

SCHOOLS
AS LIVING
LABS

SALT Toolbox

schoolsaslivinglabs.eu



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SALL

SCHOOLS
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Schools and Societal Actors collaborate based on the Living Lab methodology

In the **Schools As Living Labs (SALL)** project, we, together with schools and other societal actors, have adapted the Living Lab approach for the school context. The result of this co-creative process is the '**SALL methodology**'. The aim is to run Living Lab projects at schools, involving students and local actors in a user-driven innovation process. This approach takes **Open Schooling** to a new level by increasing the involvement of local actors and the influence of students on their local environment, through collaborative work on innovative solutions.

For SALL, the key elements of a Living Lab school project are these:

- 1. Real issue**, making use of the participants' personal experience
- 2. Real solution**, turning ideas into potential solutions and exploring opportunities
- 3. Quick prototyping**, immediately putting ideas in practice and testing them
- 4. Co-creation**, involving all impacted societal actors.



Why Living Labs in Education

While the world is undergoing deep transformation, formal education is still using 19th century approaches to learning. Schools need to re-invent themselves and this is by no means an easy process.

Our creative and engaging approach will empower you to embark on a new and exciting educational Methodology, confidently navigating the changing landscape of modern education.

The Schools As Living Labs project proposes to:

- work within a framework based on open innovation methods
- adopt the Open Schooling concept in science education
- build new products, new services, new uses - i.e., prototyping
- address local issues
- transform schools into Living Labs.

SALL supports schools to transform into living labs, where students are in charge of a science and innovation process by collaborating with relevant societal actors.

Schools become agents of community well-being, and students start to consider themselves as change-makers.

It is important to remember that all participants in a Living Lab activity are partners: everyone has something to offer and something to learn.

Students participate not only to learn and teachers not only to teach.



How to Use the Toolbox

Get inspired by this easy-to-use collection of visually designed summaries showcasing the results of the SALL project.

Our modular set of materials provide access to valuable information, inspiring success stories, and innovative best practices for you to implement or sustain your living-lab-based open schooling activities.

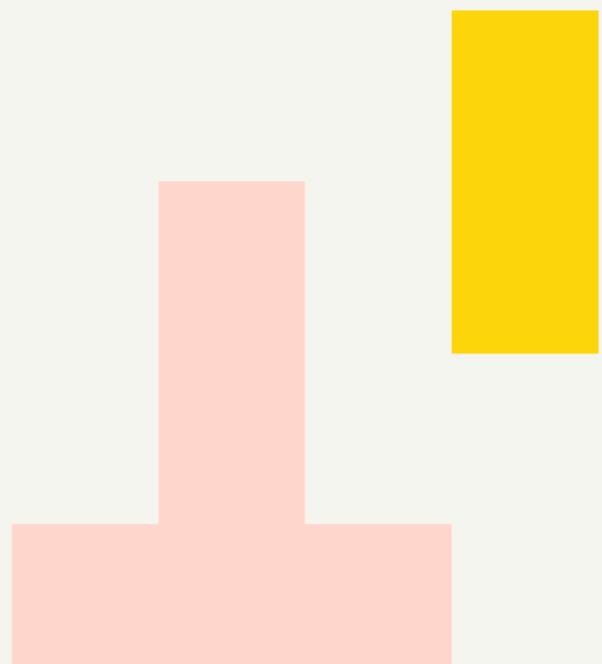
Imagine you are about to embark on a journey through a complex document. To make sense of it all, you will need to pick a point of view that works best for you. Luckily, we have got you covered with four distinct types of actors, each corresponding to a unique colour. That way, you can easily navigate the document and stay on track. Let's take a closer look at these colour-types:

- **Yellow** for Schools
- **Orange** for Teachers
- **Light blue** for (Local) Partners
- **Deep blue** for Policy Makers

Suppose you decide to start or continue a Living Lab school project. In that case, you can use this Toolbox to inform other potential actors, giving them the information they need.

And what if you like to take a deeper dive into the details of your project? We have got everything you need to uncover every last detail.

The Toolbox will guide you through the necessary references, making it easy for you to search and find exactly what you need. So, buckle up and get ready to explore the depths of SALL and your Living Lab project like never before!



SALL for Schools

1

Why Open Schooling?

Let's transform education to meet the needs of a changing world. The 2015 "Science Education for responsible citizenship" report suggests connecting innovation and science education strategies at different levels. In 2017, the OSOS project introduced the Open Schooling methodology to help schools become more relevant to their communities. The SALL project builds on that and encourages collaboration and experimentation, challenging traditional roles.

3

What are the benefits?

Schools can be more than just places where students go to learn. By collaborating with the local community and other institutions, they can tackle issues that matter to everyone. And they can do it in a way that engages students, helping them develop skills they will need in the future. STEM subjects are a key part of this, but they are not the only thing that matters. By linking STEM to other subjects and real-world problems, schools can make a bigger impact.

2

Why Living Labs?

A Living Lab is an innovation ecosystem involving students and teachers, research centers, science centers, museums, businesses, civil society organizations, and other local entities working together to create solutions for real-life problems in the community. By embracing new approaches, we can prepare the next generation for the future with curiosity, creativity, and innovation.

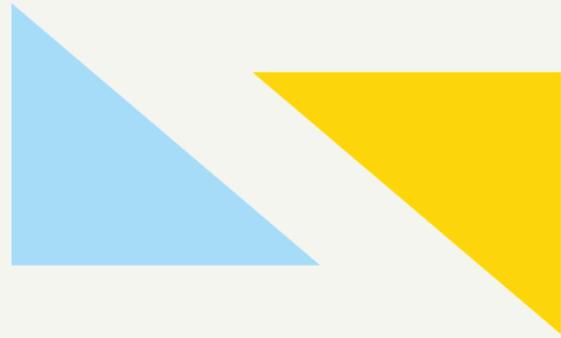
4

How to participate?

Schools can inspire the young generation to face future challenges with curiosity and creativity. You need to give them opportunities to apply what they have learned, to work with others to solve real-world problems, and be part of the solution. That's where our Community Platform comes in. By participating in this network, schools can connect with other schools and organizations around the world and collaborate on projects that have a real impact.

<https://www.schoolofthefuture.eu/sall>

SALL for Schools



Tools for you:

To start, you will find a list of tools in the following table.

But remember, the best place to find, share and interact with school-based living lab activities and communities is the **Community Platform** (schoolofthefuture.eu/sall).

Whether you are experienced or new to open schooling, the SALL community platform has something to offer.

The platform also gives access to a library of new **tools, tips, and tricks** developed and approved by pioneer teachers to implement the SALL methodology. We have made a **downloadable repository** where you can find **translated materials in 10 languages**, with one simple click.

TOOLS

BIRD'S-EYE VIEW

FOR MORE

Accelerators

Well established school projects for inspiration



Communities

The place to interact with other schools implementing living lab activities



Roadmap

Practical tools and guidelines to develop a Living Lab school project.



SALL for Teachers

SALL METHODOLOGY

A Living Lab is a collaboration between various actors from the public or private sectors, and users. For instance, in a SALL Living Lab school project, the partnership may include students, teachers, parents, and sometimes other school staff. To broaden the collaboration, Living Lab school projects may also involve other local actors like a company, scientist, policymaker, shop, etc. This approach is aligned with the Open Schooling concept, which wants schools to become agents of community well-being by creating new partnerships in their local communities.

The methodology uses design cycles :

- Creating ideas together after exploring the issue
- Building some elements of the solution, which can be done fast and economically (often referred to as 'prototyping')
- Testing the solution with users and getting feedback to improve it.

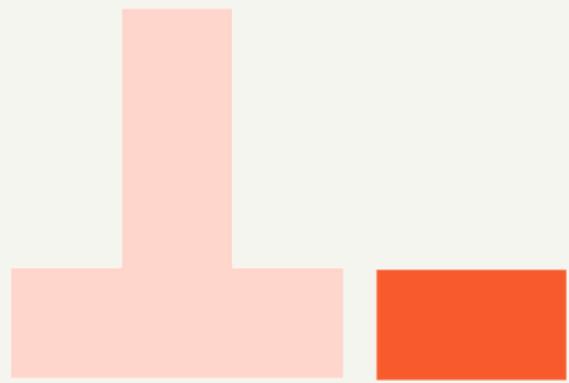
HOW TO START

To start a Living Lab school project, you need to create the foundational elements that will shape the project's constraints, possibilities, and assets. These elements include:

1. Exploring the theme
2. Building a partnership
3. Choosing a topic
4. Trying concrete, even if temporary solutions
5. Setting up the evaluation framework



SALL for Teachers



Tools for you:

To help you start with your Living Lab school project, you will find a list of tools in the following table.

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TOOLS	BIRD'S-EYE VIEW	FOR MORE
Roadmap	Discover the SALL methodology through practical tools and guidelines	
Accelerators	Well established Living Lab school projects for inspiration	
Libraries	Translated materials that you can download.	

SALL for Societal actors



1

Which are the Societal actors?

No matter if we call you stakeholders, societal actors, or local actors, you are the community members actively involved in a specific SALL Living Lab school project, beyond students and teachers. These can be individuals or institutions who are interested in the Living Lab project process or affected by its outcomes. We try to bring together families, community groups, local businesses, experts, universities, into an innovation ecosystem, empowering everyone to collaborate with one another towards the goal of community well-being.

3

Why participate?

- To have an opportunity to test new prototypes in a real-life setting
- To build capacity on how to create sustainable collaborations around real-life projects, for better prepared and motivated future employees and entrepreneurs.
- To raise awareness of the opportunities available
- To achieve local community well-being and active citizenship.

2

Why Living Labs?

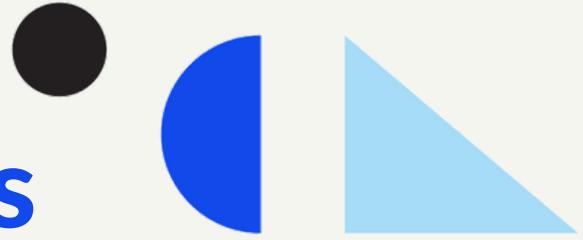
Living Labs are becoming increasingly popular as a way to promote innovation and test prototypes (products and services) in real-life settings. There are several reasons why Living Labs are valuable. Living Labs are a very useful tool for promoting innovation and driving sustainable development. By involving end-users in the development process, Living Labs can ensure that prototypes are tailored to meet their needs, leading to greater adoption and long-term use.

4

What are the benefits?

- Corporal industrial responsibility
- Promoting your brand
- Networking with other community agents
- Piloting a new product (or solution)
- Promoting research by providing data
- Attracting students to scientific carriers
- Getting to know the neighbourhood
- Giving a social dimension to your brand
- Improving services or products
- Learning young people's opinions
- Professional curiosity.

SALL for Societal actors



Experiences from societal actors:

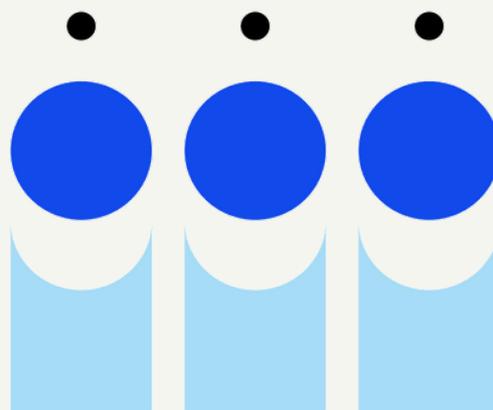
- “We gained new insights from students’ creativity and out-of-the-box thinking.”
- “We feel this is a bottom-up structure, which is an extraordinary opportunity.”
- “This project provides potential opportunities for personal growth and gaining experiences.”

In total, 373 societal actors from different fields and backgrounds have participated in different ways, so far. The individuals or organizations involved in Living Lab school projects either directly take part in the school's Living Lab as participants, or they are closely connected to the subject matter addressed by the Living Lab project as beneficiaries.



Type of societal actors involved so far

SALL for Policy Makers



1

Main concepts

- Education systems are called to adopt new approaches to learning and teaching
- SALL proposes to transform schools into living labs, in the wider framework of Open schooling in science education
- SALL brings together school communities in contact with a variety of actors inside and outside the schools.

3

Three main steps

1. Identify policy gaps
2. Elaborate a set of future policy challenges and implementation scenarios
3. Define a set of practical policy directions and recommendations.

Our Aim

To put forward a set of policy recommendations to promote the use of our living-lab-based open schooling methodology in education.

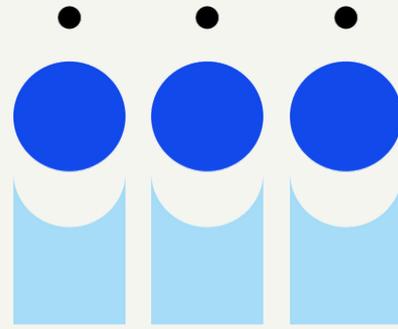
4

Issues our policy roadmap tackles

- Major policy gaps and challenges
- Necessary instruments and incentives
- Anticipated impact to each policy domain and to the society
- Broad and meaningful recommendations to accelerate the take-up.



SALL for Policy Makers



POLICY RECOMMENDATIONS:

- **Mainstream open schooling** by incorporating it in national educational strategies, central policies and curricula, boosting its legitimacy as a fully-fledged alternative to more traditional teaching methods, rather than a complementary activity that ultimately is perceived as an optional “add-on”. This can improve stakeholder as well as parent and caretaker engagement, and thus support teachers in adopting the SALL methodology. Student engagement with STEM education and potential careers is also likely to benefit from this novel, more flexible approach.
- **Train the teachers of the future.** Integrate open schooling into teacher training curricula and encourage the development of leadership, facilitation, and project management skills, as well as digital and technological competencies among newly qualified teachers. In parallel, invest in upskilling the existing workforce (lifelong learning), so that teachers and educators familiarise with the tenets and aims of open schooling and can engage with these initiatives.
- **Make funding available for open schooling programmes.** Create incentives for school management to invest in open schooling initiatives, taking into account known disparities in science literacy among different regions of Europe. Particular attention should be given to not leaving anyone behind, especially in less resourced areas.
- **Prioritise skills development** by promoting a shift away from traditional grading, and encourage rigorous monitoring and evaluation of open schooling initiatives. While standardised testing may continue to have some utility in providing consistent measurements of scientific knowledge at the national and international levels, the results of these assessments should not be relied upon solely to evaluate the success of open schooling programmes.
- **Support schools in accommodating students’ needs.** Open schooling programmes should be designed to be as inclusive as possible. Schools need funding and, where necessary, technical support to fully implement existing legislations and policies to ensure accessibility, and to better support students with disabilities.

INSPIRING

Schools as Living Labs Projects

SUSTAINABLE AND HEALTHY FOOD

Helping local businesses acting sustainably



THE NETHERLANDS STUDENTS AGED FROM 14 TO 16 HEALTH SUSTAINABILITY FOOD

THE SCHOOL

- Christelijk Lyceum Veenendaal High School
- An open, Christian school community in a small city
- The school encourages students to develop their talent and creativity.

Familiarity with the open schooling approach before joining the SALL project

Beginner

Experienced

AHA MOMENTS

Shared by teachers: Teachers really enjoyed working with the community outside the school.

By students: Students, especially those that were able to connect with a societal actor of their own choosing, indicated this motivated them more to work on school than usually.

By societal actors: One of the societal actors was happy to get to know the students in a different way than merely as customers in their snack bar.

THE LIVING LAB PROJECT



THE PROBLEM(S)

This living lab project addresses two main issues to make local food business more sustainable:

- Exploring how catering business can act sustainably
- Investigating sustainable packaging solutions



THE SOLUTION

- Develop advices and recommendations on sustainable business, based on information collected from social actors involved in the living lab project



THE COMMUNITY

- A local catering business, the school cafeteria, local sports club canteens and a local snack bar took part in the interviews
- A chain supermarket franchise holder and a company that produces sustainable packaging provided information and gave talks about healthy food and sustainable packaging alternatives



THE PROTOTYPES

- Interview guides to collect useful information
- Sustainable lunch menus, tested within the school
- Sustainable packaging ideas presented to professionals in the field

INSPIRING

Schools as Living Labs Projects

PROTECTION OF SOLITARY BEES



CYPRUS STUDENTS AGED FROM 16 TO 17 BIODIVERSITY NATURE PROTECTION

THE SCHOOL

- Emporiki Sholi Mitsi Lemythou
- A school built at 1200 meters altitude and gathering students coming from mountain communities
- Long experience in environmental projects

Familiarity with the open schooling approach before joining the SALL project

Beginner

Experienced

AHA MOMENTS

Shared by the teacher: “For 4 years I have been moved by the zeal of the students. So much excitement! The previous students of the program impart their knowledge and experience to the new students and make them enthusiastic. They are internally motivated, they want to pursue it, to work at it.”

By students: The students are excited about the turn their project has taken as they may discover a previously unrecognized species.

THE LIVING LAB PROJECT



THE PROBLEM(S)

This living lab project addressed the need to protect important pollinators in the area, which had not yet been studied. Students, in cooperation with a university researcher and their biology teacher, decided to contribute to the protection and preservation of solitary bees in the villages near their school.



THE COMMUNITY

- A university researcher helped students to collect and analyse samples
- A design and technology teacher contributed in building a bee hotel
- Residents of the area were informed and contributed with protective measures



THE SOLUTION

- Investigate the factors that reduce bee biodiversity in the area
- Collect samples of bees, classify them and find the best conditions for their reproduction
- Create alternative to lost habitat
- Raise awareness within the local communities



THE PROTOTYPE

- A bee hotel installed in the school area
- Classification of solitary bees
- Bee samples in falcoms for future study

Towards sustainability

SALL is a European project and, inevitably, its funded lifecycle will soon come to an end. What comes after that?

We have co-created the methodology for Schools as Living Labs and we have tried it in real life, in collaboration with hundreds of school communities and societal actors in ten countries. The results of our work and the inspiring ideas and Living Lab school projects developed within our network are the legacy of SALL, which we are taking steps to offer sustainably beyond the official completion of the SALL project.

We are offering this colorful palette of a versatile methodology coupled with rich school-generated ideas and content to you, with a promise:

This is a tested way to develop innovative collaborations between your schools and communities, in worthwhile projects and with rewarding teaching and learning experiences for all, corresponding to your own needs and aspirations.

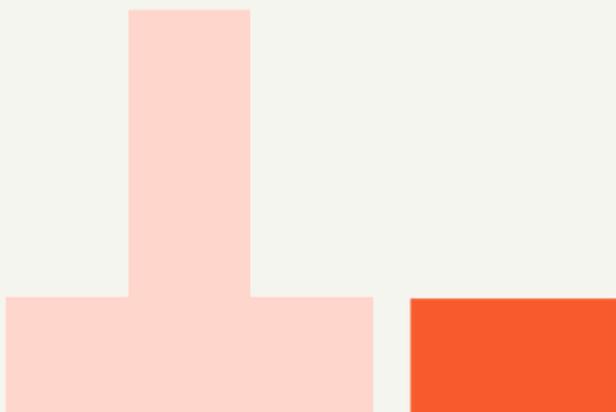
To make sure that the work and spirit of SALL stay available, we are using mainly two channels:

First, you can keep finding inspiration, guidance and content in our **Community Platform**, the digital place to share and interact with school-based living lab activities and communities (www.schoolofthefuture.eu/sall).

Second, our voices and work will continually be there and strong in the **Open Schooling Together (OSTogether)** initiative. This is a collective set up and very actively supported by SALL together with eight other projects funded by the European Union's Horizon 2020 research and innovation programme.

All of us in OSTogether share an interest in how schools, local communities, policy makers, museums, sciences centres and other local stakeholders can rethink education and expand learning boundaries. We want to actively involve local communities in the teaching and learning process, to help European schools become hotbeds of innovation and agents of community well-being.

Follow and join **@OSTogether** in social media, and stay informed through its e-newsletter!



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