



**OPEN
SCIENCE
HUB**

**EMPOWERING CITIZENS
THROUGH STEAM
EDUCATION WITH
OPEN SCHOOLING**

DELIVERABLE 4.3

Report on OSHub.net Open Source Platform



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Reference

Please cite this work as:
OSHub Consortium, 2020. OSHub: D4.3 OSHub.net Open Source Platform Report, Trinity College Dublin, Dublin

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Acknowledgement



OSHub has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 824581

Document Identification Sheet

Project Ref. No.	824581
Project acronym	OSHub
Project Full Name	Open Science Hub: Empowering Citizens Through STEAM Education with Open Schooling
Document Name	OSHub.Network_D4.3_OSHub.netOpenSourcePlatformReport_20220414
Security	Public
Contractual Date of Delivery	31.03.2022
Actual Date of Delivery	14.04.2022
Type	ORDP: Open Research Data Pilot
Deliverable number	D4.3
Deliverable name	OSHub.net Open Source Platform Report
WP / Task	4
Number of pages	16
Authors	Brendan Owens
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Reviewers	Rosario Sapienza (IHS), Maria Vicente (ULEI)
Project Officer	Simona Abbatangelo
Abstract	This report outlines the approach to using Open Source Platforms to meaningfully showcase OSHub.Network activities and how broad dissemination is assured.
Keywords	OSHub, Open Schooling, Case Studies, Resources, Feedback, Co-design, Co-creation

REVISION HISTORY

REVISION	DATE	AUTHOR	ORGANISATION	DESCRIPTION
0.1	13 April 2022	Brendan Owens	TCD	Draft Version
0.2	14 April 2022	Shaun Usher	TCD	Contributing edits
0.3	14 April 2022	Rosario Sapienza	IHS	Reviewer
0.4	14 April 2022	Maria Vicente	ULEI	Reviewer
1.0	14 April 2022	Brendan Owens	TCD	Final version

LIST OF ACRONYMS

ACRONYM	DEFINITION
GA	Grant Agreement
CSA	Coordination and Support Action
DEI	Diversity, Equity and Inclusion
STEM	Science, Technology, Engineering and Mathematics
STEAM	Science, Technology, Engineering Art and Mathematics
HO2020	Horizon 2020
SISCODE	Society in Innovation and Science through CODEsign
OSHub	Open Science Hub
TCD	Trinity College Dublin
ULEI	University of Leiden
IHS	Impact Hub Siracusa
WP	Work Package

EXECUTIVE SUMMARY

The OSHub.Network Open Source Platform Report is Deliverable 4.3 (D4.3) from the coordination and support action (CSA), OSHub.Network, grant agreement (GA) 824581. This report outlines the approach to showcasing activities from each OSHub through an Open Source Platform including the related dissemination strategy as part of WP4: Design and Implement Open Schooling Activities. This work is outlined in the CSA under WP4 objectives as (underlined):

To document the processes, methodologies and outcomes of the OSHub.Net activities, and to share these on open source platforms, to facilitate the reproducibility of the OSHubs and the activities.

In order to provide the greatest access to OSHub.Net activities, a two pronged approach was chosen using both the oshub.network¹ website and the Scientix online STEM portal and community².

The oshub.network website is used to host case studies from each partner under the OSHub Roadmap webpage in order for OSHub activities and initiatives to be reproduced elsewhere. These case studies rely on testimonials from the target audiences for those activities and initiatives to corroborate their usefulness and impact. The [scientix.eu](http://www.scientix.eu) website is used to host the associated resources that enable another user to replicate the activities or initiatives described in the case studies. Through the Scientix project (GA 730009) this open platform gives rise to possibilities for translation of resources and access to a cultivated STEM education audience beyond the current audiences established by the OSHub.Network.

The combination of distributing localised case studies alongside their relevant resources is the preferred method of disseminating OSHub activities by the project consortium. Finally this report includes an outline of dissemination plans to ensure that the case studies and associated resources are broadcast to relevant audiences through the Open Schooling Together joint initiative of 9 Open Schooling projects and Scientix communication channels. This is expanded on in the Dissemination Strategy section of this report.

1 <https://oshub.network/>

2 <http://www.scientix.eu/about>

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1. INTRODUCTION

1.1 Background: about OSHub.Network

The Open Science Hub Network (OSHub.Network), and the associated network of community hubs – OSHubs, aim to 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.

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”* approach, developed by Mariana Mazzucato, OSHub.Network will define a set of Open Schooling Missions, aimed at addressing local relevant challenges linked to the UN’s Sustainable Development Goals (United Nations General Assembly, 2015). These Open Schooling Missions will constitute the basis for the creation and development of open schooling projects, enabling real collaboration across communities. Through this approach with OSHub mediation, schools can be active agents for collaboration between civil society, enterprises, research institutes, and families.

Importantly, to ensure diversity, inclusion and sustainability, each OSHub location will be held accountable to a local management board consisting of representatives from local stakeholder groups across schools (teachers and students), families, research institutes and universities, enterprise, industry, media, local governments, civil society organisations and wider society. The board will be involved in all key processes and decisions regarding local OSHub programmes and initiatives.

By supporting local schools and communities with the tools and networks to tackle relevant challenges, OSHub.Network aims to create local impact while simultaneously promoting an active global citizenship attitude. All resources, products and solutions developed by OSHub.Network will be fully based on Open Standards to expand the reach and impact of the project. 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. All OSHub.Network resources will also be shared on existing large online educational repositories, and relevant national networks and repositories.

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 organisational structure, leading to a sustainable high quality of education. In particular, OSHubs will facilitate the bridge between the needs and realities of schools and their local context and resources, as well as brokering and advocating for the implementation and maintenance of national/regional policies.

1.2 Purpose of Document

This report outlines the approach to using Open Source Platforms to meaningfully showcase OSHub. Network activities and to assure broad dissemination.

The report includes an outline of why a case studies approach was chosen and how these outputs look using relevant examples. It also includes an outline of why and how the Scientix Platform was used to host open resources for the case studies. The dissemination strategy section includes information on the channels that will be utilised to ensure that case studies and resources are spread far and wide for others to use for reproduction in other locations.

This document concludes with a brief summary of further actions to be taken to build on this work, which should prove fruitful for the remaining work relating to WP4.

2. CASE STUDIES APPROACH

When gathering the broad spectrum of activities from the consortium it was clear that a basic resource list alone to explain OSHub activities was not aligned with the open schooling objectives of Open Science Hub and did not provide an insight into how the activities are carried out and if they are truly deemed useful by the end user.

In taking a case studies approach, the consortium was asked to provide a set of elements to build a picture of activities from the point of view of the end user, and show evidence of reproducibility by including similar stakeholder types who are new to the activity and want to know more.

TCD issued the following instructions to the consortium in order to gather a case study package per partner.

- **Title and 'in a nutshell':** The name of your hub and the project/ initiative you are showcasing. Under this include a short description (**200 words max**).
- **Video testimonial:** The idea here is that the stakeholder type you engaged teases or advertises your chosen project for a similar stakeholder (e.g. a teacher promoting to other teachers). In practical terms we're asking for a one minute video of the main participant/ facilitator answering the open question: "Why would you encourage another person like you to take part in this?" Please feel free to tweak this for your particular case study. For example in Ireland it would

be: "Why would you encourage another teacher to run the Open Science Hub TY programme?" **1 minute max**

- **'In Conversation' piece:** The idea here is to have someone who is new to your project/initiative speaking with someone who has been involved before and has the lived experience to share. This should be relaxed and conversational so that the 'newbie' can freely ask questions about what the experience was like, what were the challenges, the benefits etc. We recommend doing it as a Zoom call and recording it in a manner that replicates an in person meeting. If you need to encourage the new person to ask questions, keep them open and try where possible to get them to come up with the questions themselves – e.g "Chris – is there anything else you'd like to ask Aisling that would help you run the programme?" We have tips below to ensure consistency in our Zoom recording layout. **15 minutes max**
- **Resource/s:** The idea here is that someone who this project or initiative is aimed at has been excited by the video, got a better understanding of how it works from the discussion video and now the resources will allow them to really replicate it/ take part in it. It is very open as to what these resources are – they might be PDFs, PowerPoints, video tutorials, etc – whatever helps someone enact the project/ initiative elsewhere.

Below are screen captures from the oshub.network³ website to exemplify how these elements are displayed/ linked to (for 'Associated Resources' – see the next section for more detail).

A CASE STUDY

Through teacher consultation a handbook was created by TCD to help teachers in Irish high schools facilitate a year-long programme to develop student citizenship and STEAM skills culminating in a project build and showcase. The handbook includes relevant definitions, diversity equity and inclusion guidelines, a selection of transdisciplinary inspiration workshops and a series of guidance materials. These guidance materials include co-creation session outlines, how to build a research question, how to activate the research question as a project and finally tips and tricks for showcasing student work.

The handbook is intended to support teachers, but requires the additional assistance of a broker such as an Open Science Hub or other institution to provide feedback, connect schools with relevant expertise and to host a school project showcase to reach audiences within the schools' local community and beyond.

A key point about this programme and framework is that the lead up to deciding on final projects and showcase formats is equally important - the journey is part of the enrichment experience as well as the destination and final visible outputs. The programme has content that should serve a period of 8 months of the school year (e.g. September to April).

Why would you encourage a peer to take part?

OPEN SCIENCE HUB

0:00 / 1:31

The Inside Story | Download Transcript | Associated Resources

Main body of text on the left is the 'in a nutshell' element, video on the right is the video testimonial, 'The Inside Story' links to the 'in conversation video', and 'Associated Resources' links to the Scientix resource repository.

OPEN SCIENCE HUB SCHOOL PROGRAMME



Screen capture of the page linked from 'The Inside Story' button including the 'in conversation video', transcript download and the same Scientix link to the resource.

As can be seen in the screen captures above, each video recording is accompanied by a link to download a transcript (an example for a 1 minute transcript can be viewed [here](#)) to read, if that is a preferred way of consuming or revisiting the video content.

To collate the information a file structure was established in the project folder and the following template was given to partners:

- **OSHub Name:**
- **Title of Case Study:**
- **Target Audience:**
- **Description (200 words):**
- **Video Testimonial (1 minute):** Upload to *this folder* with your OSHub name in the filename
- **In Conversation Video (<15 minutes):** Upload to *this folder* with your OSHub name in the filename
- **In Conversation Questions:** 1. X 2. Y 3. Z **Resources:** Upload to *this folder* with your OSHub name in the filename/s

To summarise: This case study approach used a video testimonial from an experienced end user to tease and recommend the activity, this leads to 'The Inside Story'. The 'In Conversation' video explains what is needed to reproduce the activity through the eyes of a new end user speaking to an experienced end user. Finally, the user journey ends with the option to download the associated resource(/s) that make it practically possible for the activity to be reproduced elsewhere.

3. SCIENTIX OPEN PLATFORM

The Scientix open platform for STEM resources was chosen for a number of reasons. Firstly, the platform is being or has been used by many other STEM and Open Schooling projects to host relevant resources. It can therefore act as a unified portal for teachers, researchers, STEM education project managers and policymakers.

Also, its search filters mean that it is a much more powerful tool than simply uploading resources as direct links to the project website. Resources in the repository can be sorted by Subject, Age, Type (of resource), Language and STEM strategy (e.g. connections with communities/ school leadership/ etc).

RESOURCE REPOSITORY

Find resources by keyword

GO

ADVANCED SEARCH

Subject | Min age | Max age

Type | Languages | STEM strategy criteria

Screen capture of the search page for resources on Scientix.

Through this platform, the end user has the choice to select subjects and resource types relevant to them which could combine the best learnings across multiple projects including Open Science Hub.

Scientix can even be used by the OSHub.Network to find connections in wider European networks as Projects are searchable by Country, Topic, Target Groups and Funding on the platform.

PROJECTS

Filter by [See all](#)

Country ▾

Topic ▾

Target groups ▾

Funding ▾

Starts after ▾

Ends before ▾

Projects looking for teachers
 Ongoing projects

APPLY FILTER

Screen capture of the search page for projects on Scientix.

4. DISSEMINATION STRATEGY

Dissemination of OSHub.Network case studies and resources will be carried out through three means:

- **Local dissemination:** All OS Hubs in the network will be instructed to share the OSHub Roadmap webpage and Scientix website with relevant local stakeholders to share both local activity and activity from the wider consortium. This can be carried out by whichever channels are most appropriate per partner.
- **The OSTogether (Open Schooling Together) joint consortiums:** The OSTogether initiative provides a unified communication approach to an open schooling audience so that messaging is not split across multiple, disparate channels. This includes a newsletter, a short Facebook campaign to rotate through each partner's case studies, and a Twitter post to highlight the OSHub Roadmap webpage targeted at other open schooling practitioners.
- **Scientix platform:** Once the Open Science Hub project has been verified and translated into 8 languages by the Scientix project team (ETA end of May 2022), the project and associated resources will be disseminated through the Scientix digest to teachers across Europe as well as policy makers.

5. FURTHER ACTIONS

At the time of writing, resources have been uploaded in each partner's native language to the Scientix website. These will be translated to English over the coming months to broaden their appeal and accessibility for a wider audience.

In achieving the objective set out by this deliverable, the process has formed the groundwork for approaching finalising a handbook of OSHub.Network activities by project end as well as linking into the wider sustainability and legacy of the OSHub.Network.

The approach outlined in this report allows the consortium to interrogate how best to showcase the breadth of activities in a consistent and coherent manner with an emphasis on materials and methods tried and tested by the audiences they are designed for or co-designed with.

The consortium will therefore build on the Roadmap framework created as part of Deliverable 2.3 Participative Roadmaps⁴, to connect the methodology for building open schooling communities with the activity that is happening on the ground and disseminate for the widest uptake and reproducibility.

4 https://oshub.network/download/D_2.3.pdf





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DELIVERABLE 4.3

**Report on OSHub.net
Open Source Platform**