One thing that will not last;

—   One thing that will last.

After answering these questions separately, each partner of each country was asked to share their thoughts and to compare the impact perceptions between the OSHub teams and the respective partners. What emerged, in some cases, was the correspondence between the answers, in other cases, different points of view were shown and discussed.

Within this report, we set out to describe and explore the content of what emerged and the conversations that were generated:

The biggest impact the OSHub project had on schools/teachers:

First of all, the comparison of the responses shared by the OSHub team brought out the shared vision that thanks to the project, **students were made aware of what for example a FabLab is and what is done inside, and that teachers were able to take advantage of the opportunity to use the space and especially to share their creativity** with the OSHub team.

With regard to MFCR, it was noteworthy that students and teachers were able to **benefit from the tools, new methodologies, opportunities and resources** provided by the project. This view was brought out by the OSHub team and endorsed by the teacher. Furthermore, the teacher pointed out the importance of working together with the OSHub team, the fact that the **students felt more part of the community and active in the project (not just beneficiaries).**
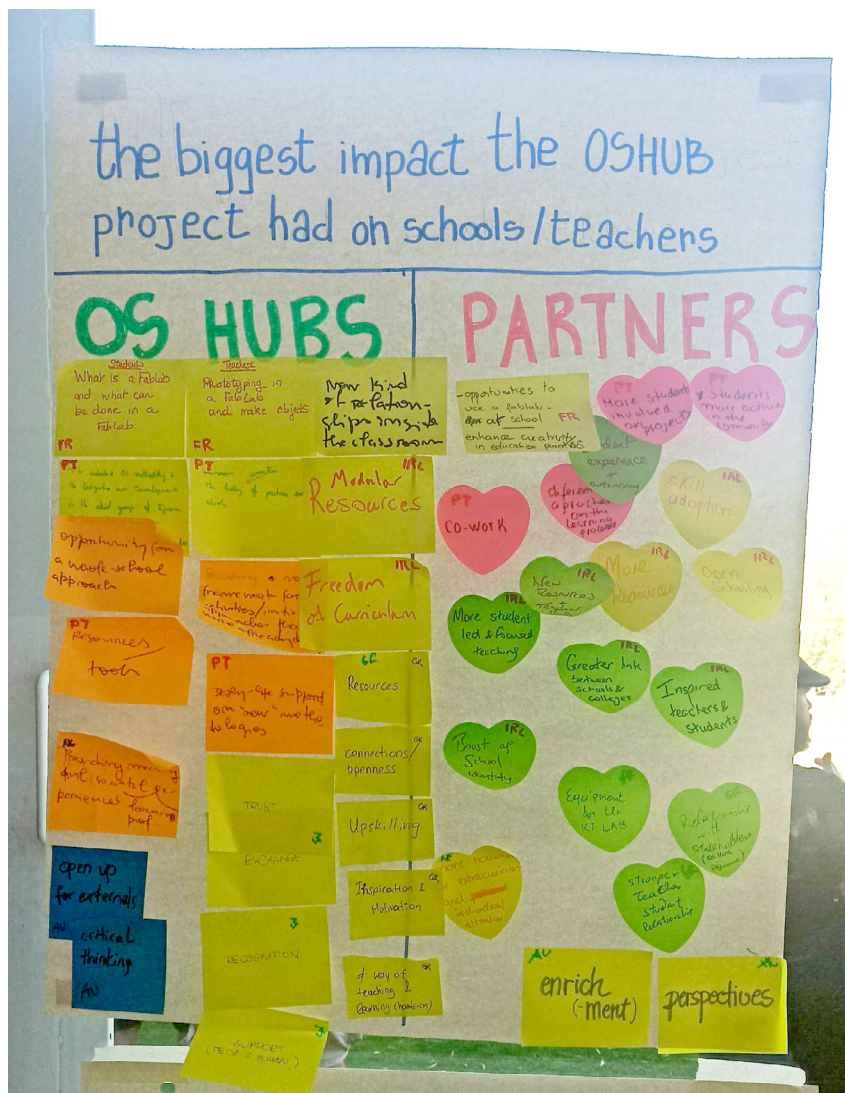

Figure 3: Outputs of the exercise "Impact perception by the OSHub team and respective partners".

The statements of the **TCD** team and the teachers shows the importance of the project on the use of resources and tools that would not have been there without the project, the possibility for the beneficiaries to carry out open schooling, and the ability to grow in the acquisition of new skills. Similar results emerged thanks to the **SCICO** partner, to which we add an important load of inspiration and connections created. In general, the development of more critical thinking and awareness of the existence of new and innovative opportunities also emerges.

What didn't work as expected:

What emerges in this case, in **CCSTI** for example, is the **difficulty of recruiting** teachers for project activities and of finding school staff willing to go on this adventure. In relation to this difficulty, it emerged that in general it is a widespread problem in many of the states represented in the consortium and also among the guests at the event. However, the teachers present in the school recounted the difficulties of time within the school and at the same time the willingness of many teachers to do their utmost to activate projects such as OSHub.

In addition, the difficulty in the final phase of the activities to conclude them in **time** became apparent. But also the difficulty of finding local economic resources to support the project's growth.

Finally, considering the historical period, a difficulty that certainly unites everyone was created by the covid, and both partners and teachers showed great resilience.

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Figure 4: Outputs of the exercise "Impact perception by the OSHub team and respective partners".

One thing that will not last / One thing that will last: it was worthy of note about the website, the group mentioned that the website may not last, unless it's sponsored.

The debate that has been created has been winningly inspiring, the teachers and the OSHub teams have listened to each other carefully and the affirmations shared with all. The difficulties of the hubs are almost similar but with some specific differences that have already emerged during the interviews. However, what started the conversation was the stimuli of the teachers, who are ready, if possible, to carry on the project activities.

7.2   Reflecting on the ownership

The IH team first subjected the teachers and then the OSHub teams to another exercise dedicated to better understanding the teachers' point of view.

First of all, several dimensions of legacy emerge:

- — Providing extra human resources
- — Providing mentoring
- — Providing tools and practices
- — Providing facilities, infrastructures (also digital) and spaces
- — Facilitating links with the local community
- — Facilitating links with the global community
- — Embedding practices into a broader policy

Now, all these elements, converge into a tripartite effort:

- — Activities, practices
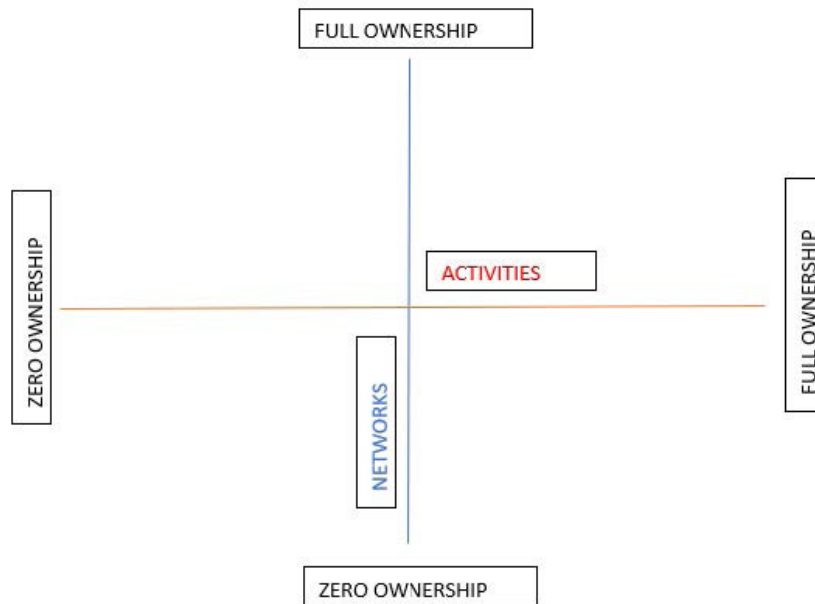- — Spaces, facilities, infrastructures
- — Networks

Figure 5: Graphic example of Exercise "Ownership 3D spectrogram".

In an outdoor space we created cartesian axes in which the two lines crossing horizontally represent the two dimensions of ownership for activities and for the network. The extreme ends represent the intensity to which that dimension will be prominent in each participant. The teachers have positioned themselves in the cartesian axes and briefly commented on their choices.

The dimension of space was a third dimension that was visible vertically – standing up in case of full ownership and sitting down in case of zero ownership. The exercise was carried out by the teachers, who in the second part were to compare their positioning with that of the OSHubs and were prompted to reconsider their positioning, taking into account how the continued collaboration with the OSHub could improve their ownership on the three axes.

Figure 6: Exercise "Ownership 3D spectrogram".

Figure 7: Exercise "Ownership 3D spectrogram".

Figure 8: Exercise "Ownership 3D spectrogram".

At the end of the exercise, thanks to the comparison between teachers and OSHubs teams, the physical positioning of the teachers has changed a bit. For example, there has been a major shift towards the importance of the network, but also there has been an evolution with regard to the relevance of the space in which to carry out activities.

8. RECOMMENDATION FOR 8 OSHUBS

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8.1 Obstacles and limits of the sustainability of the project

Figure 9: Outputs of the exercise "Impact perception by the OSHub team and respective partners".

The canvas in the photo represents the synthesis of the work carried out during the interviews and of all the ideas that emerged.

We can affirm that as regards the activities:

Table 12: Brief commentary on the results of the activities.

Replicability	Transferability	Scalability	Capitalisation
Replicability has proven to be a viable and relatively easy strategy for most hubs	Even though it is not the easiest solution, transferability has been one of the most sought-after strategies for sustainability	Scalability has found the widest range of feasibility solutions.	When sought after, capitalisation has proven to open up unexpected opportunities.

In according to the space:

Table 13: Brief commentary on the results of the space.

Replicability	Transferability	Scalability	Capitalisation
The best condition for replicability involves the same approach and methodology used in the OSHub project.	Fundamental may be the transfer of know-how and network to keep the existing OSHub alive through the transfer of shared skills and knowledge into the physical space.	There are no problems with the scalability of the space when it is in the full availability of the OSHub.	The best example of capitalisation of the project is being realised through the use of methodology, know-how and network setup, co--creation techniques, activating them in other areas and towards different users and targets.

As for the network, the responses received from the partners were less specific and more general. Here we can underline that it is clear the will to ensure that the project continues its natural conc-

lusion even afterwards, and that the network itself, and the creation of an international network, can be a means of creating connections and developing projects together with others.

8.2   Future Steps

Deliverable 7.4, Dissemination Strategy, represents the next phase for the realization of OSHub sustainability. Within the next deliverable we will share with the partners a strategy dedicated to the creation of opportunities and then we will deepen the development of the network.

9. FURTHER REMARKS

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Thanks to the path undertaken for the development of the activity narrated in this Report, critical thought was developed in relation to some key points.

First of all, the value of the **teachers' work** was appreciated. Each of them shared the difficulties, impact and future visions of the project. Above all, through the story of the work carried out with the beneficiaries, the impact of the OSHub project emerged, i.e. the experience, skills and connections that today are part of the baggage of the students who took part in the activities.

Furthermore, with regard to the **OSHubs teams** it is possible to say that they show a deep engagement in the project and the willingness to still want to work with the consortium of the current project and in the theme of open schooling. Not only that, the members of most of the different teams, both during phase *Identifying and assessing the sustainability model of the OSHubs* and during the activities carried out during the OSHub.Network Summit, were not only active regarding what the IH team requested, but they also showed great interest and operability. Moreover, searching for their comments in relation to the Legacy and Sustainability work, it was found that both the SBC and the Monitoring Report activities were considered by the partners as useful for the implementation of an internal critical thinking in their work and useful to ensure that the OSHubs continue their path even at the end of the project.

Thanks to the feedback received, we believe we can engage the results produced in a programmatic and future vision of the project, but we will discuss this more in the next deliverable.

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