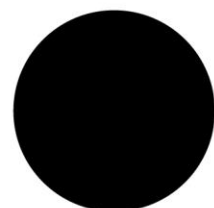




DELIVERABLE 2.4:

Support and Training Materials For Schools as Living Labs



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REVIEWERS	Rooske Franse, NEMO Annette Van Baalen, NEMO Mariluz Guenaga, UDEUSTO
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Executive summary

The *Schools as Living Labs* (SALL) project (www.schoolsaslivinglabs.eu) is a Coordination and Support Action (CSA) funded under the Science with and for Society (SwafS) objective of Horizon 2020 (H2020), the Research and Innovation Programme of the European Union.

SALL is a project serving Europe's aim to promote open schooling and collaboration on science education. Moving in this direction, the project proposes the Living Lab methodology as a technique for the development of open schooling activities linked to science learning in Europe's schools. Further, SALL chooses to demonstrate the use of this technique through activities prioritizing a focus on the theme of the food system and its links to the Food 2030 research and innovation policy of the European Union.

The SALL team, including ten consortium members and three linked third parties, consists of institutions from twelve countries (Belgium, Croatia, Cyprus, Estonia, France, Greece, Israel, Luxembourg, the Netherlands, Portugal, Serbia, Spain) representing diverse worlds: schools, universities and research organisations, science museums and centres, NGOs, business. Dialogue and mutual learning among these worlds lie in the heart of SALL.

The present document constitutes Deliverable D2.4 'Development of training and support materials for Schools as Living Labs'. It is the output of Task 2.4 'Development of training and support materials' within Work Package 2 (WP2) 'The SALL framework and methodology'. (Leader: TRACES; Main partners: UDEUSTO, NEMO). This task has been carried out since the start of the project in close link with WP3 and WP4, in order to ensure the production of materials and instruments in accordance with the needs of the implementation activities, considering local needs and the local development of further materials.

This deliverable is the compilation of the materials produced all along the process of engaging stakeholders and co-creating a methodology that allows schools, including teachers and students, as well as other societal actors to reflect on local problems relating to the Food System in an active, engaged, and experimental way.

The first chapter presents the contents of the deliverable and explains its main objectives. The second one, analyses the purposes of the resources produced in a general way. The third chapter gives a glance of the different ways in which those materials were produced. The fourth, presents the materials, both those already delivered and newly produced ones, giving details per country. At the end of the chapter, a suggested structure for teacher's training is presented.

The production of resources to accompany the SALL Methodology started from the beginning of the project, and continued to be nourished through the field experience of National Coordinators that worked with focus schools during 2021. These materials are a set of living resources generated according to the emerging needs (of the project as a whole, or of the National Coordinators in particular); therefore, they will certainly continue to grow and transform, following the dynamics of the project.

1. Introduction

The 'Schools as Living Labs' (SALL) project is a European project gathering the expertise of 10 different countries to propose a new approach to Open Schooling. By adapting the principles of the Living Lab methodology, SALL supports schools in linking with their local communities to address locally relevant issues associated with the food system in all its dimensions (production, distribution, waste management, health, economy, etc.)

By participating in the SALL project, schools and teachers experiment with an open schooling approach aimed at making STEM teaching more relevant, systemic and inclusive for their students. SALL also helps students develop new skills and positive attitudes, and conceive learning science as a way to actively contribute to the wellbeing of the world they live in. Further, in the post-lockdown world, the SALL methodology is offering alternatives for schools to return to learning environments outside classrooms.

This deliverable presents the compilation and analysis of all materials produced to accompany the implementation of the SALL methodology during the first fifteen months of the project. This is a set of living resources that are generated according to the emerging needs (of the project, the teachers, or the National Coordinators) during the implementation of the methodology. They will continue to grow and evolve following the dynamics of the project. The present report (Deliverable D2.4 'Development of training and support materials for Schools as Living Labs') is therefore a snapshot in the fifteenth project month (M15) of an evolving and growing body of training and support materials.

After the present introduction, Chapter 2 analyses why this set of materials is important, which products represent each goal and what the expectations are concerning the toolbox that completes the whole methodology.

Chapter 3 presents a summary of the different ways in which all the resources have been built.

Chapter 4 gathers outcomes already presented in previous deliverables, along with new resources developed by teachers and National Coordinators, so that the present deliverable can serve as a guide to the tools that can be used for training and as a source of information for current and forthcoming participants of the implementation activities of SALL. We present the current state of resources produced by each country but also the possibilities for the evolution of the tools in the next two years. We also propose a training session for teachers using the available tools, based on the assumption of a short slot of available training time. It can be customizable and will allow future initiatives for the development of living-lab school projects to organize resources according with the needs of their public.

We hope that this document will be useful for any team that will engage in school projects in the context of SALL, and that it will inspire new propositions of tools and uses of the SALL methodology.

2. Why?

SALL is founded on a combination of three main themes in science education in Europe, which impact on the way in which involved actors will interact with their communities:

- Open Schooling: Encouraging schools (teachers and students) to work in cooperation with other stakeholders and to become agents of community well-being by creating new partnerships in their contexts.
- Living Labs: SALL takes inspiration (and tools) from the methodology of Living Labs and combines those with open schooling initiatives, allowing a user-centred approach in open innovation ecosystems, and involving multiple stakeholders in the co-creation process to integrate innovation processes in real-life communities and settings.
- Food System: The vast theme of the food system is perfect ground for combining Open Schooling and the Living Lab methodology, adopting at the same time a subject the European Union is working on through the FOOD2030 policy agenda. This subject covers the production, processing, distribution, preparation and consumption of food, as well as its disposal, and is an excellent area for STEM education directly linked to real life. Nevertheless, at the end of the SALL project, the living lab-based open schooling methodology will be open to application with any STEM-related topic.

Since the beginning of the project, the whole consortium has been developing tools to facilitate the implementation of the SALL methodology, by using different resources, both some previously existing and those produced for this project. This process has been reported in previous deliverables:

- D2.1 'Commented bibliography and relevant case studies' presents a set of basic resources to understand and integrate the concepts associated with the general Living Lab methodology.
- D2.2 'Co-creation workshops on applying living lab methodology to open schooling: methodology and results' presents the process of preparation, the outputs and the results of two participatory workshops that led to the production of the Living Lab Methodology of SALL.
- D2.3 'The SALL methodology' presents and explains the living lab methodology for open schooling proposed by SALL.
- D3.1 'Methodology for the engagement of school living labs with stakeholders' presents a roadmap offering suggestions for schools and National Coordinators on how to identify stakeholders, how to approach them, and how to create a sustainable connection with them.
- D3.2 'Practical guidance and training materials for the engagement of school living labs with stakeholders' aims to make the Stakeholder Engagement Methodology accessible and immediately usable by schools, through the production of practical guidance and training materials.
- And finally, D4.1 'School preparation materials and tools' includes all the training materials to prepare for the implementation of the living lab methodology in schools.

Based on the main goals of the SALL project (Table 1), we will explain why it is important to bring together all those materials in this deliverable.

Table 1. The main goals of the SALL project

Goal 1: Better connect schools to current research and the societal needs of the communities they live in.

Goal 2: Empower students to deal with problem solving on real societal issues, foster the development of 21st century skills that are essential to future careers and allow them to co-create solutions with research centres.

Goal 3: Research how the Living Lab approach has made an impact on students' awareness of and interest in scientific careers.

Goal 4: Collaborate with education policy makers on the further use of the Living Lab approach as a school-based methodology.

Goal 5: Design and implement a dissemination strategy that will ensure the effective dissemination of the project's aims, results and outcomes.

Overall goal: To always take into consideration inclusion in connection to both gender and students' social and ethnic background, and involve representative stakeholders of the communities the schools belong to.

One of the operational objectives of the project is "To co-construct, within the stakeholder community, the SALL framework and methodology for living-lab-based open schooling more generally and in particular with a focus on the food system theme, basing this on existing knowledge and best practices and enabling its application in practice through appropriate training and support materials." This objective has been addressed since the first project month, and the relevant work will go on throughout, up to the final day of the project. Even if the framework is a concrete methodology (the Living Lab approach), the ways in which every participant of the project appropriates and transforms it can vary considerably, therefore, this compilation of the training and support materials is necessarily a living document. The invitation is to use it as a starting point to develop new ways to implement this methodology, and then to share those with the community of SALL schools and school projects through the SALL Community Platform specially designed for it (<https://www.schoolofthefuture.eu/sall>).

In this deliverable, we present three different kinds of materials:

1) The general tools of the project, planned generally to be used by every National Coordinator and accessible for everyone in the project website and the SALL Community Platform. These materials have been presented in previous deliverables.

2) Tools produced by National Coordinators and/or Work Package leaders following needs that have arisen in the course of the project. Some of those materials are available in local languages and are reachable for everyone through the “Library” section of the SALL Community Platform.

3) Tools that have been produced and used locally by National Coordinators as tools in their day-to-day work with school communities in their countries, which however are not intended as ready-to-publish materials. These materials are available in the online shared workspace of the SALL consortium on the BSCW platform; they can become available for inspection following a relevant request to the coordinator of SALL.

The third category above consists of evolving materials which may progressively transform into tools of the second category, based on the emerging needs of the project.

Following the main goals of those materials, we have divided them into four groups (Figure 1):

- materials used to inform about the project;
- materials used to engage participants;
- materials used to empower actors;
- materials used to implement the methodology.

All those materials will be presented in detail in section 4.

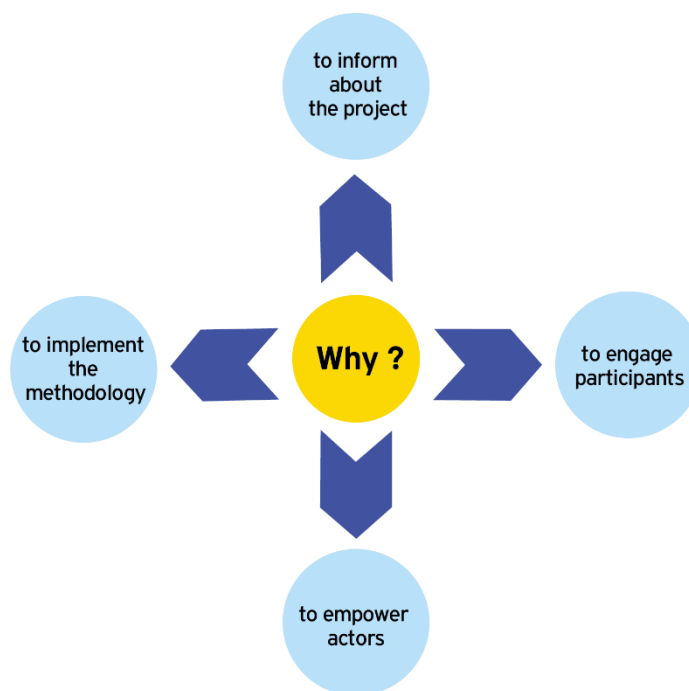


Figure 1 – Why?

2.1. To inform

At the beginning of the SALL project, it was clear that a strong way to achieve the appropriation of the methodology was to ensure that every consortium member was aware of the implications, the methods and the basics of the methods that were going to be used. By informing all the consortium members about Living Lab bibliography and cases, it was easier to engage them in the participatory process to come. It was also a goal to start from the same perspective. So, the production of common resources and tools to inform about the project was mandatory. The documents and resources used to inform about the project are part of the deliverable D2.1:

- The commented bibliography and relevant case studies: They allowed National Coordinators and other members of the consortium to gain awareness about the methodology and feel comfortable during the discussions that led to the design of a participatory methodology to implement living lab projects in the schools.
- The pitch document: It is a communication tool to invite schools and stakeholders to participate in the piloting phase of a new experimental methodology.

The pitch document has been translated, modified and adjusted for each country based on each NC's needs.

2.2. To engage

One important detail in the process of attracting schools, teachers and societal actors into the project is effectively to communicate "What's in it for me?". Potential participants (teachers, students, societal actors), due to their other existing commitments, may be reluctant to participate actively in the implementation of a totally new methodology which appears to generate new commitments and may have uncertain outcomes. The best way to engage participants is then to communicate the advantages of being part of this European project effectively, which gives participants the opportunity to share experiences with and learn from other schools, students and stakeholders, as well as to participate in the development of a new methodology and the important Open Schooling strategy of the European Commission, while working on the theme of food.

To this end, the consortium developed a number of tools which have been adjusted and used by National Coordinators at the local level. The materials that encourage participants' engagement with the SALL project are the following:

- Deliverables D3.1 'Methodology for the engagement of school living labs with stakeholders' and D3.2 'Practical guidance and training materials for the engagement of school living labs with stakeholders' provide suggestions for schools and National Coordinators to identify, initiate, and create sustainable connections with societal actors so that they will participate in SALL. The first one provides a Roadmap suggesting an approach consisting of elements such as a Step-By-Step process, Questions to Discuss or to Think About, and Examples and Tips for each stage of approaching the stakeholders. The second one aims to exemplify the stakeholder engagement

methodology of SALL and make it accessible and immediately usable by schools through practical guidance and training materials.

- Powerpoint Presentations about the SALL project: As for the pitch document, each country developed different presentations to promote the project. Some countries produced different versions according to the audiences to be shared with: one presentation for teachers, another for societal actors, and even a different one for students. The principal aim of these slide presentations was to convince different partners to engage with the project showing the expected outcomes, the advantages and the great possibilities that could follow after their involvement with the project.
- Powerpoint presentations about the food system: In order to facilitate the choice of a subject to treat while using the SALL methodology, some National Coordinators prepared general training materials about the food system and the possibilities offered by this theme in STEAM education. Some of the countries also shared materials and other resources that will be presented in the next section.

2.3. To empower

Once partners are convinced about their involvement in SALL, it is needed to ensure their capacity to engage and convince others: other teachers and school staff, local actors and, of course, students. To do so, the idea is to facilitate the use of multiple possibilities offered by the methodology: the exploration of themes and ideas, encouraging boldness to look for new ways of doing things, the materialisation of those ideas through prototypes, etc. Some of the mechanisms used to encourage empowerment were:

- The Masterclasses: before the first co-creation workshop that contributed to the development of the methodology (cf. Section 3.1 further below), four masterclasses took place online to give the opportunity to all consortium participants to exchange directly with people involved in this kind of projects, as a mean to inform, but also to engage. Now, the videos of the masterclasses are valuable resources to give to all the partners the opportunity to hear real experiences from participants that have experienced Living Lab projects: a student, a researcher, two members of the staff of a cultural centre that works with the local community, and the director of a Living Lab space. Those videos are not only informative but also very inspiring.
- Resources on the food system: in several countries, a real need to discuss more about the possible contents of the living lab projects appeared very early in the dialogue with teachers and schools. National Coordinators found a solution to this need through presentations, training sessions, repositories of resources (like padlets or shared folders), etc. This also opened a new source of exchanges among the members of the consortium.
- Ideas of prototyping: One of the more demanded tools for the second co-creation workshop was to produce materials to support the prototyping phase of the Living Lab cycle. So, during the second workshop, a shared document with examples and methods to prototype was produced. Following that, in the second version of the Roadmap (cf. Section 4.1.5) special attention was given to the experimentation section, going more deeply into the possibilities for the production of prototypes.

2.4. To implement

Despite the challenging situation due to the sanitary restrictions imposed by the COVID-19 pandemic, the engagement of the different participants (within the consortium, but also of the new partners) allowed plenty of learnings that will keep evolving up to the end of the project. Some of those learnings gave also the opportunity to enhance the quantity and the quality of the materials produced. Some of those tools facilitated the work of newcomers, which certainly will reflect on the character of the living lab projects to come.

- Examples of other living labs projects: The examples are a useful tool to use very carefully. It is one of the most demanded materials: for better understanding the methodology, for being inspired, for deciding if the choice of a certain idea is adequate or not. It is possible that if the examples presented are too awesome, it could intimidate teams with simpler living lab projects. So, the selection of examples is a very delicate task, because while awesome projects also deserve to be known, we should keep in mind to also choose simpler projects as good practices.
- Planning templates: The Israeli National Coordinator took the lead in the development of templates for teachers and students as a useful tool to follow the advancement of the project. The first version was in Hebrew, which was later translated and is now used by other countries.
- The SALL Community Platform: Finally, the place to share, exchange and follow the production and use of those materials is the Community Platform of SALL, which was designed, developed and tested in the first project year, and is now public and increasingly used by teachers and schools developing living lab projects (<https://www.schoolofthefuture.eu/sall>). We expect that the appropriation of the platform by teachers and schools will result in the rise of new tools and materials produced directly through the joint work of teachers, students and societal actors involved in SALL projects.

3. How?

The production of these tools has followed mainly three ways, one of which was entirely planned, while the other two emerged along the way. The first was the co-creation workshops, that had the production of these tools as their planned outcome. The other two paths were a consequence of the evolutive character of the methodology itself: the informal weekly exchanges between National Coordinators, also known as Case Clinics, which are now part of the methodology, and the natural emergence of local and specific needs to complete the methodology.

3.1. Workshops

A full description of the workshops is presented in deliverable D2.2. Here we summarize the main features of the co-creation process.

The first Workshop was conducted online for 3 days, on 25, 26 and 28 January 2021, with the aim to work on the development of the SALL Methodology. The workshop was conceived and facilitated by the TRACES team, including the Association's staff and the two Living Lab experts, Malvina Artheau and Didier Laval.

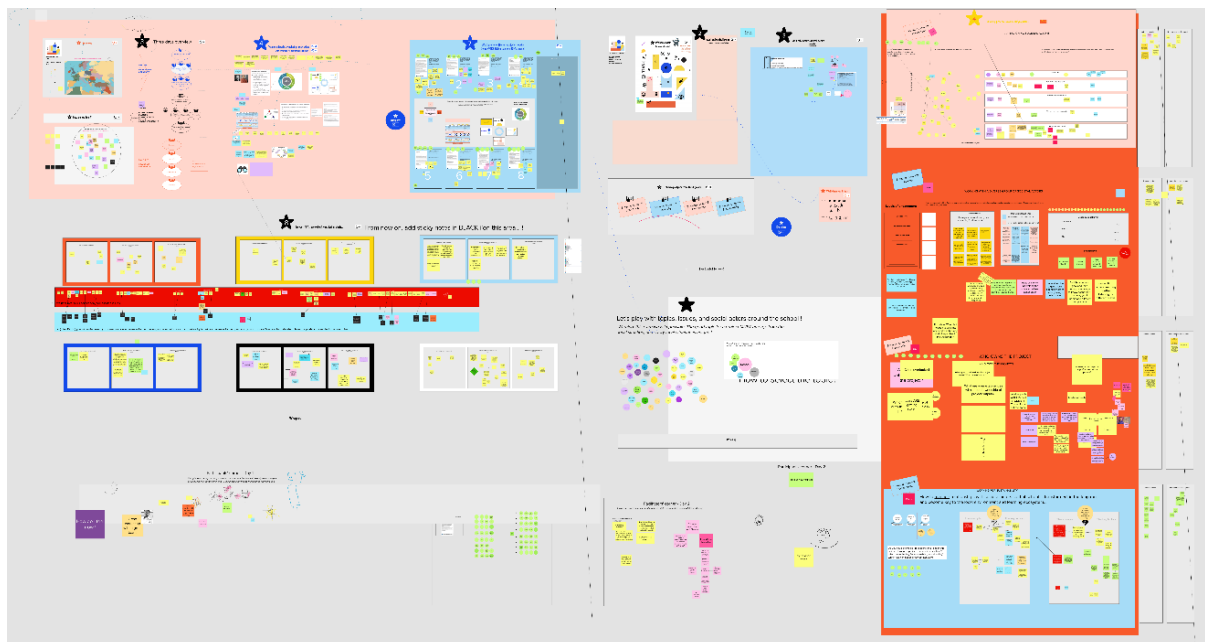


Figure 2 – Workshop 1 visual collaboration space on MURAL

The workshop addressed these three basic questions:

- a) What are we heading to?
- b) How do we get started? How do we set up?
- c) How do we implement (the methodology)?

After 6 months and based on a continuous monitoring of the process, it was agreed that the following Workshop would be devoted to working collectively on the practical production of tools, documents,

guidelines, etc. that would best support teachers, schools, societal actors, and National Coordinators to engage in the next phase.

The second Workshop was organised in 4 days, from 14 to 18 June 2021, combining synchronous work and self-organisation groups. Several meetings were held before the workshop between Work Packages to establish the main goals, the methodology to be used, and the tools that would allow the interaction and productivity that would be needed to reach those goals. This workshop was fully dedicated to identifying the top priority needs of National Coordinators and, in a very collaborative way, give answers to them through fully ready-to-use materials and tools.

The work in small groups was very effective, and it produced outputs to fulfil National Coordinators needs.



Figure 3 - Systematization of the Workshop 2 outcomes

The topics developed were:

- Societal actors workshop: How to plan a workshop for teachers on how to engage stakeholders/societal actors in living lab projects. The workshop will be led by National Coordinators.
- Involvement of societal actors
- Prototyping
- Templates for the planning and implementation of projects
- Engaging materials
- National communities of practice / Case Clinics
- Examples

3.2. Case clinics

After the first workshop, a big challenge for National Coordinators was to guide schools in the implementation of a methodology that themselves were learning on, in a period where nothing was easy. So, the Methodology Work Package proposed a weekly online appointment to exchange about struggles, difficulties and questions about methodology implementation in all the participating countries. There was no obligation to participate, and even if there was a proposed scheme, informal conversations took center stage fairly quickly.

In the beginning, the Case Clinics were considered as a place to assist National Coordinators, but in reality, they became a masterpiece for feedback about difficulties on methodology implementation and tools needed, and thus a key milestone in the co-creation process. The current methodology includes case clinics, to be run at local level, as part of the good practices for the implementation of living lab projects in the school communities.

3.3. Local needs

Following the implementation of the methodology, National Coordinators and other project partners identified the need to develop new instruments to facilitate their experience. Such instruments in certain cases were shared with other partners and constituted a great enhancement of the co-creation process of the methodology. From the sharing of experiences up to how to engage a stakeholder to the implementation of students' templates, the local production of tools is one of the best outcomes of this co-creation experience.

4. What?

4.1. Previous deliverables

At this stage of the project, several deliverables have been produced to support the implementation of the SALL methodology in schools and communities. These resources support the schools, and more specifically the teachers, as methodological resources, guidelines to develop each phase of the approach with the students, to be inspired by other examples and good practices and to attract social actors, among others.

The deliverables are living documents that are in continuous update as they are refined, improved and completed along with the project progress. Consortium members identify needs, difficulties and barriers that are overcome with improved or new resources.

In the table below, we list the resources included in the submitted deliverables that aimed at supporting teacher training and the implementation of SALL projects in schools. In addition, there are other deliverables in progress oriented to the organisation and support of the National Coordinators and the consortium members to facilitate SALL to reach and support schools. The selection of these deliverables is based on usefulness for SALL participants to make the most of their experience.

Submitted deliverables	Support and training materials for schools
D1.2 The SALL community of schools exploring living-lab-based open schooling	The SALL pitch to schools
D2.1 Commented bibliography and relevant case studies	
D2.1 Commented bibliography and relevant case studies	Examples of Living Labs (padlet) SALL significant cases (padlet)
D2.2 Co-creation of the SALL Framework – co-creation workshops	Case clinics
D2.3 The SALL Methodology	Roadmap
D3.1 Methodology for the engagement of school living labs with stakeholders	Stakeholder Engagement Workshop (PowerPoint presentation)
D3.2 Practical guidance and training materials for the engagement of school living labs with stakeholders	Stakeholder Engagement Workshop (PowerPoint presentation)
D4.1 School preparation materials and tools	SALL school project examples

Below, we briefly describe how these resources support the implementation of the methodology in schools, involving teachers, students and societal actors to pursue a true living lab experience.

4.1.1 The SALL pitch to schools

The 'SALL pitch' is a four-page document that has been developed in the context of WP2 and WP3, i.e. the methodological Work Packages of SALL, to provide the basic message which can be used to familiarize National Coordinators and school communities with the kind of activities that the SALL vision and approach entail. The pitch consists of precise answers to the following questions that may be asked by all those potentially interested in getting involved in SALL activities:

- What is SALL: Schools as Living Labs?
- What does "living lab" mean?
- What do we mean by "school"?
- Who are the "other societal actors"?
- What does SALL aim to achieve?
- What does the "food system" theme mean?
- Which kind of school project?
- What are the requirements of these school projects?
- What are the main benefits of participating?
- How do we know that our project has worked?
- What do we want to know from students?
- What do we want to know from teachers, school's administration, and other societal actors?
- Can I participate in spite of the COVID-19 pandemic?
- Is that all?

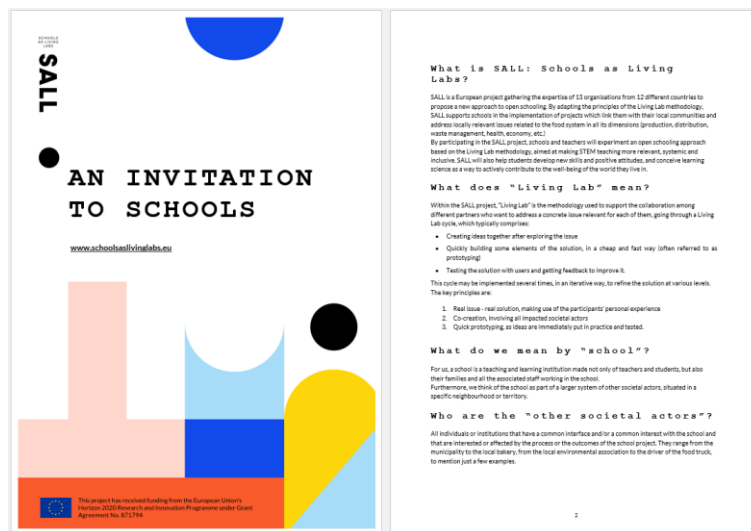


Figure 4 – The pitch document

This document is very useful for teachers because it helps them to understand the overall methodology of the project, to identify what is expected from schools and to focus on what kind of projects they can develop in schools.

National Coordinators can use this document to invite new schools to participate in SALL. The document summarises the main ideas of the project and answers the most common questions that teachers ask themselves before getting involved in such a project.

4.1.2 Examples of Living Labs

As part of the methodological framework of the project, a literature review has been carried out to define the living lab methodology and its main characteristics. As a result, in deliverable D2.1 there are some relevant documents with examples highlighting one or more specific aspects of the living lab approach, for example the type of resource, the most important aspect of each example, case summary and main living lab elements.

A padlet containing references, examples and tools that can be useful to learn more about the living lab methodology is also available here: https://padlet.com/asso_traces/32mdj8jw5w6pu05v

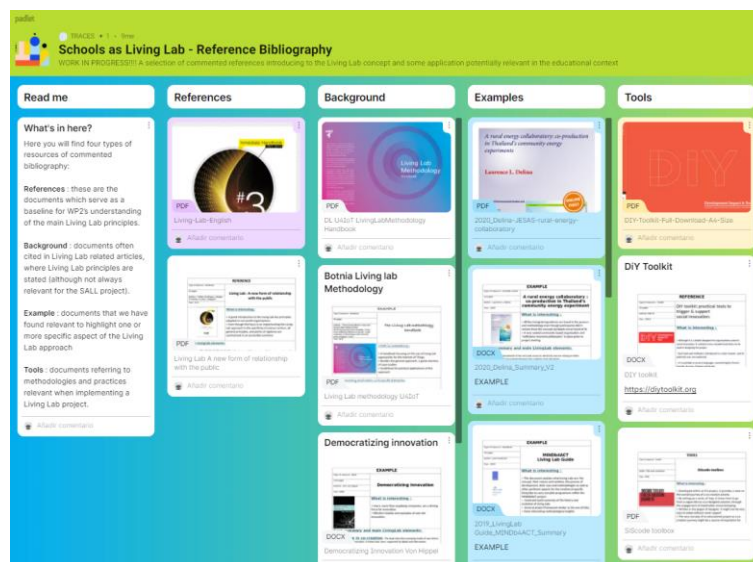


Figure 5 – SALL Reference Bibliography

All these resources on the living lab methodology are very useful for the NC to introduce teachers to the SALL methodological approach and to present them with concrete examples of the methodology.

4.1.3 SALL significant cases

In order to help National Coordinators and schools, a number of case examples of school projects with methodologies close to living labs have also been collected in WP2 and can serve as inspiration for defining SALL projects in schools. The SALL methodology has several elements in common with the proposed project examples and can therefore help National Coordinators and teachers. Among these projects are some examples of school projects initiated by SALL members in the framework of OSOS and other European funded projects.

Another padlet is also available to collect this information and is constantly being updated. This padlet is available here: https://padlet.com/asso_traces/ggchondbggk6fxkk

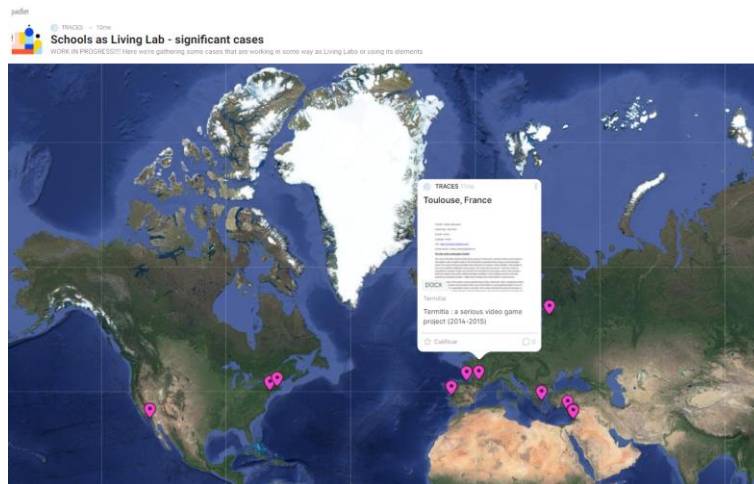


Figure 6 – Significant cases

4.1.4 Case clinics

In order to support the National Coordinators in the process of guiding the schools in the application of the SALL methodology in the complicated situation of the pandemic and also in a preliminary phase of the project, "Case clinics" were created. WP2 set up a weekly online meeting to exchange ideas, concerns, difficulties and questions on the application of the methodology. These voluntary virtual meetings were very well received among the National Coordinators.

At first, the "Case clinics" were considered as a place to assist National Coordinators, but in reality they became a masterpiece for feedback about difficulties on methodology implementation and tools needed, and thus a key milestone in the co-creation process. Therefore, the "Case clinics" are now another resource for schools to generate co-creation meetings among students and societal actors, for example.

Another example of the use of this methodology can be in teacher training. If National Coordinators conduct teacher training, they can propose these "Case clinics" so that teachers from the same school or from different schools can share their concerns, doubts or difficulties met in the implementation process.



Figure 7 – Invitation to the Case Clinics

4.1.5 Roadmap

As a result of the co-creation workshops organised by WP2 in January and June 2021, a complete document has been created describing in detail all phases of the living lab methodology. It is a very illustrative and synthetic document that helps teachers to carry out the project. This document is the main guide for teachers because it defines the methodology step by step, provides guidance on possible strategies to address each phase, on the generation of ideas with students, on the co-creation process with social actors, etc.

This Roadmap presents the final methodology, which is an adaptation of the living lab approach to the school context. The aim here is to run living lab projects in schools, involving students and other local actors in a user-driven innovation process. This approach has the potential to take open schooling to a new level by increasing the involvement of local actors and the influence of students on the local environment, in collaborative work on innovative solutions.

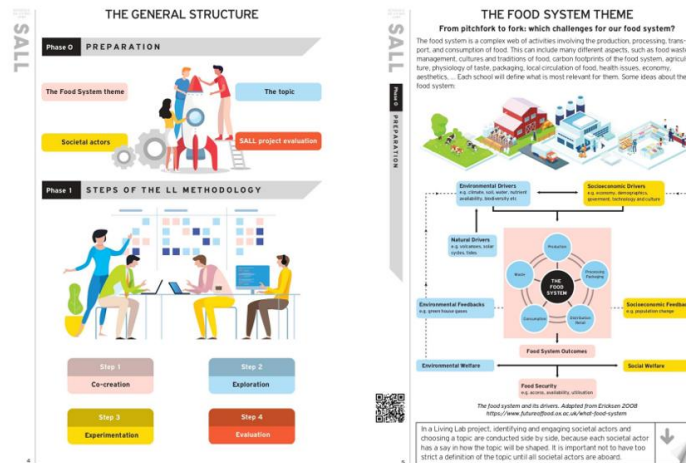


Figure 8 – The roadmap

4.1.6 Stakeholder Engagement Workshop (PowerPoint presentation)

The aim of this presentation is to exemplify the stakeholder engagement methodology of SALL and make it accessible and immediately usable by schools, through the production of practical guidance and training materials addressed to members of the school communities on how a school living lab activity can involve relevant stakeholders.

This guidance and training content has been the result of co-design within the community of SALL in year 1 of the project, during the first cycle of pilot implementation of school activities.

The presentation is really designed for National Coordinators to train communities, schools and teachers, but indirectly teachers and schools can use the same material to guide their collaboration with project stakeholders. There are examples of activities, types of participation and reasons for involving stakeholders and all of this is very valuable for schools.

Thanks to this presentation, teachers and communities should be able to:

- apply the method of stakeholder engagement;
- identify potential stakeholders;
- conduct activities to involve stakeholders in SALL projects.

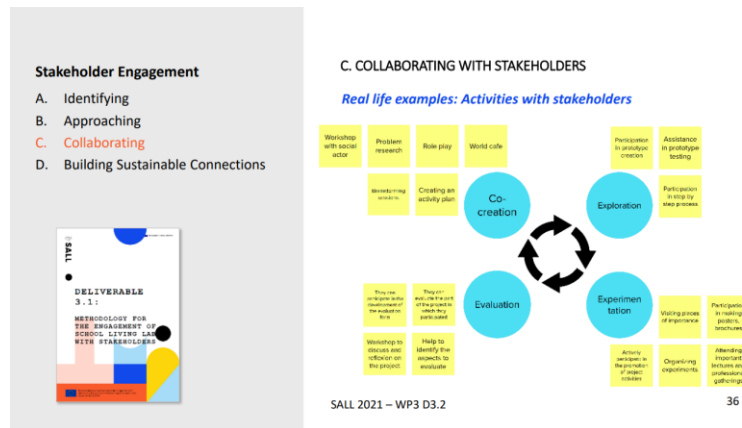


Figure 9 – Stakeholder Engagement Training

4.1.7 SALL school project examples

The National Coordinators have identified some examples of projects -best cases- so that schools can be inspired and clearly understand the methodology. These examples will describe the different phases followed in the Living Lab methodology. A first effort has been made to identify projects that meet the main characteristics required in SALL, which are: starting from a real problem, involving agents from the environment, prototyping a solution, and, during the first year and partly in the second year of SALL, focusing on topics related to the food system.

Example of a school project from PORTUGAL (1)
<p>1. Title and description of the school project</p> <p>Vegetable Selection and Storage: A New Food Concept</p> <p>A problem of malnutrition has been identified in Mozambique, specifically in Ponta de Ouro Marine Reserve. The project embraced the selection, conservation and preparation of packages of dehydrated vegetables (corn, cassava, beans, moringa and peanuts), that contain the widest range of nutrients possible, easy to produce and prepare, and enriched with <i>xima</i> (ground corn flour that's turn into a sort of porridge, eaten all over sub-Saharan Africa). The purpose was to improve the cognitive, intellectual and motor development of children and the community in general.</p>
<p>2. What makes this project an open schooling project?</p> <p>A very real problem was identified (malnutrition, in particular in school children) and the school community was engaged in trying to find a solution, with a partnership with a Faculty that helped to select the vegetables to include in the food packages, as well as to test the best packages. Moreover, the entire community was engaged in a communication plan to raise awareness for the importance of a nutritional-rich diet.</p>
<p>3. Are there Living Lab elements in this project?</p> <p>Yes, as the stakeholders were engaged to find the best solution with the school and local community, through lab analyses, products testing, etc.</p>
<p>4. Which local stakeholders were involved in this project?</p> <p>[School] Escola Portuguesa de Moçambique</p> <p>[School] Escola Matatuine</p> <p>[Faculty] Faculdade de Agronomia e Engenharia Florestal da Universidade Eduardo Mondlane (UEM)</p> <p>Not local:</p> <p>[Faculty] Instituto Ricardo Jorge (INSA, Portugal)</p>

Figure 10 – Project examples

These project examples are very useful for teachers as they serve as inspiration to start designing the project in their schools.

4.2. Locally produced by National Coordinators

Since the beginning of the project, the SALL consortium has elaborated several materials and resources to transfer the SALL methodology to the real classroom settings, which we have reviewed in section 4.1. This material is fundamental and complete. At the same time, the different realities of the countries where the project is implemented require an adaptation and localization of some of them, in addition to the development of new resources for the national context. Also, in some cases language is a barrier for participants to understand the SALL approach, or cultural specificities require an adaptation of the methodology. In these cases, National Coordinators adapt and translate all or part of the materials developed in the project.

During the regular monitoring meetings, National Coordinators have shared the resources, materials and strategies developed in their countries since they may be very useful for all National Coordinators. Country-specific materials have been shared in the BSCW online workspace of the SALL consortium and reused by other National Coordinators if they have found them interesting. In some cases, when the consortium has considered a material relevant enough for the overall project, it has been translated from the original national language into English. Refined versions of such materials in the national languages are shared in the public Library section of the SALL Community Platform. The following table summarizes the resources translated and adapted by each NC, based on the original resources generated in the project.

COUNTRY	PITCH	PRESENT	FOOD SYS	PLAN	OTHER	RESOUR	CONS
Croatia	X	X			X		
Cyprus	X	X	X		X	X	X
Estonia	X						X
France	X	X	X	X	X	X	
Greece	X	X	X	X	X	X	X
Israel	X	X	X	X	X	X	X
Portugal	X	X	X		X		
Serbia	X	X		X	X		X
Spain	X	X	X	X	X	X	
The Netherlands	X	X	X		X	X	

Table 3. Materials locally produced*

*PITCH: translation of the pitch document; PRESENT: presentation of the Project; FOOD SYS: presentation of the Food System; PLAN: planning template; OTHER: other documents presenting the Project; RESOUR: resources; CONS: consent forms.

In the following sections we briefly present a description of the translations, adaptations and new resources generated by each National Coordinator.

4.2.1 CROATIA

Translation of the pitch document

We translated the pitch document and sent it via e-mail to the school principals who were supposed to approve the implementation of the project in their school. The document gave them a rough picture of the project to assess the resources and opportunities for the school to participate in the project.

Other documents presenting the project

To conduct a joint workshop of all teachers who will participate in the project, we translated the protocol for National Coordinators to explain in the best way the process of data collection and implementation of questionnaires.



Figure 11 – Croatian student in SALL

Other resources

Methodology for the engagement of the stakeholders has been translated into Croatian to make it easier for the National Coordinator to conduct a workshop with teachers working on the project. Also, the document will be used to facilitate the translation of another document and the creation of a PowerPoint presentation.

4.2.2 CYPRUS

Translation of the pitch document

We used it as a pitch document for the open call for the schools. For the open call of the second year, we modified the evaluation section and added a direct link to the projects' examples on the website for reference.

Presentation of the project

We created two presentations for the project: one for the teachers (participating in workshops, seminars etc.) for dissemination and training purposes, and one for students to introduce the project and some examples to them. The latter presentation was used mainly for the brainstorming sessions of living labs in which we were asked to participate.

Consent forms

We created two consent forms; one for teachers and one for students (to be signed by their parents/guardians). The consent forms were created based on the regulations followed in Cyprus.

Other documents presenting the project

We created a newsletter at the early stages of the first year's implementations in order to showcase some examples of projects to teachers and also to provide useful links to them.

Other resources

We recorded one of our online presentations, for teachers that were unable to participate to have access to it.

4.2.3 ESTONIA

Translation of the pitch document

We created a version of the call for schools document. We modified it a little, but mostly it remained the same. We were in lockdown and social distancing, so we did not have any face-to face meetings in the beginning of the project when we shared the document.

Presentation of the project (ppt)

Estonians speak English quite well, so there was no need to translate it. We used the English presentation (showed briefly and shared) during zoom calls.

Presentation of the food system

Estonians speak quite good English so there was no need to translate it. We used the English presentation (showed briefly and shared) during zoom calls.

Planning template

Again, we did not need to translate, because teachers/school management has a good command of English.

Consent forms

Translated the SALL version.

4.2.4 FRANCE

Translation of the pitch document

We translated the general pitch in French, to present the project and invite schools to participate. People find it a little too long, and they prefer us to present it than read it. We produced a shorter version, in the beginning thinking of youngsters, but in the end, also adults prefer this one.



Figure 12 - Teachers training in France

Presentation of the project (ppt)

We designed a general presentation talking about what the project is, which the school's engagements are, and a proposition of calendar.

Presentation of the food system

As a part of the general project presentation, we introduce some examples of possible themes for a SALL project

Planning template

The templates produced during Workshop 2 translated in French.

Other documents presenting the project

Simplified pitch (English, French). As the initial pitch was too long, we wrote a shorter document.

Other resources

National document on food system education. The Ministry of Education in France published a general document called "Vademecum de l'éducation à l'alimentation".

Padlet: other case studies. This padlet and the next one are part of the D 2.1 : 'Commented bibliography and relevant case studies'; in this first one there are some examples of living live like projects; the second one is about literature in Living lab methodology. https://fr.padlet.com/asso_traces/ggchondbggk6fxkk

Padlet: Texts in LL methodology. https://fr.padlet.com/asso_traces/32mdj8jw5w6pu05v

Padlet: Educational resources for teachers. It is a padlet with plenty of different resources related with food system (in different languages) to extract ideas of thematic, but also of methodologies of work.

4.2.5 GREECE

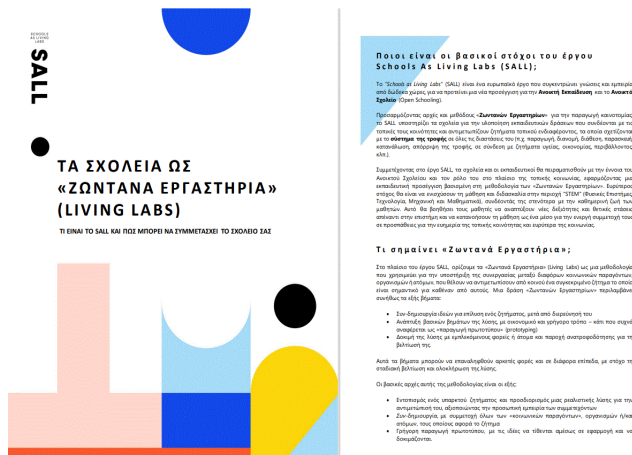


Figure 13 – Pitch document in Greek.

Translation of the pitch document

An adjusted to the country context and translated version of the 'SALL pitch' document, to inform schools and educators and invite them to take part in the implementation activities of SALL.

Presentation of the project

Introduction to the SALL project, its approach, objectives and opportunities for school communities, used at various instances for communication and training purposes in the context of conferences, workshops, etc.



Figure 14 – SALL presentation in Greek

Presentation of the food system

Part of the SALL presentation mentioned above.

Consent forms

The consent forms of the project have been translated into Greek.

Other documents presenting the project

A shortened and translated version of the SALL Roadmap.

Other resources

A slides presentation and a video resulting from that, presenting the SALL project, its approach, objectives and opportunities for school communities. The aim of the video is to address teachers in particular, making them notice and remember SALL, and helping them see the living lab approach as an opportunity fully aligned with current and topical innovations such the "Skills/Competences Labs"

recently introduced into the primary and secondary school curriculum in Greece, or the Generation Next STEM Initiative.



Figure 15 - SALL resources in Greek

4.2.6 ISRAEL

Translation of the pitch document

SALL project brief – ISRAEL. An edited and translated version.

Presentation of the project

- SALL for iSTEAM teachers – ISRAEL. A presentation of the SALL project for new teachers, in the framework of the ORT iSTEAM project (year 2).
- Introduction to SALL for schools. A presentation of the SALL project for new teachers (year 1).
- 4 Stages of a Living Lab Project. Presentation that illustrates graphically the 4 stages of a living lab project. The goal is to help the teachers to understand the flow of a LL project.

Presentation of the food system

Teaching Resources for SALL Teachers on FOOD. A Padlet board with a variety of materials (teaching materials and other information) on Food. including: healthy eating, food waste, packaging, urban agriculture, food engineering, environmental aspects of food, and food sciences.

Planning template

Project initial planning template ISRAEL.

Consent forms

Consent form ISRAEL.

Other Resources

- Workshop_Collaboration with Stakeholder. A workshop for teachers, in which they work on upgrading the interaction and collaboration with the community stakeholders they've already chosen in advance.
- Workshop_Living Lab Methodology 23022021. A workshop on understanding the LL methodology - the four stages of a Living Lab project and the meaningful collaboration with community stakeholders.

- Workshop_new teachers in SALL (national). A workshop for new teachers that was given to teachers outside of the ORT Israel school network.
- Workshop_project initial planning. A workshop that was done with a group of new teachers (several teachers from each school), aiming to create an initial plan for their schools' LL projects.
- Assignment_project initial planning. An assignment for teachers at the beginning of their work in the SALL project. They are given guidelines for discussion with their teams and filling-in of the project initial planning template.
- Assignment_LL case study analysis. An assignment for teachers as a part of a workshop on the LL methodology. The teachers are asked to analyse a case study from year 1 in Israel and identify the different LL stages.
- Assignment_Thinking about community stakeholders. An assignment for teachers as a part of a workshop on the LL methodology. The teachers are asked to think of community stakeholders which might be relevant to their initial project ideas and to allocate them in one or more of the four LL stages.
- Media kit for schools in Israel. The main guidelines for teachers regarding the management of publication of their school LL projects. An edited and translated version.
- Tools and Activities – translated. Tools and activities for teachers - to be used in different stages of the LL project. The materials, originally taken from other European projects, were selected especially in the context of the SALL project, especially the ones relevant when communicating with stakeholders. All the materials were translated into Hebrew.
- Workshop_project topic and target audience. A workshop that focuses on a methodology that helps students to select and hone their project topic, as well to identify the target audience (which in turn suggests relevant stakeholders from the community).
- Workshop_project topic and target audience – appendix. A collaborative presentation for teams of teachers, to work on during the workshop
- Workshop_SWOT analysis for students (and teachers). A workshop on SWOT analysis methodology and how to use it with students in different stages of the school LL project. As a part of the workshop, the teachers were asked to fill in the SALL pre-post evaluation questionnaires.
- Living Lab Tools and Activities for Schools. A Padlet board with a variety of materials that can help the teachers in different stages of the PBL process.
- Workshop_Towards a career in STEM. A short workshop for teachers and entrepreneurs on promoting STEM career for students
- Lesson Plan (STEM career) 1_The Story of My Career. An introductory meeting with an entrepreneur / community member and the skills required of him in the position. The unit includes an explanation of storytelling
- Lesson Plan (STEM career) 2_Becoming an Entrepreneur. A session that deals with self-examination of students' skills and strengths and their connection to the skills required for an entrepreneur in the field of STEM
- Lesson Plan (STEM career) 3_My Autobiography. Empowering students by drawing a personal roadmap for personal integration in STEM areas.

4.2.7 PORTUGAL

Translation of the pitch document

Translation to Portuguese of the pitch document, to share with teachers when inviting them to the project.

Presentation of the project

- Presentation to teachers of the general steps of the project
- Webinar about living-labs in a school context

- Webinar detailing the four steps of the living-labs in a school context
- SALL leaflet produced for teachers attending the Open Days (Oct 16 and 17: presentation of Pavilion of Knowledge educational program)

Presentation of the food system

- First part of a 6-hours training session on food systems
- Second part of a 6-hours training session on food systems

4.2.8 SERBIA

Translation of the pitch document

An introductory document describing the outline of the project (name of the document: Opis SALL projekta za škole)

Presentation of the project

Presentation describing the scope, thematic domain and the roles of all the actors in SALL (name of the document: SALL sastanak u školama)

Presentation of the food system

Brief introduction to food systems was part of the abovementioned presentation (name of the document: SALL sastanak u školama)

Planning template

Action plan template, containing short description of a project and then problem it is tackling, then providing a table with activities - roles/responsibilities and timeframe (name of the document: Akcioni plan SALL OŠ Petar Kočić Indija)

Other documents

Several documents containing texts for presenting the project to wider audiences:

- Three documents for schools in focus and wider communities describing the project
- One document reporting about the schools' presentation event.

Consent form

The consent forms are made for parents and children, for the participation in the project with all its activities (evaluation research included) and for using of photo and video materials, as well as other products made during the work on SALL.

4.2.9 SPAIN

Translation of the pitch document

SALL project brief - Spain

Presentation of the project

A presentation of the SALL project for new teachers

Presentation of the food system

Food system is introduced in the presentation of the project

Planning template

Template to support teachers in defining the general structure of the project

Roadmap (short version)

Project roadmap describing the methodology in detail, serving to introduce the project

Project template for students

Template that illustrates graphically the 4 stages of a living lab project

Presentation of the stages of the project

Presentation of the methodology, specifying the actions required at each stage of the project

Event with societal actors

Description of the event with social agents and schools

Call to schools

Mail to recruit new schools.

4.2.1 THE NETHERLANDS

Translation of the pitch document

Translation of the pitch document

Presentation of the project

Two workshops were conducted: one to teach the teachers about the SALL methodology, and another to teach teachers how to find and engage societal actors in their projects. This second workshop is an almost literal translation of the workshop included in D3.2.



Figure 16 – SALL presentation in Dutch.

Presentation of the food system

This was part of the workshop about the SALL methodology mentioned above.

Consent forms

Translation of the SALL forms.



Figure 17 –Food System presentation in Dutch.

Summary of stakeholder engagement methodology D3.1

Summary of deliverable D3.1

Webinars to find new schools for the SALL project

There were webinars in January and September 2021. Their goal was to explain what SALL is, in short explain the methodology, explain what is expected of the schools that decide to participate and what schools gain from participating, and ultimately get the schools to join the SALL project.

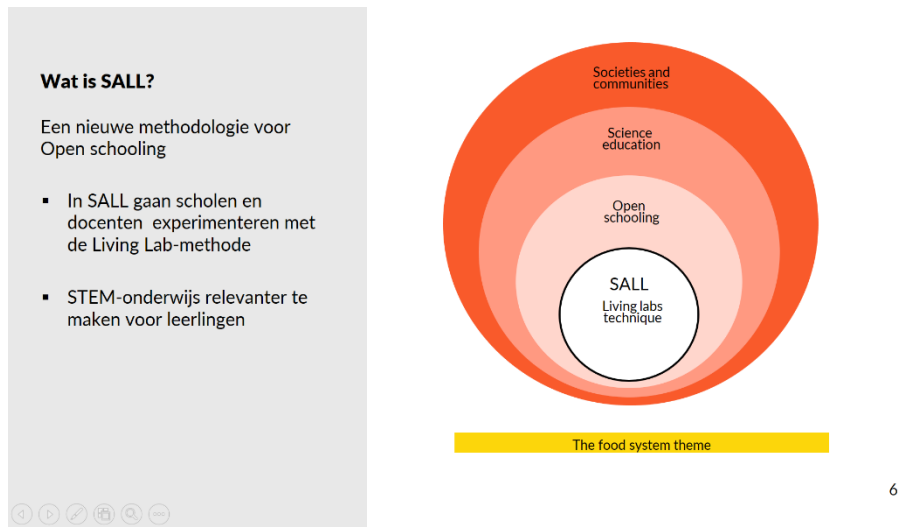


Figure 18 – Webinars to find new schools for the SALL project.

Template for SWOT workshop

Used to perform SWOT analyses online in Mural.

Tool Focus schools Stakeholder-Issue relation

This tool was used to illustrate how finding stakeholders can influence the issue at hand and vice versa.

4.3. Teacher training: an example

As we mentioned earlier, the engagement of schools and societal actors can be an issue due to lack of time and multiple commitments by teachers and other stakeholders. While complete training schemes have been produced by SALL (e.g. on the engagement of societal actors, as presented in the WP3 deliverables), on the following page we propose a possible solution for a quick (120 minutes) training for teachers, which can present the basics of the SALL methodology when there is not more time available, and which can easily be adapted for each context. The ideal time would be 4 hours or even more, but this serves as an example of the possibilities for customization for a first training when available time is sparse.

INDICATIVE PROGRAMS FOR TEACHERS TRAINING IN THE SALL METHODOLOGY

2 hours training



Title	Duration (mn)	Description
▶ Welcome	5	Welcoming all participants and announcing the programme of the day.
▶ Icebreaker	5	A quick exercise for all participants to wake up and meet, with a loose relationship to food system. By pairs participants have 5 minutes to present themselves to each other and state their favourite food, as well as their least favourite food.
▶ General presentation of SALL	15	A general presentation of the SALL project, followed by a short session of questions and answers.
▶ Food system mapping	20	Participatory activity: mapping all areas identified by participants as part of the food system topic.
▶ The SALL Living Lab methodology	20	Presentation of the SALL Living Lab principles and 4 steps, followed by a short session of questions and answers.
▶ SWOT Analysis	20	Participatory activity: in small groups, participants identify the main strengths, weaknesses, threats and opportunities that this methodology would have for their own classes and schools.
▶ Examples of Living Lab actions	15	A short selection of case studies is presented to participants.
▶ Identifying potential partnerships	15	Participatory activity: participants identify the main local actors they may partner with in their local areas, to implement the SALL methodology.
▶ Wrap-up and conclusion	5	Quick recap of the main results from the day, conclusion and call to action.

Total time
120

SCHOOLS
AS LIVING
LABS

SALL

