



Deliverable 5.4.b

Rural Schools Innovation Map

This project has received funding from the European Commission PPPA Programme under Grant Agreement No.LC-01760255/10105266 LfE



Co-funded by the
European Union

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 607858

Document Control Page

WP/Task	WP5/ T 5.4
Title	Rural Schools Innovation Map
Due date	M24 –January 2024
Submission date	29/01/2024
Abstract	This document serves as the revised deliverable (website) for the DEC type of the D5.4b "Rural Schools Innovation Map". It represents the progress achieved within WP5, specifically under Task 5.4, and the update of the LfE Innovation Map, designed as the gateway to school communities. The focus of this document is to present the changes made to enhance the Innovation Map, its features, and the collaborative opportunities established between months M11 and M24. Additionally, the document provides a comprehensive overview of how the map illustrates the progression of the school network across Europe, along with detailing the supplementary functionalities introduced to teachers since M11.
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Dissemination level	<input checked="" type="checkbox"/> public

Document Control Page

Version	Date	Modified by	Comments
01	29/12/2023	Vasiliki- Eleni Provopoulou	Creation of the first version
02	24/01/2024	Yvoni Pavlou	Peer review
03	25/01/2024	Vasiliki- Eleni Provopoulou	Creation of the second version
04	29/01/2024	Maria Nika	Quality Assurance
05	29/01/2024	Vasiliki- Eleni Provopoulou	Submission

Executive summary

This deliverable, situated within the ambit of WP5 (Community Building and Support), undertakes the comprehensive documentation of advancements within the [Rural Schools Innovation Map](#). Positioned prominently on the LfE Community homepage within the OSOS Portal, this cartographic interface serves as a discerning instrument for the identification of rural schools actively participating in community initiatives, exemplifying commendable practices, and securing EU funding through the LfE Open Calls.

Functioning as an illustrative manifestation of the burgeoning rural school network, the Rural Schools Innovation Map transcends its role as a visual aid, engendering avenues for European-level discourse, knowledge-sharing, and reciprocal staff exchanges. Beyond its immediate utilitarian value, the map assumes a strategic position as a platform for delineating collaborative opportunities among rural schools across diverse European regions. Its broader significance lies in furnishing invaluable insights to project policymakers, both internal and external to the consortium, thereby facilitating judicious decision-making concerning the active engagement of rural schools in innovative initiatives, notably the LfE project.

Moreover, the map serves as a catalyst for collaborative pedagogical initiatives, endowing participating schools and instructors with opportunities for synergistic endeavors. The visual representation of the burgeoning European school network underscores the positive outcomes engendered through the school-based pilots. Notably, the Rural Schools Innovation Map establishes direct liaisons, not solely with the LfE community, but also with OSOS-affiliated schools already immersed in this innovative pedagogical milieu. In addition, the map can inspire greater participation among rural schools, fostering active involvement with the Community Portal and illuminating diverse funding and collaboration prospects that promise discernible educational enrichment within their scholastic environs.

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1 Introduction

1.1 Purpose of the document

This document functions as the updated deliverable of the technical work carried out in context of T5.4 "Rural Schools Innovation Map". It represents the advancements made within WP5 and the refinement of the LfE Innovation Map, serving as the entry point for school communities. The primary focus of this document lies in presenting the improvements applied to the Innovation Map, its features, and the network opportunities established between months M11 and M24. Furthermore, it offers a thorough overview of how the map visually represents the development of the school network across Europe, along with specifying the additional functionalities introduced to users starting from M11.

1.2 Document Structure

This deliverable comprises the following sections:

CHAPTER 1. The current chapter serves as an introduction for the document.

CHAPTER 2. This section presents an overview of the progress achieved until Month 10.

CHAPTER 3. Within this chapter, the modifications made to the map are detailed.

CHAPTER 4. From the technical point of view, this section outlines information regarding the implementation of the map, providing a comprehensive list of the technologies utilized in creating the Rural Schools Innovation Map.

CHAPTER 5. Explores collaboration opportunities for the LfE rural schools through the Community and the Rural Schools Innovation Map, incorporating insights from recent changes.

CHAPTER 6. This section provides a summary of the entire document.

2 Description of the Rural Schools Innovation Map

The LfE portal incorporates a [Rural Schools Innovation Map](#), designed as an entry point for school communities. This map aims to significantly enhance the user experience for frequent users of both OSOS and LfE Projects. It provides valuable features such as searching for rural schools that have received funding through the project's Open Calls, based on criteria such as *name, geolocation (country of origin) and Openness/Innovation level*. The Rural Schools Innovation Map plays a crucial role in supporting participating schools and teachers by broadening their networking opportunities, and fostering the exchange of experiences. Furthermore, visitors to the LfE Portal can readily identify additional rural schools according to the aforementioned criteria. Visitors can also review the educational activities' projects successfully implemented by LfE schools, utilizing the funding provided by the LfE Project.

Through this collaborative effort, rural schools have the opportunity to share good practices, creating a positive impact initially within the specific school and subsequently within the broader community. The map visually represents the network's representation of the pilot activities. The implementation of the map leverages both OpenStreetMaps with Leaflet and IP Geolocation Views & Maps while utilizing data extracted from ESRI.

2.1 Description of the Rural Schools Innovation Map feature

As indicated in D5.2a, the Rural Schools Innovation Map is located on the homepage of the LfE Community Portal (Figure 1). To be more precise, the map is positioned in the middle of the main body of the homepage, beneath the News section (Figure 2). This placement is intended to inform visitors of the LfE Portal about schools associated with the project. It is important to note that this map exclusively showcases rural schools that have secured funding through the Open Calls process.

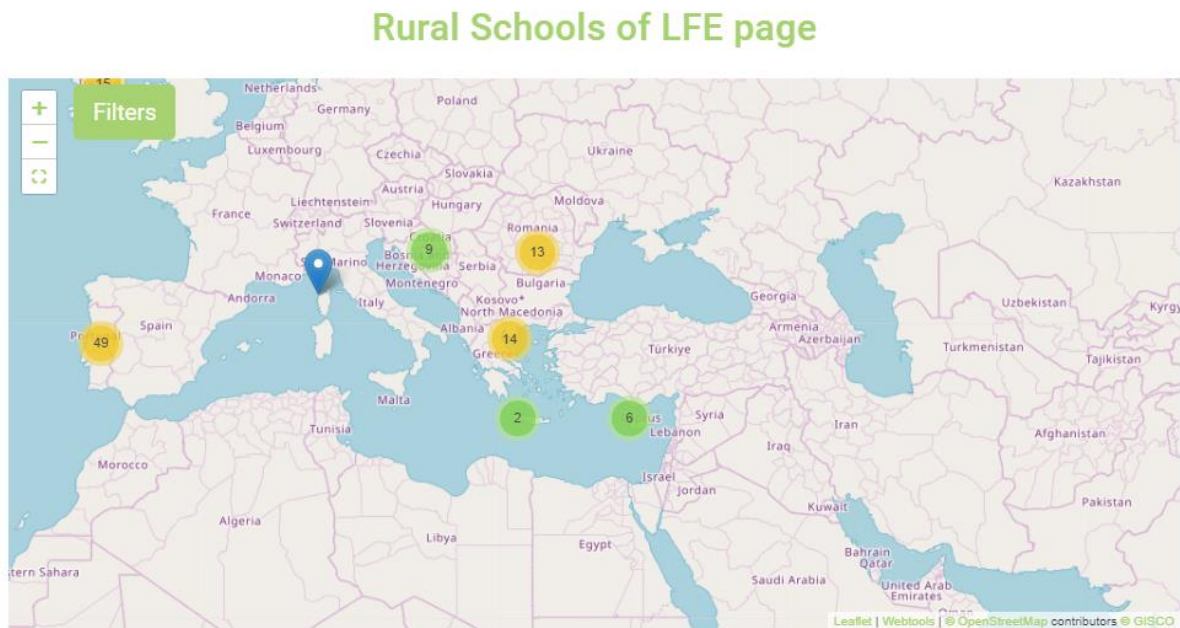


Figure 1: Rural Schools Innovation Map

Learning from the Extremes International

Community 👤 664 members

Info
Details
All entities
Members
Resources
Projects
Events
Edit
Translate

Teacher Square

Wall

Help Desk

Training Opportunities

Guidelines and Tutorial

School Square

Good Practices

Library

Self-Reflection Tool

Open Call Results

Good Practices

55

Schools

123

Teachers

689

News and Announcements

Learning from the Extremes

WEBINAR

October 2023

16:00 CET

on YouTube

How to upload your project to the LfE Portal

LFE Webinar: How to upload your project to the LfE Portal

Learning from the Extremes

WEBINAR

20 December 2023

16:00 CET

LIVE on YouTube

Rural Schools of LfE page

Filters

How to upload your project to the LfE Portal

Learning from the Extremes

Join us in the next Learning from the Extremes Webinar. How to upload your project to the LfE Portal

20 December 16h CET (15h GMT)

LIVE on YouTube

<https://youtube.com/watch?v=...>

In this webinar we will introduce the four different steps of the Design Thinking approach

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Figure 2: Positioning of the map on the LfE Portal

2.2 Information presented for the LfE schools

Primarily, a typical visitor of LfE Portal can employ the Rural Innovation School Map to identify rural schools participating in the Project's Open Calls and funded initiatives aimed at enhancing services, technology offerings, while expanding the overall school environment for students and teachers. For those users seeking collaboration opportunities, geo-localization services can be utilized. By pinpointing schools on the map, visitors can obtain additional details on innovative activities that may hold greater innovation relevance for the school, as elaborated in detail in D5.4a.

Additionally, the Rural Schools Innovation Map offers in-depth information about each school through a hyperlink embedded in the school's title (Figure 3). Upon clicking on the pin representing each school's location, a box with basic information about the school appears. Thus, visitors can immediately access valuable information about schools such as the country, postal and email addresses, and the school's Openness level/Innovation status.

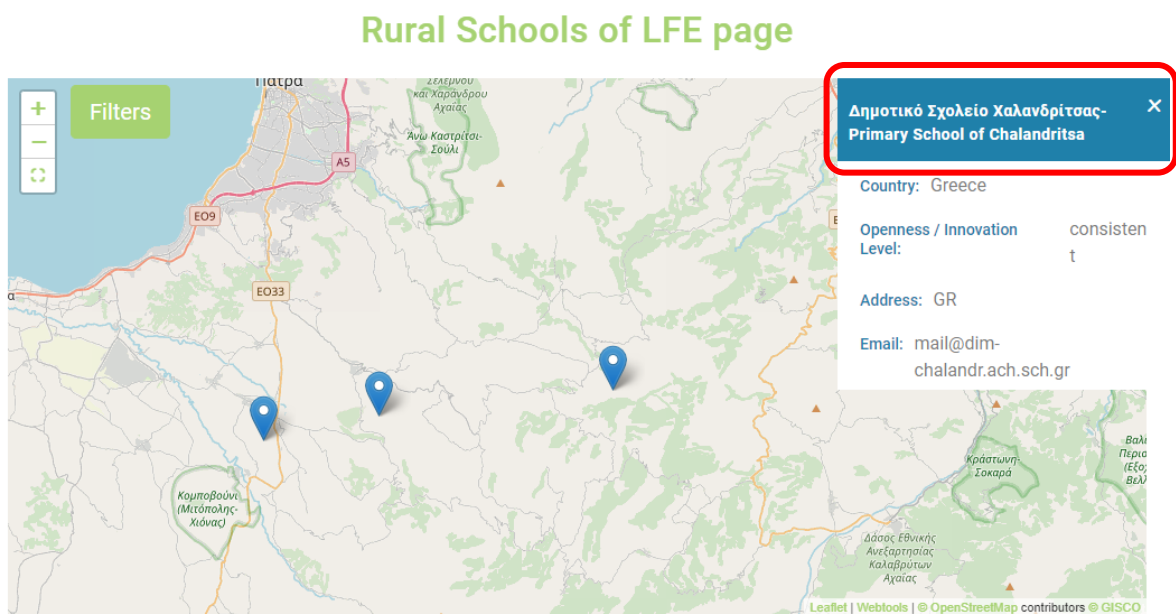


Figure 3: Illustration of school's information presented on Rural Schools Innovation map

After outlining how a visitor to the LfE Portal can locate LfE schools using the Rural Schools Innovation Map, it is noteworthy to explore the information available upon selecting the school's name, as presented in Figure 3.

Upon choosing a school and accessing its profile, it is feasible to view the school details in the local language. Consequently, the user can utilize the translation feature of the portal to have the content translated into English or any of the other 10 additional languages accessible on the portal, as depicted in Figure 4.

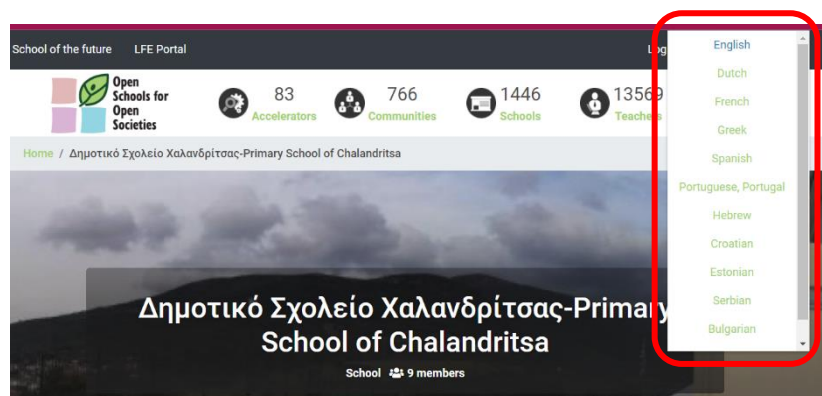


Figure 4: The language translation menu

For a more in-depth exploration of schools' profile structure on the LfE Portal, you can refer to D5.2a- Learning from the Extremes Community Platform and D5.4a- Rural Schools Innovation Map, where this topic has been thoroughly explained.

3 Modifications of the Rural Schools Map that have been completed between M11 and M24

The Rural School Innovation Map has been implemented by M10, and the sole recent modification to this feature involves the addition of the filter associated with the Innovation level of affiliated schools. Moreover, this information on schools' profile form has been renamed as well. Specifically, the term has transitioned from "Openness level" to "Openness level/Innovation status". This alteration aims to ensure data consistency between the OSOS Project and the new data introduced by the LfE Project concerning this particular attribute. The selectable options for the 'Openness/ Innovation level' variable, as illustrated in Figure 5, include:

- Advanced
- Consistent
- Integrated
- Enabled

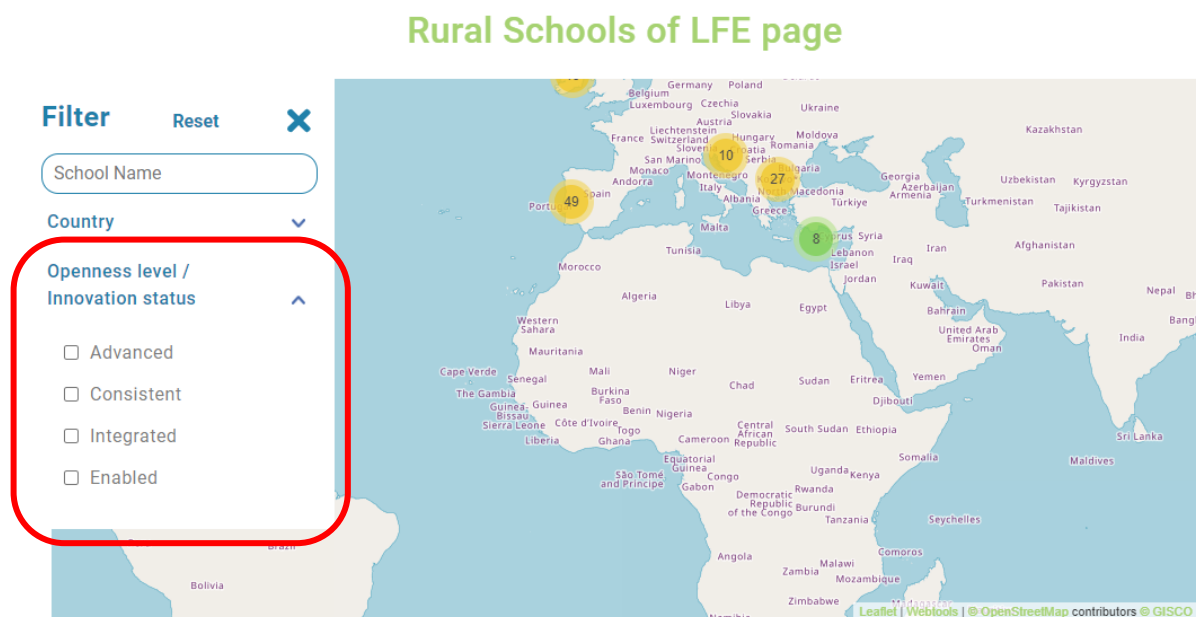


Figure 5: The updated filtering options of the Rural Schools Innovation Map

The comprehensive details of the four distinct categories regarding the innovation status are mentioned in detail on the Interim report and are presented briefly below.

Enabled: Schools that are at an initial stage of incorporating educational innovation in the classroom and beyond.

Consistent: Schools that have achieved a certain level of innovation and openness through specific measures, educational ICT tools, best practices, CPD, but they still consist isolated cases without a network of other schools and external partners to facilitate the process.

Integrated: Schools that have achieved a high degree of innovation and openness and they have already established cooperation with community stakeholders and other external partners.

Advanced: Schools that are considered rather extreme cases of schools that offer a glimpse to the open school of the future.

Additional information pertaining to the innovation status can be found in the Final Report of the Impact Assessment.

Furthermore, substantive upgrades have been implemented on the backend infrastructure of Drupal, specifically enhancing the “Open Street map” library affiliated with the Rural Schools Innovation Map. The “Open Street map” is a map interface layer on which the Leaflet library enhances interaction on the map. Data for the map is drained from the location module, a shared component employed in the OSOS Project. This collaborative utilization ensures the meticulous upkeep of geospatial data, affording precise information pertaining to the authentic geographical placement of schools featured on the map.

4 Technological integration

The implementation of the Rural Innovation School Map has been inherited from its precursor, the OSOS Project. Both the OSOS and LfE Projects share a common objective of mapping schools based on their openness and innovation levels. This approach enables visitors to monitor schools' status by tracking the implementation of classrooms' projects and the integration of initiatives facilitated through the Open Calls of the Project.

Functionally, the map relies predominantly on “Open Street map” platform. To fulfill software requirements, the library “Open Street Map” has been employed. Within the Drupal framework, the “Open Street map” serves as an interface to the “Leaflet” library which enhances interaction on the map. Additionally, to visualize the map of OSOS schools, the “Open Street map” library interfaces seamlessly with the location module, a component used in the OSOS Project for maintaining accurate geographical information pertaining to the schools presented on the map.

This integration ensures a cohesive and streamlined approach to the mapping functionality, aligning with the overarching goals of both the OSOS and LfE Projects in presenting a comprehensive depiction of schools based on their openness and innovation attributes. By building upon the foundation of the OSOS project, the Rural Innovation School Map continues to evolve and contribute to the collective mission of enhancing educational environments and fostering collaborative best practices.

The chosen methodology for the revitalization of the LfE map involves a strategic amalgamation of specific Drupal modules, meticulously outlined in D5.4a. These modules include:

- i. Open Street map¹
- ii. Leaflet²
- iii. IP Geolocation Views & Maps³
- iv. Leaflet More Maps⁴

The most important characteristic of this approach is that it entails the adaptation of existing views employed for presenting schools in “Open Street map”. This transition involves the utilization of the IP Geolocation Views & Maps interfaces. Furthermore, the custom modules, originally designed for showcasing bespoke pins and markers, have undergone refinements to seamlessly integrate with the Leaflet and IP Geolocation Views & Maps APIs.

¹ <https://www.openstreetmap.org/>

² <https://www.drupal.org/project/leaflet>

³ https://www.drupal.org/project/ip_geoloc

⁴ https://www.drupal.org/project/leaflet_more_maps

The “Leaflet More Maps” module supplements this approach, with the “ESRI World Street Map” serving as the preferred map provider. This strategic integration aims to enhance the overall functionality and visual appeal of the LfE map, ensuring compatibility with contemporary mapping standards and technologies. For an exhaustive examination of these adaptations and implementations, refer to the comprehensive details presented in D5.4a-Rural Schools Innovation Map.

5 Collaborative avenues for rural schools through Community interaction and Rural Schools Innovation map dynamics

Within the LfE portal, users can explore shared communities and classroom activity projects through the interactive features embedded in both the Community section and the Rural Schools Innovation map. This dynamic collaboration fosters the development of new classroom activity projects and best practices among participating rural schools, contributing to the overall enrichment of the educational ecosystem. Teachers, in particular, can leverage this platform to expand their networks, either by connecting with educators who share similar interests or by creating and joining communities. This expansive teacher network serves as a hub for various global activities facilitated through the LfE Community portal.

As visitors have the ability to track rural schools and teachers from these schools, they can discover supplementary materials available on the LfE Portal. These resources serve as valuable support for educators and schools, as detailed below.

In addition, the Library section works as a dedicated space for enrolled users to showcase valuable educational resources. This fosters collaboration by allowing to LfE portal users to draw inspiration from one another and share successful project methodologies, in terms of deepen the impact of the collaborative learning and shared intelligence.

Moreover, the LfE Community portal empowers users to contribute by posting comments related to their work, fostering idea exchange and knowledge sharing within communities and among rural schools engaged in the project. The platform's notification feature ensures that users stay informed about the latest discussions and updates within the communities and schools they are part of. Additionally, enrolled users who have opted to receive updates on the project's progress benefit from the LfE newsletter. This newsletter delivers informative announcements about upcoming events and news, providing a comprehensive overview of the latest developments to those engaged in the LfE Project.

6 Conclusions

The Rural Schools Innovation Map, alongside the complementary features within the LfE Community, serves as a powerful tool in facilitating and enhancing collaborative activities for both instructors and students. This dynamic platform not only supports the formation of networks but also empowers individuals to collectively pursue and achieve their learning goals, exemplifying the transformative impact of collaborative knowledge sharing in education.

The attainment of success in both professional and personal realms is intricately linked to the adept utilization of knowledge for overcoming challenges and promoting innovation. Collaborative activities' endeavors not only equip individuals with the essential skills for contemporary citizenship but also acknowledge the reality that complex societal and business issues are best addressed through collective efforts rather than individual endeavors. The collaborative nature of group work instills in individuals an appreciation for the diverse talents and perspectives of team members, a valuable lesson preparing them for the challenges of the twenty-first century.

Engaging in group work demands a diverse skill set and knowledge base. Through collaboration, team members gain insights into how the amalgamation of diverse abilities contributes to greater success than what could be achieved by an individual. This collaborative learning experience becomes a crucible for individuals to recognize and explore their own strengths, weaknesses, and skills. Importantly, such collaborative endeavors lead to substantial increases in individual knowledge, which is important particularly for teachers in rural areas.