



Eco² Schools as New European Bauhaus Labs



New European Bauhaus
beautiful | sustainable | together



ECO² -SCHOOLS as learning-action living labs

Deliverable 3.1 – NEB-LAB Roadmap 1st Version



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WP/Task	Work Package 3 / Task 3.7
Title	NEB-LAB Roadmap (First Version)
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Abstract	<p>This document serves as an independent guidance provided by the “Chamber of Quality” in the framework of work package 3 / Task 3.1 Formation of the Chamber of Quality - Demand response forecasting, Task 3.2 Integrated and Holistic Vision, Task 3.3 Innovation partnerships, Educational Buildings Renovation Market and Skale Up Mechanisms, Task 3.4 Governance and Processes, Task 3.5 Net Zero Infrastructure and technologies, Task 3.7 NEB-LAB Roadmap for Advanced Energy Design for Educational Buildings. The Roadmap provides guidance, enlightens and supports NEB-LAB process with decentralized involvement of 5 first volunteer pilot sites with local communities, in different climatic-cultural cross border regions with complementary educational buildings typologies. This cooperative experimentation by learning-action at 3 generations, will be documented with 3 editions of the Roadmap that will consolidate the forward looking process for implementation follower schools step by step.</p> <p>This first edition of the Roadmap documents the start of NEB-LAB changemaking process : From differentiated uses cases (for start intentions) help the 5 volunteer pilot sites,</p> <ul style="list-style-type: none"> - to step in the NEB-LAB with 4 first “Test activities”, - to forming a local community and engage in Ph1 “Document and explore the initial situation”.
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Executive summary

NEB-LAB will, as experiential introduction for change comprehensive to all, provide a Roadmap to net zero renovation and smart use of energy positive educational buildings, taking in account climate change resilient adaptation and restoration of the relation with nature. This will help lead the way to a fundamental shift:

- from buildings as consumers of energy to buildings, with few concerns of the occupants-users-operators-owners,
- to efficient buildings self-producers of their own energy, with involvement of the educative community and neighborhood.

As it will be demonstrated through this project, setting measurable goals is a main key to success. Setting measurable goals is the first commitment the educational stakeholders will make toward completing a successful net zero and smart use energy positive building (schools, university, science center...) while maintaining a reasonable budget, self-repaying in mid-long term sustainable use. NEB-LAB project will also demonstrate that a deeply rooted green transformation of educational institutions cannot be achieved by only implementing zero-energy solutions, but rather a multi focus approach is required covering various factors (social, cultural, economic, and climatic). The project is organised with a holistic methodology interlinking different levels of a systemic change 'learning by doing action' towards educational institutions. The open cooperative living lab, activated during the project will be maintained, shared and further enriched with involving follower projects, with the status of a European cooperative society (for non-profit in common structure, secured space for Testing-Learning-Consolidating-Upscaling initiatives in 5 climate-cultural regions in the EU, within the New European Bauhaus and Education for Climate Coalition, with shared governance/expertise/knowledge/resources/tools/co-investments). This will provide support to design and implement climate action plans for the renovation wave of Educational Buildings with scalable impact in the communities/neighbourhoods they serve.

The process will be documented in the NEB-LAB Roadmap, a living document that will evolve during the project implementation. It will include detailed guidelines and tools for educational buildings owners. It will describe the process they need to follow towards the green transformation of their organization. This goes beyond the building itself and covers the attitudes and the behavior of the users of the building as well as the social impact of the interventions to the local communities.

The first version of the Roadmap is organized in five chapters

Chapter 1 introduces the key support mechanism of the project, the Chamber of Quality. Based on professional guidance and support, the projects' Chamber of Quality will present different ways (related to building design, building envelop, building services systems, equipment, renewable energy) to increase the efficiency of the five pilot sites. The selected demonstration sites offering a variety of opportunities for developing innovative solutions and applications that will meet their needs, while they have already specific climate action plans in place. NEB-LAB team will study the Demand-Response Forecasting and will design a framework of implementation of Energy Efficient Solutions. Focussing on the development of high-performing buildings the issues of Energy Storage and Energy Management will be analysed in detail and specific solutions will be proposed and adopted to meet the needs of the educational communities. The project will provide evidence that significant energy savings can be achieved with limited additional costs.

Chapter 2 focuses on the description of the process that the Chamber of Quality will design and implement in the pilot sites. present a pathway (concrete and replicable "climate action plans") towards cutting-edge, energy saving educational buildings that create seamless integration between

design, sustainability, and learning. As changes in pedagogy, technology, instructional programs, and enrolment are the only constant in education the educational environments must be equally adaptable to accommodate constant change with as little disruption and cost as possible. Indoor Air Quality, Thermal Comfort, Visual Comfort, Daylighting and technology infrastructure for low and zero-energy buildings should all take this need for adaptability into account. NEB-LAB will demonstrate innovative approaches and solutions in the different pilot sites. The common feature, however, will be a byproduct of the desire to create a building that inspires forward-looking, inquiry-based learning, and a sense of ownership among students and building stakeholders alike. The school, the university as well as the science center environment helps fuel the student body's enthusiasm for learning, promoting engagement with peers, teachers, and even the building itself. In this framework NEB-LAB will provide a Roadmap to zero-energy and energy positive educational buildings and will help lead the way to a fundamental shift from buildings as consumers of energy to buildings as producers of energy.

Chapter 3 describes the co-design process that forms the main strategy of the Chamber of Quality in the transformation journey of the educational buildings. The key outcome of the process is the engagement of the local communities in the building renovation. NEB-LAB will highlight the importance of social acceptance of renewable energy innovation. To achieve that, the selected pilot sites (hosting thousands of users and visitors daily) will act as drivers of changes and social innovation hubs for their communities. They will act as innovation hubs in their communities and will facilitate their transformation to innovative ecosystems, acting as shared sites of learning for which leaders, teachers, students, and the local community share responsibility, over which they share authority, and from which they all benefit through the increase of their communities' science capital and the development of responsible citizenship.

Chapter 4 describes in detail the four Test Activities that have been proposed by the Chamber of Quality. They describe a step-by-step process for the effective engagement of the user communities in the project activities. The Test Activities (Community building, Discovering & observing, Permanent communication and reportage, Use innovative solutions) are currently implemented and validated in the pilot sites. The Chamber of Quality team monitors the process and provides guidance and support for their successful implementation. Several tools are offered to the pilot sites that have been developed to facilitate this work. These tools are presented, for each Test Activity, in Annex I.

Chapter 5 concludes the document and presents the initial outcomes of the process and the next steps in the project implementation (WP4). It also highlights a number of opportunities for the wider exploitation of the project's work.

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Preface of the authors



Figure 1. Kallikatzaroi sawing the tree from the earth, after a work by ΟΕΔΒ 1961 (Αναγνωστικό 4ης Δημοτικού)
[Public domain, Wikimedia Commons] <https://vivreathenes.com/les-traditions-des-fetes-de-fin-d-annee-et-de-noel-en-grece.html>

“In popular mythology, the Kallikatzaroi are a kind of horrible gnomes who gnaw the tree on which the Earth is placed. They do this so well that at the end of the year, there is only a little bark left to munch on. The world is in danger, it is likely to collapse!

At Christmas, the kallikatzaroi are attracted by the smell of cakes and return to the surface. They find some left for them in front of houses and devour them. Thus happy and satisfied, they enjoy causing havoc in the villages. This is why it is better not to venture too much into the streets on Christmas Eve and stay with family. Indeed, the next day, people notice the damage from the previous night: open jar of wine, nibbled sausages and stolen or spilled objects.

*After causing mischief throughout the holiday season, on Epiphany Day, these dreadful Kallikatzaroi return underground to continue their evil work. **But now the tree of the earth has had time to reconstitute itself in the meantime. So the world is saved! ...until the following year.**”*

This storytelling and ancient Greek tradition is a true invitation to reconnect as a protective careful community with the capacity to change. Coming out from a winter full of worrying uncertainties, the New Year is offering this community the capacity to bring new life into Mother Earth’s tree.

In the Climate-Societal crisis we live in, that challenges us today, *“those who blame the system are in fact pointing the finger at themselves. Because we are the system, we created it and benefited from it. So it is deeply, in our attitudes and behaviours that a transition is required, within ourselves. ...So don't spend more money on (more complex centralized) education, but teach differently so that we can better utilize the potential of young people. That means thinking, feeling and acting differently, the basis of every system change.”*

*(Jan Rotmans, DRIFT Professor in Sustainability Transitions at DRIFT, Erasmus Hoge School - NL).
17 Dec. 2023 [on LinkedIn](#); https://drift.eur.nl/people/jan_rotmans/; <https://youtu.be/EQtImInRmFg>*

Our factual observation is that Schools need to become places for learning-action into Climate-Societal transition.

This first edition of the Roadmap for Eco² Schools as New European Bauhaus Labs is providing guidance for Schools being challenged to build a resilient community and commit into learning-action, with first accessible steps into co-design and test of a Climate neutral renovation Green action plan.

1. Introduction

1.1 Purpose of the Roadmap (advisory guidance and consolidated documentation)

The aim of Work Package 3 is to develop with the “Roadmap” a framework for guiding Eco² Schools as New European Bauhaus Labs step by step process.

This Roadmap provides the consortium partners with all the appropriate information about the 4 first “Test activities” the Advisory Board (invited Experts) proposes to test with the 5 volunteer pilot sites, then consolidate and upscale to follower schools interested to discover and step in NEB-LAB initiative. This has as purpose to propose a co-design method for start involvement (Schools with their local community first steps exploration of learning-action).

This is documenting a step by step plan to be followed by all “volunteer pilot-sites” (as forward looking cooperative community that shares a common method, tools and co-experimentation) as in the coming months first “follower schools” (that are interested to self-engage in the NEB-LAB process by own means, with using prepared “Test Activities”), shared as CC.by.SA.

The step-by-step plan and templates can be considered as a ready to start toolbox (not fully consolidated at this early stage), supported with examples that can inspire a local adapted implementation.

It was decided not to first focus on the “technical solutions” (related to construction design, building envelop, building services systems, equipment, renewable energy to increase the Energy efficiency of Educational buildings), **but on the needed decisive “first side steps” to be engaged by the 5 pilot sites for engagement of a supportive “Core Team” and common learning-action, with a multi-stakeholders “local Community”**. This common effort has build the past 9 months a powerful energy and solid foundation for real on the ground forward looking implementation.

The first results of this systemic change will be visible for the coming 2nd edition of the NEB Festival 2024, where Eco² Schools will share the method, communicate and showcase the 5 pilot sites with their communities. We are willing to organize different conversations linking with other EU funded projects, gain a common recognition of the NEB-Lab hosted project status (what is very important for a cross institutional engagement and supportive support).

1.2 Scope and audience of the document

The first version is addressed to the Erasmus+ consortium. A revised version of this Roadmap will be shared as a public resource (CC BY-SA).

1.3 The formation of a “Chamber of Quality”, inspired by benchmarked best practices

The aim of NEB-LAB is to break down the silos, initiate a decentralized transformation of a variety of existing educative buildings, with(in) their context (schools, university campuses, third places, sports facilities, museum, educational forest-garden and farms, open schooling sites, neighbourhood houses). This by considering the role they can play as enablers of change for neighbourhoods/cities in transition at 3 generations with “Climate education” and “Climate neutral renovation”.

As central supporting tool for NEB-LAB experimental space, a dedicated “Chamber of Quality” is created from start of the project and for its whole duration, bringing together:

- an Advisory Board: invited Experts with complementary skills, views, experiences, committed for a 3-year period 2023-2025, and
- a Community in learning-action: started with 5 volunteer pilot-sites and follower sites that are ready to step in the challenge.



Chamber of quality

Role & mission : A “Chamber of Quality” is a secured space for building common quality within a multi-stakeholders influence shared project; providing guidance, independent contributions of invited experts, advisory reviews, shared resources, learning materials, common methods and tools, challenging conversations and experimental activities.

- **Is responsible for the forward looking vision, step by step method and tools**

> This is documented step by steps in a “ROADMAP for Climate neutral renovation of educational buildings”, that will be tested, consolidated and shared as creative common by SA (D.3.1).

- **Is providing independent advisory support to the (5) Pilot Sites**, with a “WORK ROOM” (meeting every 2 weeks), “ADVISORY SESSIONS”, “CODESIGN WORKSHOPS” and thematic focus “CONVERSATIONS”.

> Depending of Pilot Sites needs and challenges, the Chamber of Quality can invite external experts, as suggest local partnerships, links with resources, initiatives, other EU projects.

This is giving an adaptive response to the need to support the overall Quality of the Erasmus+ Forward Looking project with common bottom-up learning-action between the 5 “pilot-sites”, as first interested “follower schools”. This is also establishing fruitful links with best existing innovative initiatives and solutions ready for joint implementation within the NEB-Lab of the EU.

As this is a wide cooperative experimentation, that is challenging all parties, including the experts themselves, in changing views; understanding the shift in needs, opportunities, common process, challenges and tests of innovative solutions, support, tools and services.

Expected involvement for supporting the Eco² Schools as New European Bauhaus Labs forward looking co-experimentation:

- **Plenary Sessions (every two months) and Working groups (as required)** | The Chamber of quality will hold a plenary meeting every two months (online, with a program in 2 half days). There will be complementary work sessions as needed (thematic work groups).
- **Independent advisory notes** | The Chamber of Quality will offer comprehensive guidance and support throughout the entire process with writing (as needed) “Advisory notes”, which will enlighten key aspects for quality building in the processes, for work packages leaders, involved stakeholders, pilot sites and follower demonstration projects.
- **Advisory sessions** | The Chamber of quality will organize, as needed and at least for the key phases of the co-experimentation, common and individual “Advisory sessions”.
- **Work Room** | For supporting the Core Teams in preparing the pilot site implementation of their “Climate neutral Green Action Plans”, the Chamber of Quality is willing to open a “Work Room” (on distance by videoconference and as possible in presence aside the consortium meetings for the key steps).
- **Co-learning workshops** | The Chamber of quality will organize “co-learning workshops” with the educational buildings (pilot sites/demonstration sites, follower schools) and partner entities being involved in the NEB-LAB activities. These will help the pilot sites/demonstration projects to be actively engaged in the quality building process during the co-experimentation.
- **Challenging conversations and test activities** | The Chamber of quality as independent body will take the initiative to organize “Challenging conversations” and “Challenging test activities” within the New European Bauhaus (NEBLAB). These will as need associate external experts and connect with others initiatives (ex. Education for Climate coalition, UN Schools 2030, NEB Light house demonstrators).
- **Roadmap (3 versions following advancement of the co-experimentation, for continue improvement)** | The Chamber of quality will document the project’s learning’s, references, best



practices, tools and methods. This will make recommendations for continue improvement of the NEB-LAB quality building process. The Roadmap will be formalized and published in 3 consolidated editions.

As a connecting interface, from the beginning and during the whole Erasmus+ forward looking project, the Chamber of Quality will foster continuous improvement:

- in knowledge,
- building common methods/tools,
- providing advice to the 5 volunteer pilot sites
- and beyond with challenging conversations and test-activities shared with NEB Community, as with follower schools/networks (ex. Eco-schools global), to be progressively involved.

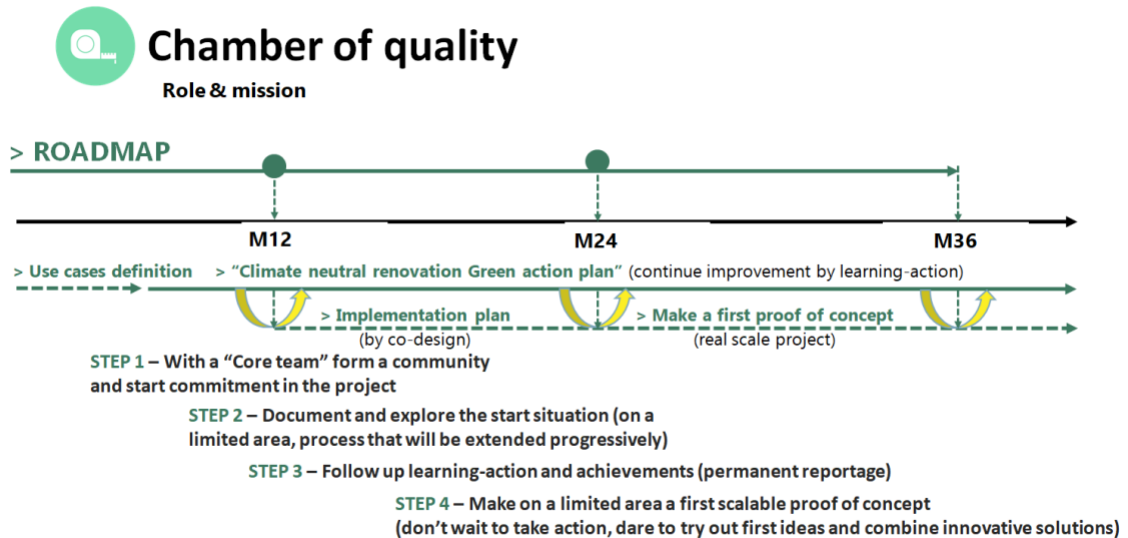


Figure 2 NEB-LAB Global process with 4 key steps for learning-action and 3 key phases (Use case definition/Climate neutral renovation Green action plan/Implementation plan with a real scale project).

1.4 Installation of the Chamber of Quality, step by step support to pilot sites

The Chamber of Quality has been installed at the very beginning of Eco² Schools as New European Bauhaus Labs Erasmus+ forward looking project, with committing a first team of experts with complementary skills and experiences.

The Advisory Team (= committed "advisory board") is the core body for driving the quality building process for the first 3 years (2023-2025). This is expected to meet regularly (2 half days each 2 months period + short recorded online meetings every 15 days where attends who can).

The Chamber of Quality is for start composed of 5-6 persons that provide common guidance with complementary expertise and skills:

- **Alliance Sens & Economie (FR) | Christophe BARTHOLEYNS,**
ir townplanner-architect, Expert Sustainable City, Innovation partnerships
Function = Manager of NEB-LAB, step by step guidance of the Chamber of Quality
- **CY Ecole Design School (FR) | Stéphanie HEMON,**
Designer-researcher phd, Expert in Multi-stakeholders community co-design process, *Function = Support to the pilot sites Co-design, tools, templates and guidelines*
- **Venhoeven CS (NL) | Cécilia GROSS,**
Principal Architect, Expert in bio-inspired construction design,
Function = Desirable Architecture, communication of concepts, tasks and process management
- **Good Planet (BE) | Ruben VERHAEGEN,**

Educational project manager, Expert in Inspiring children and adults to realize a sustainable planet by undertaking positive action,

Function = Challenging the pilot sites, advisory support for Energy renovation and environmental learning-action

- **Lernlandschaft (DE) | Almut VON KOENEN,**
Facilitator Futureproof Learning landscapes and users centred spatial functionalities, Expert in Schools adapted renovation strategy, Cultural approach,
Function = Pedagogic-functional advisory support to the pilot sites.
- **Lernlandschaft (DE) | Laura WEGLEHNER-MOTZ,**
Project management of school and teaching development, Expert in Pedagogic and cognitive psychology, Collective resilience,
Function = Learning landscape educational quality.

It interacts with other key competences Experts (using valuable expertise in the consortium):

- **Ellinogermaniki Agogi (GR) | Sofoklis SOTIRIOU,**
Professor Phd in Physics, Educational Research and Innovation, Director of EA Research Department (~20 persons)
Function = Open Schooling systemic change approach, Research guidance for Educational learning-action.
- **Universität Bayreuth (DE) | Tessa-Marie BAIERL,**
Researcher phd in Environmental attitudes, Education for Sustainable Development,
Function = Social Impact Assessment, measuring community's progress with KPI's.
- **An Taise (IE) | Maya Gryesten Fields,**
Science Education Officer & GLOBE Ireland Deputy Country Coordinator,
Function = Common community driven communication with the pilot sites.
- **Foundation for Environmental Education Global (DK) | Pramod KUMAR SHARMA,**
Senior Director of Education (Eco-Schools/Eco-Campus, Young Reporters for the Environment, Learning About Forests), UNESCO Green Schools program,
Function = Environmental education and Education for Sustainable Development.

The plenary sessions (advisory meetings, reviews, and on-site exchanges), as needed thematic workgroups, are the main occupation. The team is willing to combine expertise, methods, tools and innovative solutions, share exemplary inspiring realizations (international benchmark of solutions and initiatives), consolidate the NEB-LAB holistic vision and use case definition, organize multi-stakeholders focused work and exchange seminars, coach the five pilot sites (involve in co-design workshops and on distance advisory sessions), prototype and propose new tools, question and support cross co-investment partnerships, provide independent advices, publish papers and video reports, level barriers, by enlightening mitigation measures and supports, co-study and test feasibility of a cooperative structure for operational development of NEB-LAB services.

For sharing a common perspective, we have found inspiration in a preparative phase (co-design of NEB-LAB initiative by the consortium, Lille World Design Capital 2020 test on Eurometropolis Lille-Kortrijk-Tournai crossborder area) **and best practices that are supporting environmental space quality transformation for educational buildings.**

By developing a shared desire to improve the sustainable quality of projects with visibility for all, **these 5 best practices have brilliantly demonstrated how it is possible to transform space with a diverse community involved by learning-action** (diversity of stakeholders, open schooling).

This dynamic comes from an intense dialogue, that raised following questions:

- **how to drive the co-experimentation with a continuous improvement ?**
- **how to connect best practices at local, cross-border and international level ?**

The will to install a “Chamber of Quality” at the heart of Eco² Schools as New European Bauhaus Labs is after 9 months converging with :

- **the New European Bauhaus movement** (conversations, workshops), https://new-european-bauhaus.europa.eu/about/neb-lab_en
- **Education for Climate Coalition EU** (preparative exchanges, conversations, challenges, Green Comp Framework) <https://education-for-climate.ec.europa.eu/community/about> ; <https://green-comp.eu/>
- **Eco-Schools/Eco-Campus international Green Flag program** (initialisation of UNESCO Green Schools training program for committing 50% of the schools in Climate Learning-action by 2030). <https://www.ecoschools.global/how-does-it-work> ; <https://www.un.org/en/transforming-education-summit/transform-the-world>

1.5 5 Best practices inspire the Chamber of Quality for supporting the Eco² Schools as New European Bauhaus Labs step by step guidance process:

Best practice 1- The Horizon Europe project « Urban Maestro » (concl. recommendations).

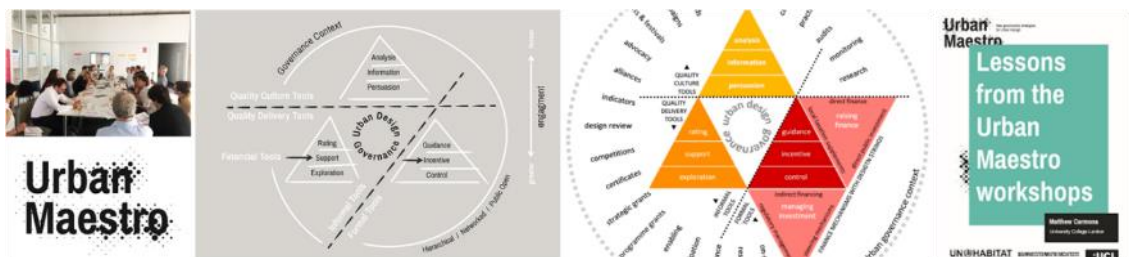


Figure 3 Urban Maestro soft power support to common spatial quality design

<https://unhabitat.org/project/urban-maestro> ; <https://urbanmaestro.org/tools/> ; https://www.researchgate.net/publication/370079755_Urban_Design_Governance_Soft_powers_and_the_European_experience ; <https://matthew-carmona.com/2023/05/15/94-six-cs-the-fundamentals-of-urban-design-governance/> ; <https://www.youtube.com/watch?v=rlxXwy9ML2M> ; https://youtu.be/_GXQ6SrQfS8?si=TZ3dALNrQE6r8puH

“The quality of urban environments derives from various projects, interventions, and policy decisions over time. They are the collective work of multiple stakeholders – public, private, and community – but are not always of a quality that we would aspire to see.

Started in 2019 with European Union’s Horizon 2020 research and innovation funding by three partners: the United Nations Human Settlements Programme (UN-Habitat), the Brussels Bouwmeester Maître Architecte (BMA) and the University College London (UCL); Urban Maestro examines how the soft (non-regulatory) powers of the state can shape the decisions that help to deliver better-designed places. These approaches often combine different, informal tools in order to guide, encourage, and enable better design. European countries and cities apply these informal tools often in innovative ways; therefore, Urban Maestro aims to capture how these tools are put into practice, with what purpose, and what impact they have on real-life solutions.

To structure the analysis and build a common understanding, the Urban Maestro team developed an analytical framework and a typology of the tools available to public authorities in order to positively influence the outcomes of the design processes. Urban Maestro conducted a survey to map out and understand the current landscape of policies and urban design governance practices across Europe.

The Urban Maestro team and its project advisors have explored other examples through research and live exchanges at events. Through a series of pan-European workshops, these practices are discussed and analysed in detail, allowing participants to learn, share ideas and co-create policy recommendations. Participation in the workshops is open to all interested stakeholders and announced through the project’s website, social media, and newsletter.”

Best practice 2- The practice of collective challenges for continuous improvement of construction quality in the Vorarlberg region « Baukultur für alle » (for 50 years).



Figure 4 “Baukultur für alle” Vorarlberg

<https://archalp.it/vorarlberg-baukultur-fur-alle/> ; https://archalp.it/sito/wp-content/uploads/2020/10/13_Vorarlberg_Hammerle.pdf ; [Passeport Ecobâti - Vorarlberg Gebäudepass](https://www.bbsr.bund.de/BBSR/DE/veroeffentlichungen/sonderveroeffentlichungen/2021/bauen-von-morgen.html) ; <https://www.bbsr.bund.de/BBSR/DE/veroeffentlichungen/sonderveroeffentlichungen/2021/bauen-von-morgen.html> ; https://www.parlament.gv.at/dokument/XXII/I/824/fnameorig_035724.html

Vorarlberg. Building culture for all

“We cannot understand the development of Vorarlberg’s architectural culture without its spatial, topographical, and socio-economic context. There is a great contrast between rural valleys and the busy, semi-urban Rhine Valley. With their exemplary buildings, states and municipalities model the production of excellent, contemporary architecture. Industrial and commercial architecture has achieved an impressive corporate identity as well. However, we rarely find the same quality in residential construction. Because of the high cost of real estate and construction apartment buildings have grown up like mushrooms, intruding upon areas formerly predominated by detached housing. Urban sprawl has eliminated the borders between the 29 municipalities of the Rhine Valley, resulting in a giant suburban landscape. To remedy this process, the players cooperate with the regional authorities as they carry out their vision of urban planning, including guidelines and ideas. Because planning and production have become so complex, urban and regional development has turned into an immense challenge. Provincial and municipal authorities value openness, participation, common good, ecology, and sustainability and involve citizens and adapt the process to their needs. Still, they must consider subsidy rules and regulations, which, until now, have privileged private property over common good and have prioritized ecological standards over architectural quality and the concerns of urban planning. Since 1997, the Vorarlberg Architecture Institute, has inspired, challenged, and spoken for the architectural-cultural scene. It continues to mediate and complement the discourse and activities of the Central Association of the Architects of Vorarlberg. In addition, the Chamber of Architects strives to improve competition procedures. The Energy Institute Vorarlberg supports ecology and promotes sustainability. The Quality Association “vorarlberger_holzbaukunst” has promoted the renaissance of timber construction. Carpenters and architects actively support the prefabrication and development of new technical solutions. Similarly, the members of the Werkraum Bregenzerwald, a craftsmen’s association, continue and transform the cultural heritage in sophisticated and resource-friendly ways, as evidenced by many buildings and the “Werkraumhaus” itself. Vorarlberg’s hospitality industry plays an important role in supporting and promoting the architectural culture. However, thoughtful and coordinated master planning is necessary to expand the quality of individual architectural projects to urban and regional planning and construction. This transition will be the most important challenge for the period of urban densification. Vorarlberg may be Alpine, even rural, but it is urban without doubt.”

Best practice 3- Lab-École Québec: A concentration of resources and quality team that is supporting with innovative design the building of 6 frontrunner next generation schools.





Figure 5 Lab-École Québec, Saguenay (newbuild school extension)

<https://www.lab-ecole.com/mission/> ; <https://youtu.be/CmGwcx--eGc?si=Efq343iDo8Jh1X0Y> ; <https://youtu.be/ZFsTfq8prPc?si=rKVDj4RWfrFaVBj> ; <https://editionsmultimondes.com/livre/les-ecoles-qu-il-nous-faut/>

Marc-André CARIGNAN – *The schools we need: “Academic success also requires innovative architecture. School is not only a place of learning, it is also a living environment. But our school buildings are frozen in time. The classes that children attend today are very similar to those that their parents, and even their grandparents, knew.*

A more inspiring work environment, both for students and teachers, is neither a utopia nor a luxury, it is a social necessity. Thus, it is now imperative to design and build schools differently in order to promote creativity as well as academic success. Some pilot experiments already demonstrate this. Reinventing school? Around fifty experts – psychologists, politicians, designers, professors, architects – explain how and why this must be done.”

“The Lab-École is a for non-profit organization whose mission is to bring together multidisciplinary expertise to design the schools of tomorrow. Under the leadership of its three founding members, Pierre Thibault, Pierre Lavoie and Ricardo Larrivee, the Lab-École intends to mobilize this collective reflection to make it a social project. How ? By integrating the knowledge of teaching staff with that of specialists from other backgrounds to create the best schools in Quebec, those that fully promote the well-being of students and all those around them.

The Lab-École is not a new school model, it is a laboratory to study the impacts of our three pillars on physical and mental health and academic success. It wants to raise awareness and equip school and municipal stakeholders to create better educational environments at child level so that everyone can be transported into a world specifically intended for them. In addition to the tools in development, the Lab offers support the six school service centers throughout the year in the reflection and definition of their architectural program, until the realization of their project.

To follow up on the work on Thinking about the courtyard of tomorrow, which is based on four major foundations: thresholds, the relationship to climate, biophilia and the richness of play, we are carrying out consultations and field research for everything surrounding transport active and the establishment of caring neighborhoods around our schools. Research and creation work on school furniture is currently underway.

At the same time, the Lab offers continuing training to school teams in anticipation of their integration into the new spaces, layout, furniture, in compliance with the educational intentions of the environment. “

Best practice 4- Green Schools: An educational “change makers” experience driven by learning-action within a natural living environment.



Figure 6 Green School Bali

<https://www.greenschool.org/about-us/> ; <https://www.greenschool.org/insights/green-school-bali-celebrates-going-100-off-grid/> ; <https://www.loe.org/shows/segments.html?programID=14-P13-00036&segmentID=6> ; <https://youtu.be/HD4bpztESWw> ; <https://bamboou.com/11-day-course/> ; <https://youtu.be/PAfE3s07KkA?si=6h4zJw8l8FEU1AbW> ; <https://escapethecity.life/green-school-bali-modele-ecolo>

The Green School of Bali, a model for the school of the next world? by Yona Da Silva.

In Bali, the Green School is a model of alternative education. Walk through the heart of the greenest school in the world. Voted “greenest school in the world” in 2012 by the US Green Building Council, the Green School is located in the middle of the rice fields and tropical forest of Bali.

Created by Americans John and Cynthia Hardy, who have lived on the Indonesian island for around thirty years. This couple of jewelers had come there to look for precious stones. They fell in love with the island and its inhabitants and decided to get involved in local life to promote Balinese know-how. It was after seeing the documentary An Inconvenient Truth that they suddenly became aware of the threat posed by climate change and that they had to change their way of life to move towards respecting their environment. This is why, in 2008, they created the Green School, to raise awareness and empower future generations to preserve nature. They then imagined a space designed to allow children to discover biodiversity, stimulate their creativity and “train a generation of responsible citizens, capable of acting sustainably for the planet,” explain the Hardys.

An exceptional place: In three short months, the central bamboo arch-shaped building was constructed. An exceptional building which has received the LEED (Leadership in Energy and Environmental Design) label awarded to buildings of high environmental quality. Indeed, the structure of the buildings, similar to a snail seen from the sky, promotes natural ventilation and the diffusion of sunlight into the classrooms. The building therefore does not need lighting or air conditioning. Inside, there are classrooms without walls, bamboo blackboards, oval desks and pit toilets. The school is energy self-sufficient thanks to solar panels, a hydraulic power plant installed in a nearby river.

Innovative teaching: In this unique school in the world, we learn “to consume fairly, to save energy, to garden and to benefit from the benefits of the earth without polluting or wasting”. Each class must also take care of a vegetable garden where students grow rice, fruits and vegetables. Other students are building an aqua farm. Here, the program is modeled on the English system, to which the Hardys have added an eco-friendly touch. For example, we learn math by calculating carbon footprints, we learn to read by studying the lifestyle of Bali starlings, we learn music with traditional local instruments like the gamelan (see the video below) and we practice traditional sports like mepentigan.

Soon a network of green schools? Here, most of the students are foreigners. But a scholarship system allows certain Indonesian families to enroll their children there. The school aims to double its number of Indonesian students within a few years. But the Hardy couple want to go even further and create a network of green schools. To carry out this project, they launched a vast fundraiser.”



Figure 7 UNESCO has made from this experimental Green Schools concept a commitment for COP28, building a wide agreement international partnership, where FEE Eco-schools program engages with the ambition to involve 50% of its members with a Green Flag to become Green Schools by 2030

<https://www.unesco.org/en/education-sustainable-development/greening-future/schools>

This commitment has been confirmed with the publication of the “Declaration on the common agenda for Education and Climate Change at COP28”, with 37 founding partners and 28 first signatory states endorsing this agenda, on 4 dec. 2023. <https://www.unesco.org/sites/default/files/medias/fichiers/2023/12/Declaration-on-education-and-climate-change-en.pdf> ; <https://www.globalpartnership.org/news/declaration-common-agenda-education-and-climate-change>

A “green school” is defined as a learning institution that takes a whole-of-institution approach to Education for Sustainable Development (ESD), in particular by addressing climate change through its teaching, facilities and operations, school governance and community partnerships. Green schools aim to promote knowledge and skills for the social, economic, cultural, and environmental aspects of sustainable development.



Figure 8 The seven steps assessment of Eco-Schools communities common achievement, for obtaining the Eco-Schools/Eco-Campus Green Flag recognition.

https://www.researchgate.net/figure/The-seven-steps-of-an-Eco-School_fig1_261697979 ;
<https://www.ecoschools.global/seven-steps-methodology> ; <https://www.eco-schools.org.uk/seven-steps/> ;
<https://ecoschools.in/pdf/Eco-Schools-Handbook.pdf>

The 7 steps for Eco-Schools

- Step 1. Establish an Eco-Committee
- Step 2. Conduct an Environmental review
- Step 3. Implement an Action Plan
- Step 4. Curriculum Links
- Step 5. Informing and Involving
- Step 6. Monitoring and Evaluation
- Step 7. Create Your Eco-Code

|for Eco-Campuses

- |Step 1. Establish an Eco-Campus Committee (Students and Staff)
- |Step 2. Conduct an Environmental Review
- | Step 3. Implement an Action Plan
 | (Monitoring and Evaluating actions carried out)
 | (Linking the program to learning on the campus)
- | (Informing and involving the campus and a wider community)
- | (Developing an Eco-charter).

The Green Flag

Usually after two years of implementing the programme and reaching a high level of performance in complying with these seven steps (sometimes national mandatory criteria also applies), schools can then apply for and be awarded the **Green Flag**. Before receiving their first Green Flag, schools must be assessed by means of a visit. After the first Green Flag, other means of assessment are allowed, although visits are always recommended. Assessment should be carried out on a yearly basis.



The Chamber of Quality is considering the opportunity to think the co-experimentation within NEB-LAB as a possible evolution of the existing 7 steps process of Eco-schools | Eco-Campus international program, assessed and recognized with the “Green Flag”.



As FEE (Foundation for Environmental Education Global) is willing to engage 50% of its members (existing Eco-Schools and Eco-Campuses having obtained the Green Flag) into becoming “Green Schools” within the program initiated in 2021-2022 and being consolidated for uptake in 2024. Many other European/National associations are willing to engage also with different very interesting initiatives, but that are missing a systemic change implementation, relating to a “Climate neutral renovation Green action plan”.

Figure 9 Eco-Schools Green Flag recognition

This opportunity is to be studied and possibly confirmed by the 3rd consultation (January-march 2024) building on a narrow partnership with the Foundation for Environmental Education Global as European/national associations interested in joining the NEB-Lab activities connecting a wide network of Schools, Universities.

Link to the concept note: “Greening every school – Quality standard for Green Schools”, published in December 2023 (third draft). Final draft is to be published in April 2024 (consultation 3, Jan.-March 2024).
<https://www.unesco.org/en/education-sustainable-development/greening-future/schools>

Within NEB-LAB, we are willing to test how to engage Climate neutral renovation Green action plans bottom up with an local community extended beyond the educational team of the school (target = to transform each “School” as a local living lab for learning-action open to the neighbourhood/village, involving by cooperation 3 generations (open schooling approach of the needed change). The framework, method and tools for implementation with “follower schools” can possibly be used for Eco-Schools|Eco-Campuses committing to the UNESCO Green Schools challenge.



Figure 10 The seven steps for Eco-Schools commitment into Environmental education (SDGs)

Best practice 5- Fresque Renaissance Ecologique: A collective “Project Room” for visualizing a common combination of changes, ready to act pathway to Climate Neutrality.



Figure 11 “Ecological renaissance Fresk: 24 projects for the world of tomorrow, by Julien DOSSIER”

<https://www.diagonaleduplein.fr/> ; <https://renaissanceecologique.org/ressources-et-interets-pedagogiques/> ; <https://climatographe.fr/lexposition/> ; <https://www.renaissanceecologique.fr> :

“Our societies today risk collapsing due to the destruction of biodiversity, climate change, and social and economic inequalities. We are on the ropes, assailed by this bad news, stunned by these crises which paralyze us. However, solutions exist, and it is up to us to decide to implement them. To design this ecological Renaissance, Julien Dossier was inspired by the famous fresco by Ambrogio Lorenzetti, the allegory of the Effects of good and bad government, produced in Siena in 1338. He entrusted Johann Bertrand d’Hy with the care of transpose it to our time, and thus equips us with a roadmap broken down into twenty-four projects – ranging from agriculture to the preservation of ecosystems, including culture and governance systems. The contemporary version of this fresco nourishes our imagination and outlines what this ecological Renaissance can look like. Far from utopia, it gives us keys, tools, concrete solutions to get us moving. It doesn’t say everything, it provides us with a plan. It’s up to us to write history by adapting it to the constraints and contexts of each of our territories, it’s up

to us to bring it to life in schools, universities, popular festivals, cities, boardrooms. ... Where to start to respond to the challenges of the transition? The fresco gives you the means to act.

The fresco and its methodology have demonstrated their ability to:

- ADAPT to a wide variety of geographical contexts: small and large cities, dense and rural environments.
- INSPIRE to make you want to go deeper, to appropriate the messages and knowledge.
- REUNITE a community around Ecological Renaissance projects in various territories.
- FEDERATE employees, citizens, entrepreneurs, teachers, students, elected officials, etc.

Educational resources and interests To learn with the fresco: The Ecological Renaissance is a positive and prospective conception of sustainable development and allows students to consider the future in an enlightened and responsible manner while avoiding an alarmist vision of the future.

Toolkits dedicated to education: Imagine and learn with the Ecological Renaissance Fresco. The Ecological Renaissance fresco offers a vision of the future. It relies on existing solutions. It is therefore possible to make it a reality, especially if many of us get involved. In addition, the fresco contains a wealth of details that call upon very diverse knowledge. The fresco is therefore a fun tool to imagine this world after, but it is also an educational tool.

Educational context and educational interest:

- Challenges: Tackle climate change, preserve biodiversity, manage our resources and promote social equality.
- Base: All areas, mainly representations of the world and human activity, the training of the person and citizen.
- Disciplines: EMC and geography, scientific subjects, languages, visual arts, historical field.
- Projects: Education for Sustainable Development, Citizen Journey, on the scale of a class, an establishment (and inter), a territory.

A transversal tool: The Ecological Renaissance fresco is a support for learning. It fits perfectly into a transdisciplinary project pedagogy calling on the collective intelligence of the members of the educational community."

These 5 best practices are combined for enlightening the way the Chamber of Quality will step by step develop advisory assistance to the pilot sites and first test follower schools, starting a community learning-action at local level (pilot sites) and as an open living lab in 5 climate-cultural cross-border regions.

Main bricks we are willing to take over in the Chamber of Quality's work are:

Brick 1- **Urban Maestro:** Develop a for continue improvement advisory-supportive offer of the Chamber of Quality (common process, shared services, tools and resources), with a "Work Room" (shared between the pilot-sites that will have the possibility to become decentralized living labs),

Brick 2- **Vorarlberg Baukultur für alle:** Build a common Cultural change in the posture (learning-action), in Climate Education (Green Competences Framework) and in side step innovative solutions (for Climate neutral renovation); with "conversations", "challenges", "training materials" and "test activities" developed in open cooperation within a wide circle of stakeholders (friends, partners and beneficiaries using the NEB-LAB).

Brick 3- **Lab-École Québec:** A Lab structure for supporting the co-experimentation with a real ambition, by commitment of institutions and supportive foundations. With a for nonprofit association it is possible to secure the NEB-LAB and consolidate the work of the Chamber of Quality for developing a professional valuable method, services and tools (creative commons by SA consolidated documentation, packaged materials and resources decentralized in the pilot site becoming open Living labs, with a cooperative for common added value budget).

Brick 4- **Green Schools:** A real side step commitment into Education for Climate, with a systemic change co-investment in the school infrastructure renovation and reorientation for transformative learning-action process, at all stages in the School. Combine the 5 themes of Eco² Schools vision, including a change in proximity with positive handprint impact on the Living natural environment.

Brick 5- **Fresque Renaissance Ecologique**: The demonstration of the power of building a strong community bottom-up empowerment into learning-action with using the Renaissance Ecologique Fresk and a “Project Room” at a visible central place. The Fresk (with post its and pictures) and 24 common works of the ecological renaissance thematic tools offer a quick first results opportunity that can be implemented as the heart of NEB-LAB transformative process.

The Chamber of Quality has come to this added value proposal, considering the risk to miss the expected systemic change in the 5 pilot-sites, within the 3 years of the Erasmus+ project (2023, 2024, 2025). It has been decided to keep “technical advice” in listening mode for concentrating the efforts on specific guidance for the start a learning-action process:

- **by describing the first steps to follow,**
- **by asking questions on what is really observed on the ground** (existing infrastructure, uses, discover scalable opportunities for reducing the needs of energy and improve the sustainability by proximity and circularity),
- **and by helping the pilot site to map the stakeholders that can be involved in their “Climate neutral renovation Green Action Plan”, starting improvement of the initial situation** (persons, skills, tools, supports, by the hand accessible resources and cooperation).

This first phase is building a solid foundation for a systemic transformation with following measurable effects, that will be progressively observed in the community when it will be extended and active with on the ground learning-actions :

- Develop citizens awareness raising activities spreading the concept of energy and resource efficient buildings renovation,
- Promote education and training for sustainability, helping all actors (school staff, students, families, citizens) to develop competences and positive behaviours for resource efficient and environmentally sustainable energy use.

2. A focus for Roadmap 1st Version: How to start NEB-LAB process?

2.1 Uses cases (scanning the pilot sites situations)

From the kick-off meeting of the Erasmus+ forward looking project, on 21-22 January 2023 in Athens, the 5 pilot sites coordinators have communicated their first intentions for a Climate neutral renovation action plan with a focus on an existing building-area, involving a local community in a learning-action posture, open to the neighborhood and concerned stakeholders.



Pilot site 1- Ellinogermaniki Agogi, Palini (Athens, GR) = private school with its own R&D department (~15 persons), a continue innovative educational program developed for open schooling with the 12 years curriculum being organized for learning-action of scientific skills, applied to the buildings and spaces of the school campus. An ambitious project for transforming the school to a positive energy facility, extending with a biocanteen building impact on the agricultural surrounding landscape, a extendable solar canopy for charging a fleet of electric/hybrid retrofitted school busses.



Pilot site 2- Sigtunaskola Humanistiska Läroverket, Sigtuna (Stockholm, SE) = private school with heritage campus between 2 villages and lake, project on to transform the old professors house in a living lab, ambitious renovation of the students houses, theater and heritage school facilities.



Pilot site 3- Microville 112, Courcy (Reims, FR) = former military Airbase, 1km from Reims, 65 ha, 50.000 m2, that will be completely ecorenovated as a Sustainable Microcity® within 5 years. Ambition is to start a ECO²-CAMPUS in learning-action, a European living lab empowering the Climate neutral and smart renovation of neighbourhoods and villages.



Pilot site 4- University College of Cork (IE) = first University to obtain the challenging “Eco-campus label” launched by the Foundation for Environmental Education (Eco-schools Global network), heritage campus integrated in the core of the city of Cork, project to lead a systemic renovation of the existing campus started with the Medicine Faculty, needs of retrofitting the professors houses, a lighthouse project with a passive house standard renovation of 1980’s buildings. A Community of students and professors committed to Climate Neutrality, that is willing to start learning-action for the University and the City.



Pilot site 5- Ciencia Viva Pavilhão do Conhecimento, Lisbon (PT) = network of science clubs (neighbourhoods third places) and farms (villages), that is willing to make a cooperative transformation of the open science museum (existing building) as a learning-action living lab for Lisbon and the luso-iberian peninsula. Project to build a natural green bioclimatisation with green roof and façades. Opportunity is seen to work with other forwardlooking local initiatives as New European Bauhaus Lighthouse demonstrator “NEB of the Seas” and “Bambuparque”.

Following the 5 pilot sites uses cases Templates presentation (2nd consortium meeting in Lisbon, 7-8 September 2023), **the Chamber of Quality has started to document each situation, exploring some specific needs and valuable opportunities.**

On 28th Sept. 2023, it has published a Shared questions list for exchange with each pilot site, in a specific meeting held on 4 Oct. 2023 (“active listening mode”, empathic supportive posture).

2.2 Initial observation

The main issue was to learn each other with the local teams and good understand each pilot-sites, intention(s) for being actively involved in the co-experimentation with a renovation project following the 4 main steps of this Erasmus+ forward looking project 2023-2025.

First attention and time consuming work of the “Chamber of Quality” was to support the 5 pilot sites in making the Preparative Work (Sept. – Nov. 2023).

This needed a joint effort with the Coordinator (EA) for filling in the Templates related to the “Use cases definition” (presented in Lisbon, 2nd consortium meeting 7-8 sept. 2023) and “Climate neutral renovation Green action plan” (presented in Sigtuna, 3rd consortium meeting 7-8 dec. 2023), with establishing the clear understanding that these documents are “work in progress” (for continue improvement by co-design and learning-action).

A factual observation:

All 5 pilot sites are quite at the same level for starting a volunteer commitment in NEB-LAB with a systemic changemaking demonstrative project.

They are facing the same 1st challenge of building a local community, informed and engaged in a learning-action process.

An observed fact is that local steering groups, pedagogic teams, classes of students, invited professionals, families, external stakeholders (as local associations, third places facilitators) that are interested in implementing “Climate Education” new goals, need a first push with a common activity to step in the project.

This is also true for interested follower schools (at local, national and European level).

About ~20 schools/cities-villages, NEB partners-friends (as NEB Prizes laureate, Lighthouse Demonstrators experimental projects...), foundations and associations that support NEB-LAB initiative (as Foundation for Environmental Education Global/UNESCO Climate Change Education, Antaisce, Good Planet, Wallenberg foundations, Renaissance Ecologique...) have declared their interest to be able to implement step in activities.

This observation is challenging, because we will not be able to make the common step by step experimentation process without real diverse learning-acting local communities, on each volunteer pilot site.

But this challenge, with real interest of external entities (schools, cities-villages, NEB partners-friends), is a very positive situation!

3. NEB|LAB ECO2-SCHOOL Systemic change approach based on a co-design methodology

3.1 Framework

The Roadmap documentation provides the reference point for numerous tasks and activities of the project. Figure 12 presents the overall framework of the project highlighting the key role of the Test Activities proposed by the Chamber of Quality. The Roadmap is a living document that will be developed along with the project and will document the actions made to support the five pilot sites. The aim is to act as a map after the end of the project, for educational organisations that would be interested to follow the NEB-LAB approach.

Eco² Schools as New European Bauhaus Labs

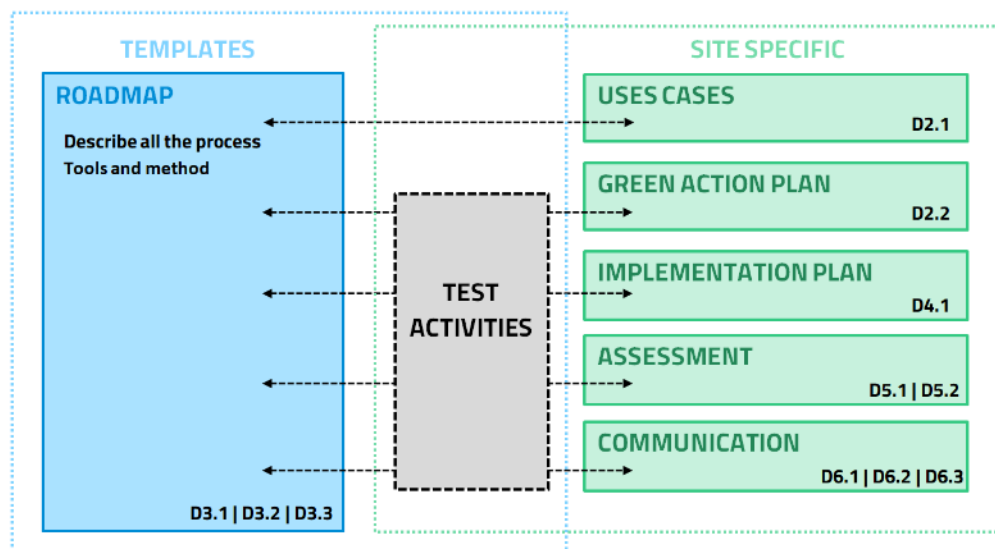


Figure 12 Overall framework of Eco² Schools as NEB Labs with Test Activities for supporting site specific implementation with a roadmap describing all the process, tools and method, and ready to use templates.

3.2 Rationale for the proposed process

In envisaging the transformation of Eco2-schools as New European Bauhaus Labs (= living experimental laboratories for sustainable transition), the focus of the methodology is not only on the boundaries of the educational establishment but also on the living fabric of the community. These educational buildings are intended to become dynamic centers where sustainable practices are not just taught, but actively explored and tested.

At the heart of this vision is the activation of the whole community, a collective effort to foster change and establish new collaborations. NEB-LAB should transcend traditional boundaries, becoming catalysts for collaborative initiatives that involve not only educators and students, but also community members, local businesses, and diverse stakeholders. We believe that this is through this shared commitment that the true potential of sustainable transition can be unleashed.

In addition, the culture of co-design must permeate both the school environment and the wider community, as it allows diverse perspectives to converge to shape innovative solutions. In the context of education, co-design involves active collaboration between students, teachers, and administrators, fostering an inclusive approach to creative problem-solving.

Beyond the school gates, this spirit of innovation that goes beyond theoretical concepts will extend to the community. Collective creativity will become the driving force behind positive change, actively involving end-users at every stage, from the design of the vision of a desirable future to

the implementation of innovative solutions. This user-centered approach not only ensures the relevance of the initiatives but also enables the community to take ownership of the transition process.

3.2.1 Introducing design thinking

Over the past five decades, research in design and management science has been a dynamic and evolving field. Johansson-Sköldberg, and al., (2013, p.127) underscore the substantial progress made in this domain, marking 50 years of dedicated research.

A pivotal concept that emerged during this period is "design thinking" as introduced by Rowe in 1987. It encompasses not only a set of tools, practices, and principles but also a distinct way of thinking and a creation of meaning that has its origins in the design process used by designers.

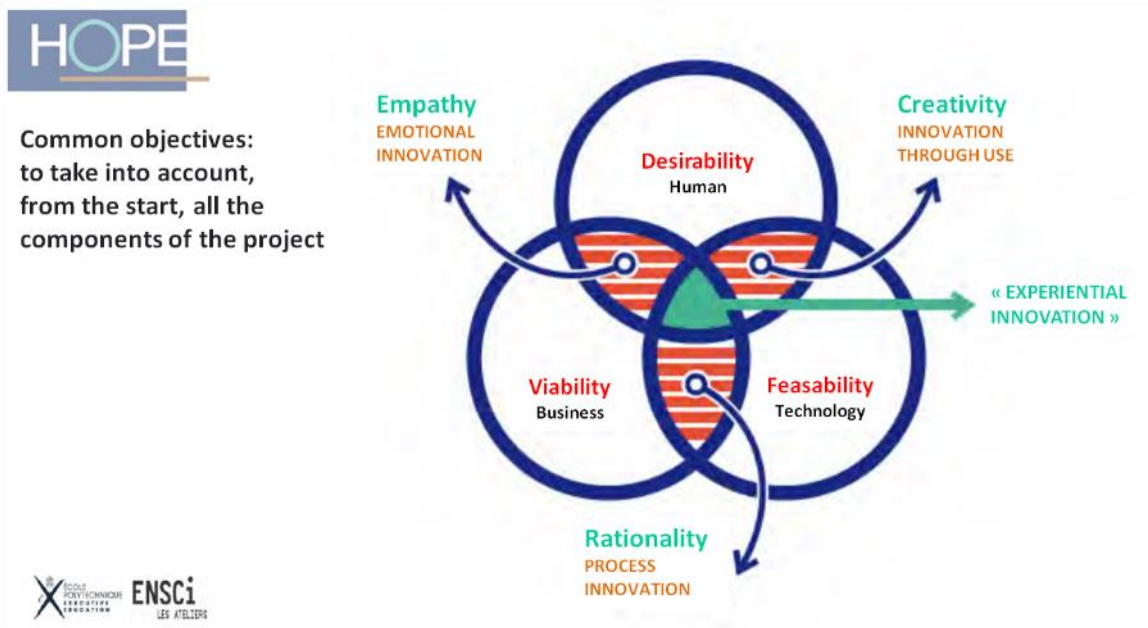


Figure 13 Objectives to take into account from start for achieving a common value systemic change by "Experiential Innovation" – J.P. Piché HOPE XExed-ENSCI

This way of thinking is generally described as a process based on several iterative phases¹, often represented in the form of a spiral process or a loop model, with each stage having a period of divergence followed by a moment of convergence.

These phases may vary slightly depending on the source, but generally pass by 3 spaces with a non linear loop process (you can at every moment go back to the preceding space):

- **UNDERSTAND BY OBSERVING AND INTERACTING** (live on the ground situations)
> monitor and explore the initial situation, document the use case, map the stakeholders.
Empathy: Deeply understanding the needs and perspectives of users. This often involves interviews, observations, and other methods of gathering information directly from the people involved.
Problem definition: Precisely identifying the problem or challenge to be solved, based on the information gathered during the empathy phase.
- **EXPLORE NEW HYPOTHESES** (don't be trapped by own culture, open to new possibilities)
> transform a documented strategic theme into hypotheses; explore, exploit, translate with a storytelling, sketches and models that unlock new hypotheses.
Ideation: Generate many creative ideas without worrying about their initial feasibility. The aim is to explore a variety of potential solutions.

¹ D.stanford design thinking process <https://web.stanford.edu/~mshanks/MichaelShanks/files/509554.pdf>
 Design Council "Double Diamond" <https://www.designcouncil.org.uk/our-resources/the-double-diamond/>

Prototyping: Creating simple prototypes of the ideas selected during the ideation phase. These prototypes can take the form of mock-ups, sketches, simulations, etc.

- **MATERIALIZE = IMPLEMENT, WITH A TEAM THAT COMBINES DIFFERENT SKILLS, INCL. USERS**
> test and validate a prototype, make proof of concept with real users and a potential for upscale.

Testing: Submit the prototypes to end-users for feedback. This enables us to understand how the proposed solutions meet users' needs and to refine the ideas accordingly.

Implementing: Implement the chosen solution, communicate about it, and learn for continue improvement.

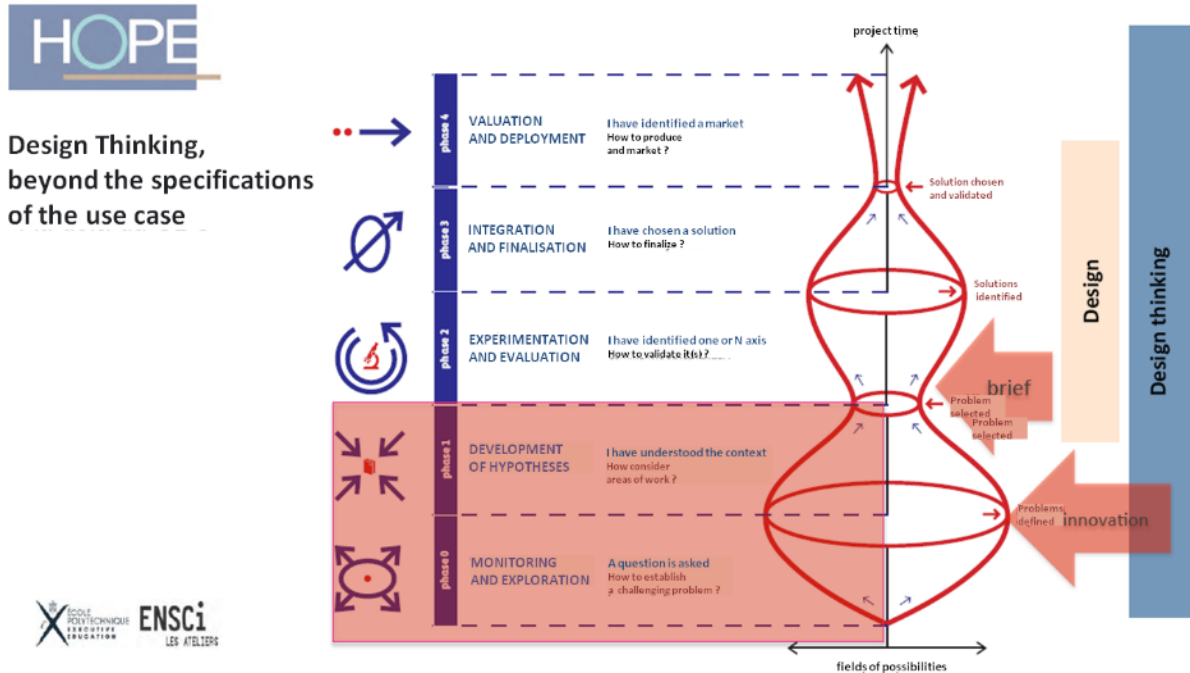


Figure 14 The Design Thinking journey, beyond the specifications of the use case – J.P. Pêche HOPE XEd-ENSCI

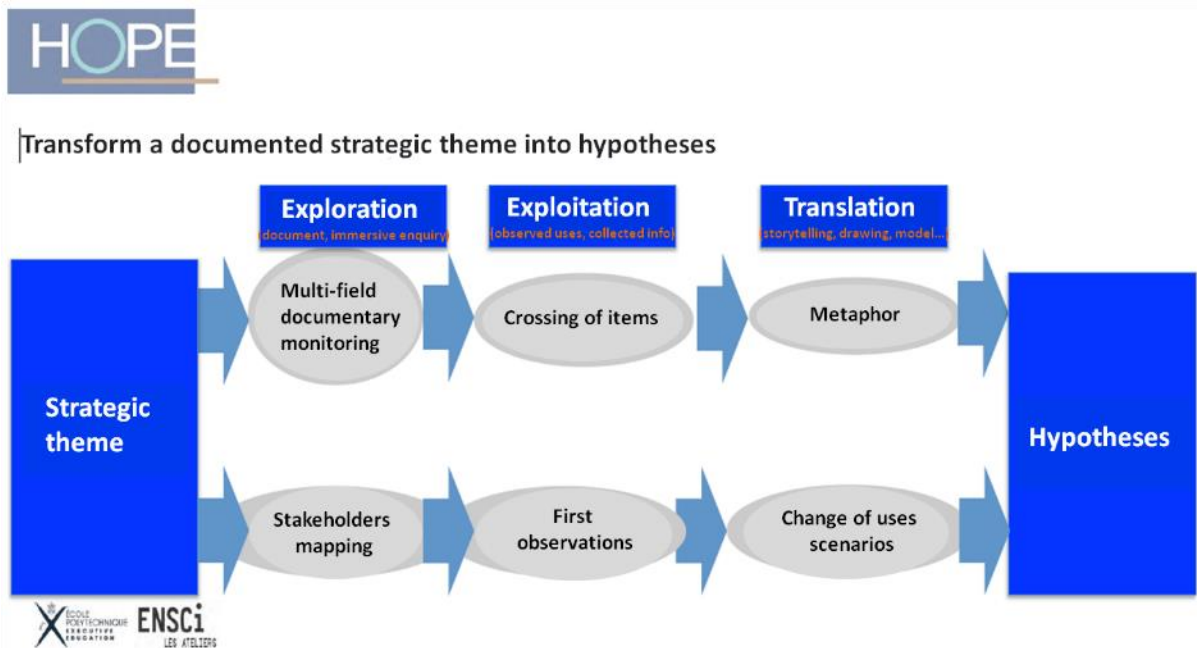


Figure 15 Key steps to transform a documented strategic theme into hypotheses by Design Thinking – J.P. Pêche HOPE XEd-ENSCI

Design thinking is used to foster creativity, innovation, and user-centric problem-solving across various domains, including multi-stakeholders sustainable design introducing systemic change of offers and habits with commons coproduced by communities.

The innovation stimulated by design thinking carries with it an imperative for transformation. In the words of Simon (1969), design is the process of transforming an existing situation into a preferable one.

Schön's concept of design management, introduced in 1983, brings a managerial perspective to the design process. This managerial lens delves into how leaders navigate decision-making in uncertain environments, relying on intuition and cultivating problem-solving skills through reflective action. Within the realm of design management, the emphasis is on agile decision-making that can adapt to evolving circumstances.

Design thinking therefore becomes a dynamic force that drives innovation and guides the organizations into evolving and adapting constantly in response to contemporary challenges. (Brown, 2009) This concept encompasses a mindset, tools, and practices that transcend traditional boundaries. By penetrating organizational contexts, design thinking becomes a catalyst for transformative change, aligned with the imperative to meet challenges, innovate continuously, and shape a better future. It represents a strategic and innovative approach to innovation and sustainability. (Buhl and al.,2018).

Using Design Thinking to Create Sustainable Communities is the most recent development in the field of sustainable systemic change design. Engagement for continue improvement is achieved with a driving principle of Challenges, where participants can bring their own lived experience. They can co-create and put forward potential solutions; with support of a local institutions, sustainability and Design Thinking experts on campus. In the process of doing so, participants frame and reframe the challenge from different angles and perspectives, opening a co-creation dialogue about community needs on and off campus, and their role in contributing to sustainability locally. (Lory Barile and Bo Kelestyn, 2023).

3.2.2 Introducing co-design

In the United States, 'user-centered' design emerged, which means involving the end user in the design process, particularly in terms of the user's knowledge, which serves as a resource for the designer. By involving users, the designer can better understand users' needs, observe them in action, imagine new solutions, and test several alternatives. "Co-design" is a further development of this model (Sanders and Stappers, 2008), using a series of creative techniques to produce new ideas and potential new directions.

In Scandinavia, Participatory design (PD) made its appearance in the 1970s. The first projects were carried out in working environments.

The idea was that the people affected by the design should have the opportunity to influence it: to involve users in co-design as co-designers, treating them as partners. The particularity of this approach is that it was linked to political declarations on the possibility and the right of workers to influence their working conditions (Ehn, 1993).

Today, the 2 terms are often used synonymously in the Nordic countries, as they are similar in terms of the mindset of the experience itself, which empowers the stakeholders present and affected by the design. (Mattelmaki and Visser, 2011) We will follow Sanders and Stappers's use of the term co-design to indicate "collective creativity as it is applied across the whole span of a design process" (Sanders and Stappers, 2008).

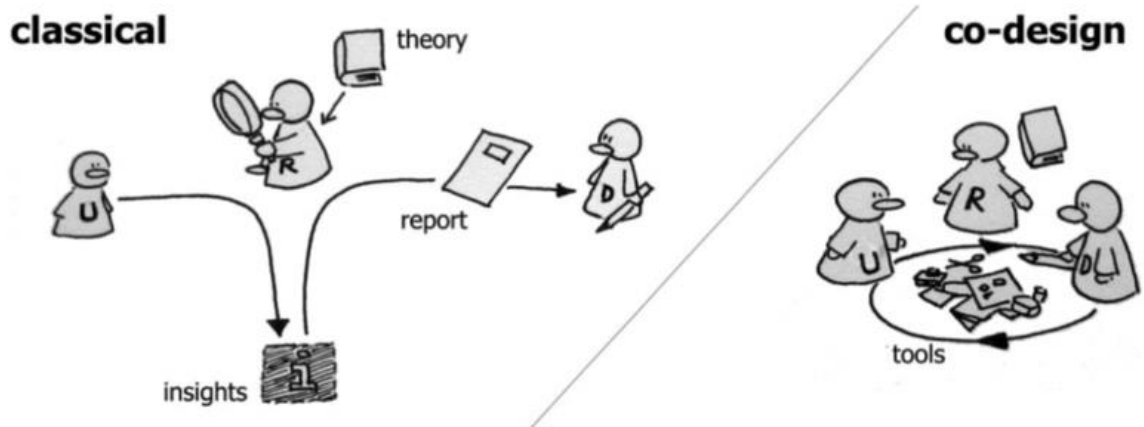


Figure 16 In the classical representation, the user represents the object of study, the researcher observes the user and acquires knowledge and the designer reports on the process and builds a comprehension of the technology and the necessary next steps in creative thinking. In co-design, the roles are mixed and interchangeable between user, researcher and designer. (Sanders and Stappers, 2008).

The use of a co-design methodology represents a strategic and innovative approach to innovation and sustainability. Involving non-designers in the design process provides information on user needs (Vines et al., 2013), enables ideas to be generated, concepts to be developed, (Sanders and Stappers, 2008), and "matters of concern" to be discussed (Björgvinsson et al., 2010). Poudray et al. (2018) point out that design based on citizen participation empowers participants to act in their environments.

The emphasis is either on the locality of the actors (for a situated design), the fact that these participants are also citizens and therefore participate in the political debate and change the balance of power, or that public services and traditional public management are in transition trying new ways to define and implement public policies. Local/regional public actors recruit designers and use design methods for a wide range of systemic change innovation projects (Bonin and Folléa, 2018).

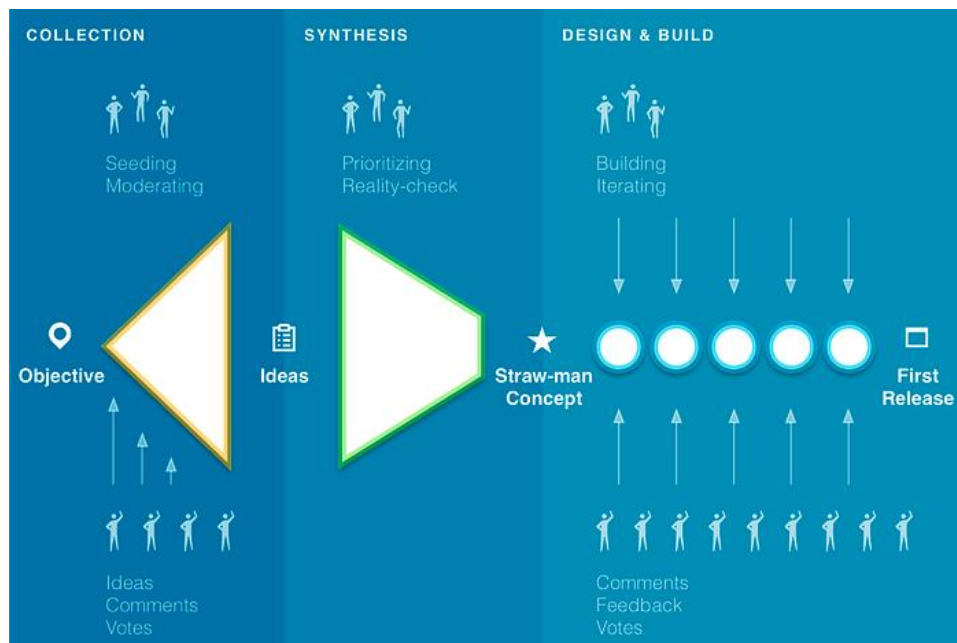


Figure 17 A successful participatory design should include participants in all three phases of a project. (Casali, 2013)²

² Casali, E. 'Folletto' (2015) Co-design and participatory design: A solid process primer, Intense Minimalism. <https://intenseminimalism.com/2013/co-design-and-participatory-design-a-solid-process-primer>

3.2.3 Design sustainability

Sustainable Design

Born in Austria in the years 1920, Victor Papanek has emigrated to the US where, after studies in Design and Architecture, he worked with Frank Lloyd Wright. He publishes in 1971 a landmark book, *Design for a real world: human ecology and social change*. “*In all pollution, designers have a part of responsibility... It is high time that design, as we currently know it, ceases to exist.*”

“If the design takes ecology into account, it immediately becomes revolutionary. All current systems - private capitalism, state socialism and mixed economy - are based on the same postulate: we must buy more, eliminate more, reject more, that is to say, sink the raft of the Earth. An ecologically responsible design must remain independent of any concern for the gross national product.” (V Papanek, 1971, S Vial, 2017 *Le Design éd. Que sais-je?*)

Design for a Better World: Meaningful, Sustainable, Humanity Centred.

“Sustainable design creates long-term solutions and helps societies ensure the well-being of their people and harmony with the environment for generations. To sustain something means to keep it in the current state. And today's current state, no; we don't want to live in today's current state with the kinds of fires and droughts and winds and hunger. No. But we don't let it to get worse. So, the first step is, let's not go any worse, which means stop releasing all the carbon products into the atmosphere or into the land or into the ocean. When I say the current state is not sustainable, what do I mean by that, and how did we reach the current state? More waste is generated in the manufacturing and in the mining and in discarding and in lots of other activities. And it's fine if we had waste of the sort that nature has, where the waste itself is valuable substances that can be reused by nature. What we need to do is stop making and using objects that create great harm to the planet. This means changing the way that we do things, changing the way we make things, changing our designs, making designs that – the stuff can be repairable and can last a long time without being thrown away, that can be upgraded without having to buy a new item.” (D.A. Norman, 2023)³

Social Sustainability

“Sustainability and sustainable design are more concerned with the physical environment than the social dimension. But design should give sufficient attention to social sustainability for balanced development, where “power” is always the core. When it comes to shaping a fair and just distribution of power in society, empowerment is crucial to optimize power allocation” (Core capability of taking decisions and engaging common action). **“Empowerment is the core criterion of participatory design because participatory design changes the power relationship among participants profoundly. While participatory design contributes to social sustainability, it also illustrates the inevitable responsibility of design.”** (M. Zhang, 2022)

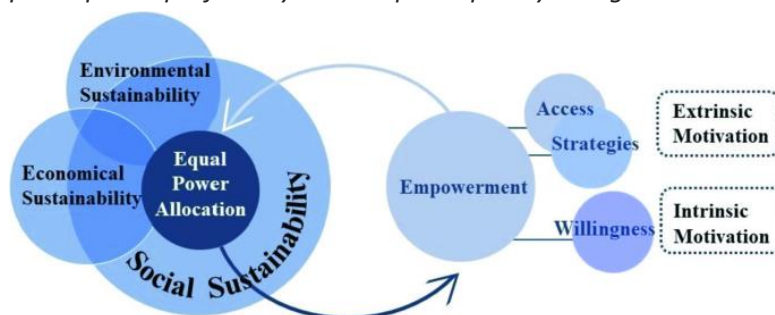


Figure 18 Interactive models of social sustainability and empowerment by design Man Zhang (2022)⁴.

³ Norman, Donald A., *Interaction Design Foundation. Design for a Better World: Meaningful, Sustainable, Humanity Centered*. Cambridge, MA, MA: The MIT Press, 2023. <https://www.interaction-design.org/courses/design-for-a-better-world-with-don-norman-course>; <https://www.interaction-design.org/literature/topics/sustainable-design#:~:text=Sustainable%20design%20creates%20long%2Dterm,and%20even%20better%20%2D%20endlessly%20reusable.>

⁴ Man Zhang (2022), *Design Empowerment: Participatory Design Towards Social Sustainability* https://www.researchgate.net/figure/Interactive-models-of-social-sustainability-and-empowerment-Drawn-by-the-author_fig1_361333078

A common side-step : Form a community and start commitment



9

Figure 19 *Schools need a systemic renovation linked to “education for Climate action”. NEB-LAB common side-step commitment: engage a “Climate neutral renovation Green action plan” by learning-action for systemic change with linking 5 focus areas for sustainability (focus 1: Solutions for retrofitting schools in series/scalable combination of solutions, focus 2: Multifunctional, open for the neighbourhood, focus 3: Other configurations for co-learning better, focus 4: A community engaged in the eco-transition, focus 5: Restore a cycle with nature-permaculture).*

3.2.4 Why use design thinking|co-design in NEB-LAB learning-action process?

Sustainable development is a community driven process of co-evolution and learning that involves design decisions based on a holistic/integral perspective. Design for sustainability is not about prediction and control, but about appropriate participation, flexibility, and constant learning. (Wahl, Baxter, 2008)

Design thinking has been popularized to enable everyone to take part. "It's not an instruction manual on how to design, it's an invitation to get involved." (Brown, 2009)

To better define the problem with users and communities.

In the pursuit of sustainable development, it is vital to understand the subtleties of people's experiences (Buchanan, 2001). To achieve this, it is essential to explore their needs, desires, expectations, and challenges in depth.

Facilitating collaboration is emerging as a key strategy in this endeavor, as Cruickshank (2014) points out. Collaborative efforts not only improve our understanding of users but also create an environment where diverse perspectives converge. This collaborative approach fosters a sense of shared responsibility and ensures that the design process is enriched by the collective wisdom of the community.

In the field of sustainable development, co-evolution and learning are central. Wahl and Baxter (2008) emphasize that sustainable development is a community journey that involves making design decisions rooted in a holistic and integral perspective. Unlike conventional approaches that focus on prediction and control, design for sustainability relies on appropriate participation, flexibility, and continuous learning.

Stimulate creativity and innovation.

This methodology creates fertile ground for cultivating innovative ideas. By actively encouraging a diversity of ideas and points of view, it creates a synergy that emerges from collaboration between individuals from different backgrounds. This collaborative approach not only stimulates creativity but also produces more relevant and inventive solutions.

In the pursuit of innovation, the methodology seeks to identify areas where creative solutions can flourish. Co-design plays a key role in this process, providing a platform for active participation. Bringing together individuals from diverse backgrounds and levels of expertise, collaboration unleashes a generative thought process, as Carlgren, Elmquist, and Rauth (2014) point out. This dynamic exchange of ideas and skills is recognized as a powerful catalyst for creative and appropriate solutions.

Community empowerment and changing ways of working.

Initiating a transformation in working methods is not just about changing the organizational culture; it is a dynamic process of change. When communities engage in this evolution, they enhance their existing skills while acquiring new ones, embodying a reciprocal exchange of knowledge. This paradigm shift turns the community into a learner, as Manzini (2015, p. 68) points out, fostering its empowerment.

The key lies in the ongoing collaboration between stakeholders throughout the process. By maintaining an ongoing dialogue, adjustments are made iteratively, reducing development times, and avoiding major revisions at later stages. This collaborative approach not only accelerates progress but also ensures that the community actively contributes to and benefits from the transformation process. (Norman and Verganti, 2013)

Facilitate decision making.

Facilitating the sharing of information is essential in the process of developing solutions. By actively encouraging acceptance of solutions through an inclusive decision-making process, a sense of ownership is cultivated. Involving users or customers in the early stages of the design process ensures that the products or services created closely match their expectations and needs. This early involvement not only increases the likelihood of positive adoption but also establishes a connection where users feel genuinely invested in the process. This approach not only makes it possible to develop projects, but also to promote their smooth and effective adoption. (Borja de Mozota, 2003)

Series of adjustments to ensure integration. (Cyert & March 1963).

The technical adaptation of tools and methodologies is essential and requires the creation of favorable conditions. It is essential to establish a climate of trust and cooperation, in line with the values of the project, both in terms of general objectives and collaborative approach.

Cultural adjustments are just as essential, given that the introduction of new practices takes place in a context rich in cultural nuances. In co-design, it is vital to preserve the spirit of design. This means accepting the freedom to make mistakes, to experiment with new approaches with different collaborators, while maintaining efficiency targets for each phase and communicating progress transparently.

Moreover, the process requires political adjustments, acknowledging organizations as political arenas where divergent interests contend. Negotiating these political landscapes is integral to the success of transformative endeavors, ensuring that competing interests align with the overarching goals of the initiative. In navigating technical, cultural, and political dimensions, the adaptive capacity of the project is fortified, paving the way for successful implementation and sustained impact.

4. Added value proposal for an interactive support to the Pilot sites: using “Test activities”



Recall of the 4 key steps:

Step 1- **Form a “Core Team” and a “local Community”** that will self-engage in learning-action (together).

Step 2- **Document and explore the initial situation** (learn and observe).

Step 3- **Follow up learning-action and achievements** (permanent reportage).

Step 4- **Make on a limited area a first scalable “proof of concept”** (realize a first beautiful motivating project, visible in a central place with innovative bricks and scalable effects for Climate renovation).

And 3 key phases:

Phase 1- **Uses cases definition** (formulate with a 1st template the pilot site first intention),

Phase 2- **Climate neutral renovation Green action plan** (set up with a 2nd template the pilot site global strategy for Climate neutral renovation, educational goals and key steps, include a time line),

Phase 3- **Implementation plan** (formulate in a 3rd template the pilot site detailed plan for a first real implementation).

In the “Chamber of Quality” first meeting and preparatory exchanges, the invited Experts (committed advisory board) as the pilot sites coordinators (5 first volunteer pilot sites) have enlightened the need to support the formation of local communities and help the different stakeholders to step in the proposed NEB-LAB learning-action activities.

Therefore the Chamber of Quality has decided to take the initiative to propose 4 for start engagement packaged “Test activities”, each enlightening important aspects of the method and step by step involvement. These 4 complementary test activities are supporting the pilot sites first steps in the NEB-LAB process.

4 Test activities :

TA1- Community building: Focus to form your local community and start building a common commitment (set up the core team, map and involve the concerned community with codesign workshops),

TA2- Discovering & observing: Document and explore the initial situation on a limited area of the existing educative site,

TA3- Permanent communication and reportage: Follow up learning-action and achievements, with a community journal (wiki pilot-site dedicated webpage, facebook, newsletter), a person to person (peer to peer) transmission of knowledge and of responsibilities for further advancement, and a continuous improvement progress reporting,

TA4- Use innovative solutions: Dare a 1st step aside to try out and combine innovative solutions (with a community workshop, design & build a proof of concept for learning-action together with existing means).



Figure 20 The 4 key steps co-design method for a community in learning-action

Within NEB-LAB, the Test activities were first each implemented and improved with a targeted pilot site (first experimental implementation). This interaction is helping the Chamber of Quality to improve, consolidate and share a packaged “Learning-action co-design method”. Several tools have been developed to support the pilot implementation of the test activities. These tools are presented in Annex I. The tools will be validated and adopted during the pilot phase (WP4).

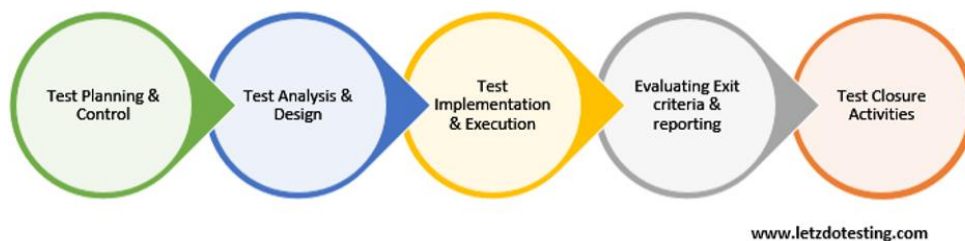


Figure 21 The way Test activities are built, implemented, evaluated, improved, before share as a packaged toolbox.

4.1 Why did we decide to start guidance and community involvement with test activities?

In our quest for continuous improvement and innovation, we have taken the strategic decision to carry out targeted testing activities over a short period. These activities will focus specifically on crucial aspects of the design process that we believe are essential to our growth and development.

4 Packaged “test activities ” to improve our co-design method

Team of experts & pilot sites coordinators

- ✓ • Test activity 1 : Community building
- ✓ • Test activity 2 : Discovering & observing
- ✓ • Test activity 3 : Permanent communication and reportage
- ✓ • Test activity 4 : Use innovative solutions

Test activity 1- Community building; Focus to form your local community and start building a common commitment. Recognizing the importance of a thriving community, we want to strengthen our collaborative efforts. Through these short-term test activities, we will experiment with different community-building strategies, paying particular attention to openness

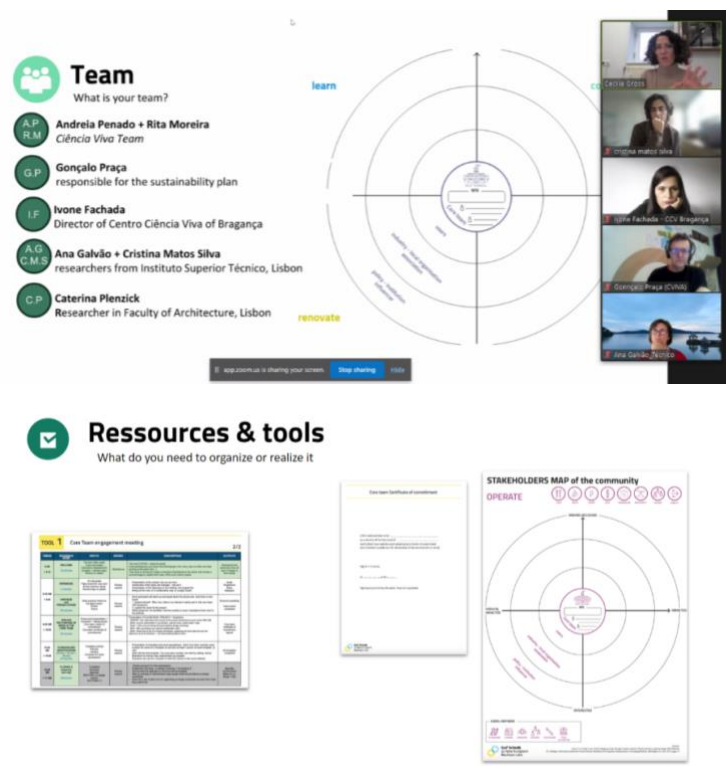
to a variety of stakeholders and their willingness to engage with the project to better understand their sense of ownership.

Test activity 2- Discovering & observing: Document and explore the initial situation on a limited area of the existing educative site. Documentation is the backbone of a well-organized design process. We need to document to communicate to stakeholders and the community that their participation is important. This documentation serves both to collect information and to explore initial situation, to visualize the work accomplished and to show the evolution between the starting point and the completion of the project. Our testing will focus on learning-action with common documentation and exploration practice (empathic observation and real conditions cooperation for discovering unexpected ways in continue improvement).

Test activity 3: Permanent communication and reportage: Follow up learning-action and achievements (with a community journal, a person to person transmission and a continuous improvement progress reporting). Keeping abreast of progress is essential to making informed decisions. Our short-term testing activities will focus on real-time updates that are readily available. This will contribute to a more agile and responsive approach to project management. Most importantly, this update report will be produced by the people involved in the project, allowing us to "speak the same language" and therefore be more effective in getting our messages across.

Test activity 4: Use innovative solutions: Dare a 1st step aside to try out and combine innovative solutions (co-design, make, test and improve a proof of concept with innovative bricks and scalable effects). Thanks to these tests, we will be investing time and resources in creating innovative proofs of concept, starting with the co-design and make of a "Project Room" (proof of concept Lab for learning-action) in the heart of the School. The focus on this activity will enable us to identify the barriers to bottom up implementation of innovative solutions and potential for upscale in the framework of the local "Climate neutral renovation Green action plan" and first Implementation strategy ("Implementation plan").

Screen capture of the 4 "test activities" introductive presentation :





Ressources & tools

What do you need to organize or realize it



Template 1 – Core team Charter of commitment :

Core Team Charter of commitment

Core team Certificate of commitment

As members of the Core team, you need to :

- **Be creative and positive.** To be creative you need to be positive and believe that your project (even if it seems crazy or unreachable) is achievable.
- **Be in an innovative spirit.** That means that he is ok with experimenting; take action quickly, be allowed to fail and to try again.
- **Truly believe in the power of the collective.** So you really think that you can't achieve the project on your own and that you will need the help of your core team and all stakeholders that want to be part of the project so the project can succeed.

Your role is to :

- assist the pilote site manager in :
- Help identifying stakeholders
- use the Excel tool template to fill in and inform all contact details.
- Invite and make sure stakeholders are coming to co-design workshops
- participate in co-design workshops
- Make sure that each step is well documented

You agree to :

- be happy to be part in the core team, respect each other points of views
- Be able to communicate and pass on information
- Find a replacement if necessary

I, first name and last name
 as a member of the Core team of
 certify that I have read the eco2-school project charter of commitment
 and undertake to abide by it for the duration of the mandate (2023-2026).

Signed in 2 copies.

At, on the

Signature preceded by the words "read and approved"



4.2 Detailed presentation of the 4 packaged "Test activities"

This detailed presentation provides the consortium partners with all appropriate information on the 4 "Test Activities" with step by step guidance, to be used tools and templates.

The Chamber of Quality will in 2024-2025 consolidate the Method in a Handbook with a dedicated toolbox, that will be proposed by the follower schools willing to involve in NEB-LAB activities. This material will be further improved bridging with other existing initiatives and networks.

4.2.1. Test Activity 1- COMMUNITY BUILDING: Form your community and start building a common commitment (set up the core team, map and involve the concerned community with codesign workshops)



Short description & main goals:

This “test activity 1” is about identifying stakeholders that are going to be invited to join the project, start a local community with common commitment into learning-action, participate to the co-design of a “Climate neutral renovation Green action plan” and step by step implementation in continue progress.

1st Target is to bring a variety of concerned stakeholders aware of the skills and roles they have in hands (positive handprint). By mapping the community, they will learn about who are the concerned stakeholders of their territory and the possible supportive instances (school board, public body, skills sponsors, co-investing entities...). Think about the local interdisciplinary team as useful skills sponsors that could be involved in the co-design process (depending on the site and local community: accounting and technical team, educative team, purchasing manager, architect, learning landscape designer, engineer, energy designer, scenographer, gardener...)

2nd Target is to bring together the stakeholders and make them understand that different activities are interlinked for Climate-Biodiversity adaptation, give them the opportunity to dare to dream and co-design the opportunities for changemaking renovation of the educational building. By sharing values, co-designing and finding their solutions, they will become a community and learn how to manage a co-design project.

3rd Target is to give the community the opportunity to change their way of working together to a more cooperative and horizontal way. Even if we will give the actors tools for collective intelligence and facilitation, the community will take action through its documentation. For positive common involvement, keep openness to a diversity of views-ages-skills-experiences-responsibilities, with where needed duplication, transmission and rotating roles.

Guidance for step by step implementation

For starting this “Test activity” use the tools, follow the step by guidance and fill in the templates for preparing useful content (see Annex I):

Tool 1- Core team engagement meeting.

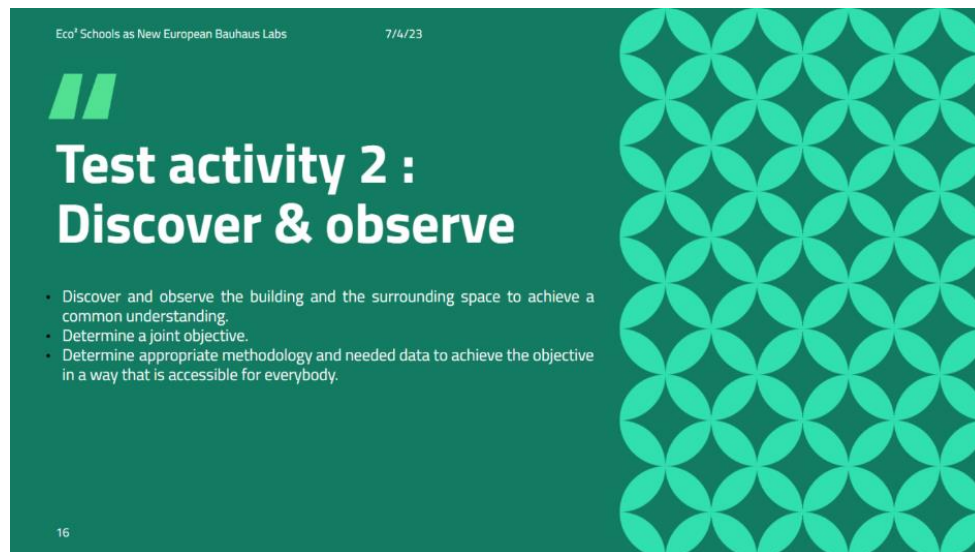
Tool 1- Powerpoint presentation of “Test activity 1”

Tool 1 Template- Excel table of the list of contacts.

Tool 2- Eco² Schools stakeholders map of the community.

Tool 2 Template – Stakeholders Map of the community “operate, learn, renovate, communicate” (in printable and Miro whiteboard format).

4.2.2. Test Activity 2- DISCOVER & OBSERVE: Document and explore the start situation on a limited area of the existing educative site



Eco³ Schools as New European Bauhaus Labs 7/4/23

Test activity 2 : Discover & observe

- Discover and observe the building and the surrounding space to achieve a common understanding.
- Determine a joint objective.
- Determine appropriate methodology and needed data to achieve the objective in a way that is accessible for everybody.

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Short description & main goals:

This “test activity 2” is about discovering and observing the building and the surrounding space to achieve a common understanding of the initial situation. This is a very important step before starting a co-design (for transforming the “Climate neutral renovation Green action plan” into a with clear steps, timeline and resource “implementation plan”. Documenting the initial existing situation is also a rich opportunity for engaging the community into learning-action, with on-site real conditions transmission of learnings, skills and methods.

The 4 key steps are:

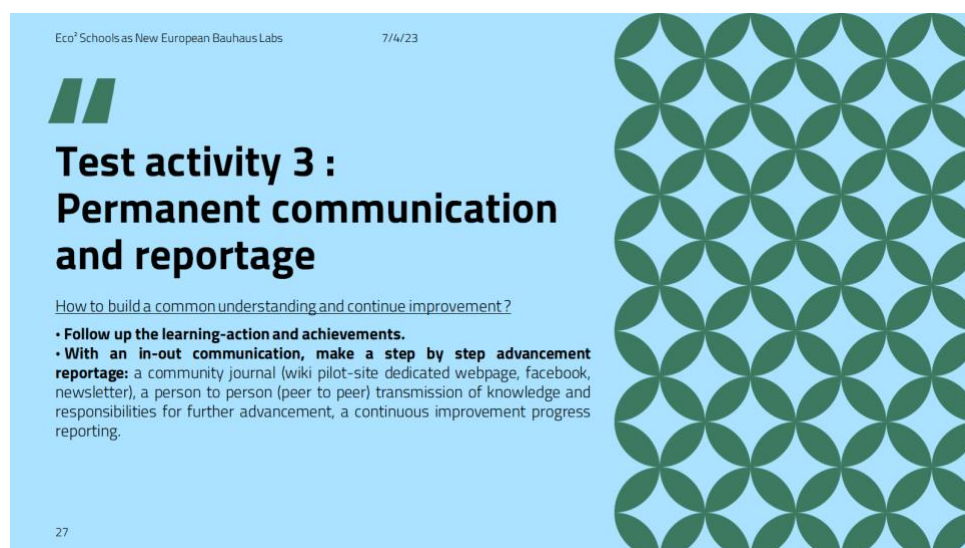
KS1- What to observe?

KS2- Discover

KS3- Document how?

KS4- Analysis and evaluation of the collected information.

4.2.3. Test Activity 3- CONTINUOUS REPORTING: Follow up learning-action and achievements, with a community journal (wiki pilot-site dedicated webpage, Facebook, newsletter) and continuous improvement progress reporting



Eco³ Schools as New European Bauhaus Labs 7/4/23

Test activity 3 : Permanent communication and reportage

How to build a common understanding and continue improvement?

- Follow up the learning-action and achievements.
- With an in-out communication, make a step by step advancement reportage: a community journal (wiki pilot-site dedicated webpage, facebook, newsletter), a person to person (peer to peer) transmission of knowledge and responsibilities for further advancement, a continuous improvement progress reporting.

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Short description & main goals :

Build a living documentation of the project, with figures, photos-videos, interviews and track records of the real on the ground achievements, for taking part to the yearly challenge between volunteer pilot sites (Young reporters, Climate action Flag).

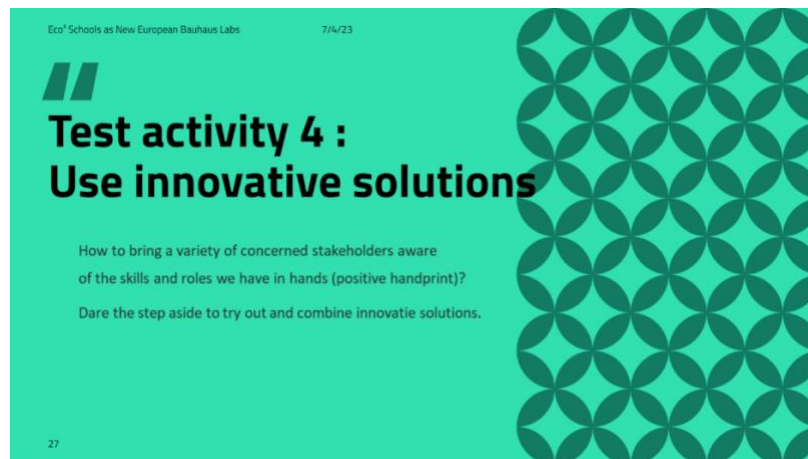
This “test activity 3” is about to:

- Follow up the learning-action on site and achievements.
- Make a step by step advancement reportage with an in-out efficient communication.

Key steps are:

- KS1. Share a permanent documentation, follow up the change.
- KS2. Bring in light findings and co-designed first tests.
- KS3. Report the achievements and improvements.
- KS4. Celebrate, disseminate the learnings, best practices of the year.

4.2.4. Test Activity 4- USE INNOVATIVE SOLUTIONS: Dare a 1st step aside to try out and combine innovative solutions (with a community workshop, design & build a proof of concept for learning-action together with existing means)



Short description & main goals :

This “test activity 4” is about to bring a variety of concerned stakeholders aware of the skills and roles we have in hands as a open involved and careful community (with a possible positive handprint in continue progress).

It is an invitation to dare a first step aside, to try out and combine innovative solutions with a potential scalable effect.

The four key steps are:

- KS1- Define the nature of the proof of concept (where, why, for what, with which framing conditions and supportive resources?).
- KS2- Organize 2 co-design workshops (WS1 for defining the ideas and identifying first possibilities, WS2 for defining a detailed project with supportive resources, conditions of feasibility and minimal exploratory budget).
- KS3- Realize the proof of concept in co-construction (cooperative learning-action).
- KS4- Analyse the first result, evaluate and improve.

5. Lessons, findings, critical issues and next steps

5.1. Lessons learned from the past 9 months step in phase (April – Dec. 2023)

All pilot sites have faced material difficulties for the step in phase in different ways (private schools curriculum, science museum program relation with visitors and external science centres, volunteer engagement of students and personnel on a University Campus, onboarding of citizens, institutions and external stakeholders in a new created educational third place), for commitment of supportive persons with clear authorizations and material support.

This is a very common situation, with 2 main needs we have observed:

- **For start need of on the ground support to the 5 pilot sites (from the Chamber of Quality and work package leaders) for helping them to make their first expected contributions** (as with WP2 for the “Use case definition”, with WP3 for forming a “core team”, “stakeholders mapping”, implementation and documentation of “Test activities”, with WP5 for the Questionnaires and KPI’s, with WP6 for start implementation of the “Communication plan” taking over a rotating responsibility),
- **Needed preliminary clarifying exchange with the School boards (Directors committee) that were during the first months still hesitating to give a clear support to their “Pilot site manager”** (authorizations, dedicated time and resources). A not naturally expressed fear is to be trapped with financial issues of an experimental community driven project.

The Chamber of Quality faced also the challenge to share a good intern understanding of Eco² Schools as New European Bauhaus Labs process, key words and concepts, step by step design thinking for continue improvement, community led co-design method with first test, consolidation of the method, tools and templates for wider implementation.

A fact is that the limited initial available time has brought committed experts to accept being fully engaged in the experimentation, beyond the initial budget.

A significant amount of time has been required for building a common culture within the consortium and with the 5 pilot sites (the Chamber of Quality has participated to many preparative exchanges with WP leaders and Pilot sites managers, co-design sessions). We have decided to dispatch the effort between the different experts with a common 1h meeting every 2 weeks and maintaining a 2 half day work session every month. This can be seen as a necessary “Common Training” and team building during the step-in phase.

This effort has produced very positive effects, beyond the initial expectations, with a big energy shared by the persons involved in the Erasmus+ forward looking project.

- All experts are fully engaged with a very positive supportive posture and ideas for improving the ongoing process.
- The work package leaders have moved forward their point of view beyond their initial WP thematic implementation plan, they are all working on positive adaptations.
- The 5 pilot sites local communities are motivated to be engaged in learning action and are ready for adopting the open schooling concept, with a on the ground step by step co-experimentation process.

The real condition time needed for common supportive actions in the context of the New European Bauhaus Lab is raising questions on the need to have a supportive engagement of national/regional public institutions and sponsors. This is a point for discussion and improvement : how NEB-LAB can be supported as official part of the NEB-Lab of the European Union, for easing engagement of public institutions and sponsors. This will be crucial for the livability of the NEB-Lab supportive offer to pilot sites and follower schools in 2024-2025.

The 4 “Test Activities” proposed by the “Chamber of Quality” have been very positively welcomed by the 5 pilot sites Managers with their local “Core teams”; however this needed some delay related to the need to prepare the implementation, with finding and inviting the needed skills/persons, building a common documentation, writing on the agenda the co-design sessions with some minimum for start resources and support of the Board of Directors the School.

All 5 Pilot Sites have now a motivated “Core Team”, share a common contacts database, a stakeholders map, agenda for advancement and communication; this is a very concrete positive change.

As “Community Building” is a progressive growing process, the on the ground involvement effects will be visible in the 9 coming months.

With the 3 consortium meetings, **we have for each taken the opportunity to discover the pilot site, met its local team and for start motivated community;**

- 7-8 Jan. 2023 Ellinogermaniki Agogi in Palini (Athens, GR),
- 7-8 Sept. 2023 Ciencia Viva Pavilhão do Conhecimento in Lisbon (PT),
- 7-8 Dec. 2023 Sigtunaskolan Humanistika Läroverket in Sigtuna (Stockholm, SE).

Also we have used some days before the consortium meeting for visiting local stakeholders working on parent projects, with an opportunity to be involved in the New European Bauhaus Lab (possible partners sharing systemic innovative initiatives on neighbourhoods/villages with schools and an interest to be involved in a common regional-crossborder living lab).

In Athens:

- **First interest of Public Authorities to make a fruitful connection with Athens public schools in the context of Education for Climate, introduction of “Green Competences framework” in the Greek curriculum with learning-action activities, and commitment as Pilot City within “Mission 100 Climate neutral and smart cities” (it is also the case for cities of Lisbon, Cork and Stockholm).**
- **Partnership with HEDNO Energy Grid network for development of Renewables in schools in a self consumption neighbourhood strategy (+project of Solar Canopy, school busses electrification).**
- **Interest of the municipality of Palini to be involved in a short distance Food Shift with EA school as living lab (bio-canteen).**

In Lisbon:

- **Very fruitful first contact with CCDR Coimbra, partnership EUROACE crossborder region (PT-SP), interest for entering the NEB-LAB with “NEB Network of Villages of the Future” (possible involvement of 3 villages with already active schools).**
- **Connection with Politecnico Lisbon, NEB Lighthouse demonstrator Bauhaus of the Seas (both teams are very motivated in establishing a proof of concept of Eco² Schools as living labs in coastal cities neighbourhoods reconnecting with Sea natural ecosystems).**
- **Partnership with Bambu Parque, South Portugal (= biggest Bamboo plants nursery in Europe), skill sponsor for development of a bamboo solar Canopy and circular water cleaning proof of concept installation (natural climatization, carbon negative biosourced material for construction).**
- **Partnership with Marveao-Beira former train station, linking 2 villages with a school and educational third place, driving Climate neutral transition in a cross-border Natural Park.**

In Stockholm:

- **Partnership established between SSSL and Signify (Philips innovative smart natural Lighting, LIFI low energy internet), interest to extend benefit of living lab to the consortium with 5 pilot sites.**
- **Contact established with “<https://lifelinkschools.org> network”, with a Swedish interest to step in NEB-LAB initiative (invitation to a conference for presentation to the network).**

Each travel was an opportunity to organize a live co-design workshop with the hosting pilot site. This has been prepared and facilitated by the Chamber of Quality, in connections with the different WPs, for supporting the local “Core Team”.

The Pilot site is invited to be the central point of attention, by:

- presenting in details its “Use case”,
- introducing first intentions related to the “Climate neutral renovation Green action plan”,
- showcasing on the ground already engaged exemplary initiatives with involved students, educative team, local partners that develop with the school innovative solutions for reduced footprint on energy consumption and augmented positive handprint on the environment.

The first co-design workshop in Lisbon was dedicated to the launch of the NEB-LAB internet site and “Communication plan”, as a first test of the “Core team” supportive tools and “stakeholders mapping”.

The second co-design workshop in Sigtuna was dedicated to a collective creativity session for defining the possible dimensions and services of a “Project Room”, located in a central visible place, offering adapted space for shared documentation, co-design and first tests experimentation as start point for Climate neutral renovation learning-action.

- Common goals: Get ideas for SSDL on how to create their documentation space (ideas may be useful to all pilot sites), experience a co-design workshop with its essential ritual and continue to create a common language.
- Proposed challenge: How might we turn the former teachers’ house into an open demonstration and test center involving the community?

An observed positive result is that the whole consortium being present as visitor onsite for two days is felt as a significant moment for the “Core Team”, that makes the participation into the European program very visible and more concrete to the local community (present stakeholders feel pride and awareness of responsibility to achieve the promise of the pilot site).

Both the community and the members of the consortium (including the other pilot sites) come back from these visiting exchanges with the feeling no more to be sole, but being an essential part of a solid common positive change.



Figure 22 Students at the heart of the target can achieve nothing sole, schools as neighbourhoods need a community in learning-action

5.2. First findings with the experimentation of the 4 Test activities

First finding is that however Schools are not prepared and from beginning ready to think a Climate neutral renovation as possible, they are now conscious and motivated enough to start involvement

by learning action. The co-design method and step by step guidance is a decisive key for engagement. A progressive start with a limited proof of concept, with existing means smart combination of innovative solutions ready for upscale, is perceived as a real achievable target approach that receives a good will and natural common sense support (even from the board of directors). Continue improvement is the decisive key for real positive impact, with the need to be challenged with easy to use guide lines, tools and templates, for non-profit independent advisory guidance and support from the “Chamber of Quality” Experts.

NEB-Lab Eco²-Schools step by step implementation, using design thinking process (where you can move freely from one to the other stage and go back as needed), is a spiral. The “Climate neutral renovation Green action plan” as its progressive “Implementation plan”, the “proof of concept test” are to be permanently documented, measured, maintained with care, questioned for improvement, co-invested and transformed in use (change of habits, infrastructure and services). This continuous improvement is possible with the 5 thematic focuses of Eco²-Schools;

- 1- Climate neutral renovations in series,
- 2- Schools open for the neighbourhood,
- 3- Multifunctional adapted for new uses (learning landscape),
- 4- A community in transition (Eco-schools, Eco-Campus Green Flag)
- 5- Reconnecting with Nature, permaculture.

The circular approach we are willing to demonstrate with Eco² Schools as New European Bauhaus Labs is a forward looking improvement of conventional education processes, thought for the Industrialized Society with a standard top down linear approach. It is a response to the needed Climate-Societal change, in line with the newly published “Green competences framework” as “open schooling”, “flipped classroom” and “person to person recognition” of skills, that are transmitted and continuously improved linking 3 generations ⁵.

We are very motivated as we see the systemic change we can initiate with renovation of Schools, that can become living labs for neighbourhoods/villages in transition, at 3 generations.

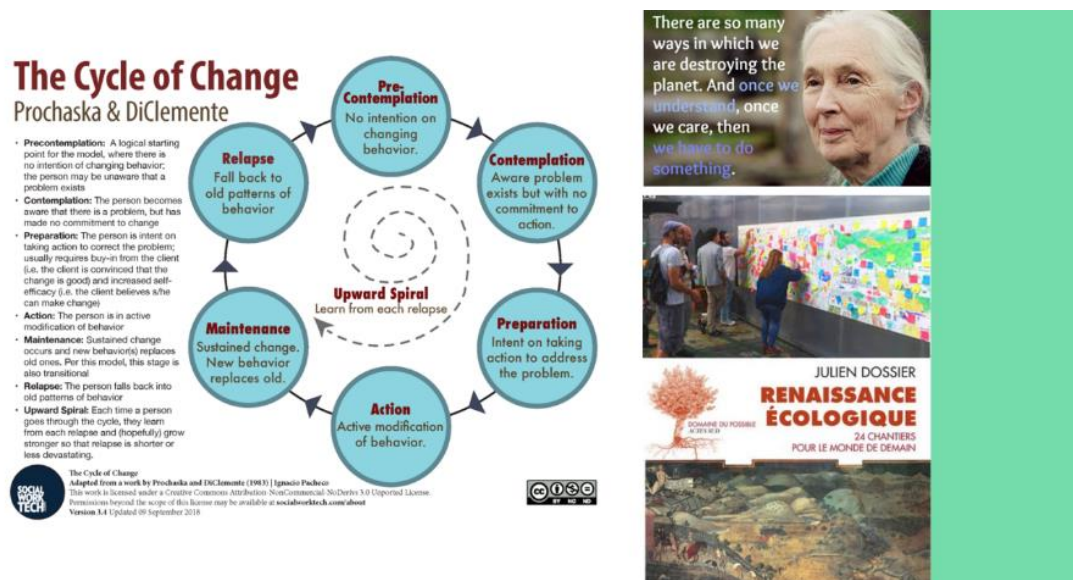


Figure 23 “Cycle of Change” (Prochaska & DiClemente, 2012)

⁵ <https://green-comp.eu/>; <https://www.openschools.eu/>; https://en.wikipedia.org/wiki/Flipped_classroom; <https://www.open-badges.eu/fr>; <https://openbadgepassport.com/>; <https://socialworktech.com/2012/01/09/stages-of-change-prochaska-diclemente/>



Open Schooling in the NEB-Lab Eco² Schools context
 = a "Climate neutral renovation Green action-plan" driven bottom up with local communities, by continue improvement and learning-action.

S. Sotiriou : "This process is as a Nuclear chain reaction, you have to concentrate big efforts, quantity of energy. But, when the reaction starts, it delivers much more energy than you can self imagine, and the self feeded reaction is difficult to stop."

Figure 24 The journey for learning-action by open schooling, asks for significant supportive efforts for starting the process but delivering more energy when fully developed as an ecosystem.

5.3. Critical issues for on the ground community engagement on all 5 pilot sites

A main critical issue is the needed time for the community to be engaged in the learning-action process by following the first steps. As all 5 pilot sites have recorded difficulties at different levels for starting their "Core Team" and activate a "multi-stakeholders community" to be invited in a first co-design workshops and to involve for start the first actions.

This is directly connected to efficient communication; that is central for getting the community into feeling consciously part of the project, and becoming an active contributor. Don't forget to prepare your rotation in communication, for being ready to share information on your project, learning and achievements, when your turn will come (every 5 weeks period).

As possible organize a rotation and transmission of responsibilities/tasks so that a growing number of persons will experiment different roles, and will learn to work no more as fragile individuals but as a open careful and creative positive minded community.

Don't miss to identify and invite the required experts, resources and supportive actors you will need to co-design a best efficient project with a as simple as possible implementation (for start and for achieving a first steps win situation to celebrate together).

For supporting the pilot sites Managers in the development of their local project, the "Chamber of Quality" is adding a new kind of regular meetings in the form of a "Work Room" (first by video-conference, but also in presence with a few visits at the key phases of development of each pilot site). We will see how we can best organize the work in this "Work Room" with WP4 in charge of to develop local "Implementation plans" with the 5 pilot sites.

This "Work Room" will be also used for bringing together the pilot sites' communication persons in the form of an "Editorial Team", for easing common communication issues, with involvement of WP6.

5.4 A milestone for recognition of NEB-LAB: NEB Festival 17-21 April 2024

NEB-LAB is willing to be present on the NEB Fair during the Festival of the New European Bauhaus 2nd edition, 17-21 April 2024 in Brussels (Parc du Cinquentaenaire).

We have reserved a big stand (<10 m²) in the central exhibition space “Laboratory and project showcase”, with intention to:

- **Showcase the 5 pilot-sites** with a video presentation, interviews and rotating online conversations with the local “core teams” and “communities”. Our intention is to organize rotating online presentations of the 5 “Climate neutral renovation Green action plans”, give an overview of the onsite first experimentations, with independent side events being organized with the pilot sites as festive events with involvement of the local community bringing visibility on the NEB-Festival in the 5 cross-border regions (from Palini/GR, Lisbon/PT, Courcy/FR, Cork/IE, Sigtuna/SE).
- **Host focus conversations bridging with other NEB initiatives** that are willing to connect and support Eco² Schools with common forward-looking activities (ex. “Klimaatsteelplaats” NEB Award 2023”, “School 2030” |BE, “Foodshift” |GR, ...), as with territories/cities that are willing to join the NEB-Lab with “follower schools” ready to step in the program.
- **Two side conversations will be organized** in the context of EUROPAN#17 Living Cities connecting Eco² Campus Microville112 with the NEB Festival “Parc du Cinquentaenaire”, and in the context of the first recently launched NEB Chapters focusing on the challenge of for climate neutral renovation community driven learning-action.
- **Organize a press and public conference** for official presentation of NEB-LAB program and first results, with visiting institutional exchanges (EU institution, politics, networks, partner foundations).
- **Organize exchanges with other NEB forward looking EU funded projects** (in presence and hybrid online), for enlightening common perspectives using NEB-LAB as a added value platform (ex. network “NEB Villages of the future”, NEB lighthouse demonstrators “Bauhaus of the Seas” |PT-IT-BE-DE and “Cultuurcampus Rotterdam Zuid” |NL, ...).

This opportunity of the NEB Festival 2024 (2nd edition and main communication before the European Elections) is an added value milestone for recognition and further development of Eco² Schools initiative as officially being part of the NEB-Lab of the European Union.

* We are ready for this and are willing to be prepared with an informal exchange meeting in Brussels with representatives of the European Union (Erasmus+, Joint research center with representatives of New European Bauhaus and Education for Climate teams, + possibly representatives linking with Mission 100 Climate neutral & smart cities, DG Regio, European Urban Initiative, Interreg, EU Bank of investment...).

The will of this is to present the NEB-LAB forward looking experimentation and opportunities for extending the impact with follower schools, as the on the ground need of the 5 pilot sites to have a supportive incentive mechanism for unlocking investment by own means for a true ambitious Climate neutral renovation of existing schools (as conventional banks and institutions are not totally ready for this at this moment).

5.5 Guidance for next steps: 9 months implementation and onsite test (Jan. – Sept 2024)

What we are willing to demonstrate with the next steps? Actually, we are so far now, that we need to engage a first visible change. This will be essential for involving a whole community in the step by step change, by learning-action.

Added value proposal: co-design and make a “project room” in the heart of your school

This is the challenge introduced by the co-design session in Sigtuna, where we worked on the added value proposal to install in each pilot site a “Project Room”.

This “Project Room”, located in a central visible place, will offer adapted space for shared documentation, co-design and first tests experimentations as a start point for a “Climate neutral renovation Green action plan” step by step implementation, as community in learning-action.

* Collected ideas : A “Net zero house”, a “students project”, “not smart technology, fabric first”, a “wow effect, magic, beautiful”, an “experience and adventure” (out of comfort zone, but with guidelines), a “place for listening, not anonym”(makes noise, amplifies), a “place for transfer, with the message”, “invitation to trying something new” (don’t know from start but reveal), a “connection to nature, important to have intergenerational involvement”, “bringing close to the center, a strong connection with Nature”, “water is stronger than land, follow the strength of nature”, “have something bigger, essential”, “put all ingredients together, smell-feel-exchange”, a “construction space where all is possible”, “in forest but with energy coming from nature, it is open to everyone” (no door), a “space for information, inside as outside”, “information is build with added value from the visitors”, a “living construction, of the community”, “moving forward, finding new tracks”, “doing for others, all living creatures”.

The challenge will be to co-design and make, with no more than 2 workshops, this “Project Room” which will become an indoor-outdoor extended space capable of hosting a diversity of activities, linked to a “common permanent documentation room” with at least 2 walls;

- **A first wall for the installation of a living documentation**, with all necessary key information (plans, documents, photos, ...), in 3 parts: story of the past, reading the present situation, the future improvements (expected, under development).
- **A second for drawing a fresco of the Climate neutral renovation of the school**, with a story telling and time line for step by step implementation and continue improvements.
- Other developments are free for co-design, with sense making adaptation to the pilot site situation.

Think positive on what your community will propose to start a desirable transformation linking this “Project Room” with the school Climate neutral renovation Green action plan as a whole.

But for the first steps, keep it very simple for delivering a real scale first result in 3 months (visitable during the NEB Festival 17-21 April 2024).



Figure 25 Example of Marveo-Beira's “Project Room” (PT-SP)

A few examples for inspiration:



Living fresco Renaissance Ecologique in the Climate Museum on Mont Aigoual (FR)



Space for learning-action in the heart of BelXpo on Climate Change adaptation in Brussels (BE)



The natural environment of Green School Bali, as a free space for real use learning-action



A roof terrace adapted for learning-action with solar energy (USA), a worksite school during its renovation (FR)



ASLA Headquarters Green Roof, before / after (USA)

This challenge is part of the step by step process each pilot site should now engage efficiently:

- ✓ Check that you have formed your “Core Team” (hold your start meeting) and mapped the local community you think useful to involve.
- ✓ Start the document and explore the initial situation work, with involving your community (as best it is to focus on the first building you will work on with a Climate renovation Implementation plan).
- ✓ Use your pilot-site web page and future “Project Room” (this can be a very simple test with post its, drawings, documents) for following up learning-action and achievements with a permanent reportage and shared documentation (online and material).
- ✓ Make on a limited scale a proof of concept within the enlarged perimeter of your “Project Room” (inside/outside, it is your free choice).

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Annex 1. Templates and tools for test activities of the 5 pilot sites

Test activity 1.



Team

Successful communities' development is based on **successful relationships**. **TRUST** is needed between various involved stakeholders.

This is why they need to know **WHO** the other stakeholders are and **WHY** they are involved in the project. They also need to know each other so they can **WORK TOGETHER** and become a community.



Site manager

- Overview
- organize the Core team
- Be in an innovation spirit
- Truly believe in the power of the collective



Core team

> 6 peoples

- identify stakeholders
- organize communication
- organize workshops
- Document each step

Stakeholders (Users and Partners, Sponsors)

- Stakeholders are persons that represent a group their institution or a section of society like people, associations, companies, academics, or authorities.
- Each stakeholder can only represent one group at a time.
- Stakeholders are affected by the project.

POSTURE:
 1. **CURIOUS**
 2. **OF ADVISE**
 3. **ACTOR**
 4. **PARTNER**



Steps

Describe the Type and time



TOOL 1 Core Team engagement meeting

1/2

Why using this tool ?

It's important that you create a nice atmosphere with your core team so they can understand the role they are about to play in this project. Also, with your Core team you will :

- share values for the project
- formulate creative challenges
- identify stakeholders, you can extend a comprehensive list of people and groups who may be affected by, can affect or have an interest in your project.
- set up the collaborative spirit with rituals you want to have during the project.

You can use the stakeholders identification sequence at the end of each co-design workshops, so your community can enhance the map! Stakeholder identification with your core team will provide a starting point in building the relationships you need for successful project development because it will be used as a conversation tool. Discussing about people, organizations, associations and about their relations is an important part in framing the collaborative project.

When to use this tool ?

As soon as you have identified your core team.

How to use this tool ?

The tool is a sequencing of a meeting with 6 columns :

TIMING : *it's the time needed to complete the sequence. It is better if you write the real time - for example, if you start your meeting at 2 pm, write 2pm and for the next sequence write 2:30 pm if the sequence lasts 30 mins*

SEQUENCE NAME : *it's the sequence name and duration of the sequence.*

INPUTS : *It's the resources you need to complete the sequence. It can be equipment, video projector, paper board, templates, Power point presentation, documents, pictures, figures ...*

ENVIRO : *It's about the environment of the room, how furnitures are arranged, how participants should behave - for example if they are standing up or working seated in small group (that means that you need to prepare table islands)*

DESCRIPTION : *It's the description of the sequence. What you will be doing, what participants are supposed to do. Use it like a reminder of what you need to ask, what you need to ask them to do...*

OUTPUTS : *It's what you need to achieve at the end of the sequence but above all, it's the results you need to produce so the work is completed.*

Sequencing a meeting will force you to be efficient. The main rule is that even if the previous sequence has not been completed, at the end of the allocated time you must move on to the next sequence.

TOOL 1

Core Team engagement meeting

2/2

TIMING	SEQUENCE NAME	INPUTS	ENVIRO	DESCRIPTION	OUTPUTS
9AM >9:10	WELCOMING 10 minutes	Tea and coffee ready (Cups and sugar) Instructions displayed (A3 template+ painters tape) Pictures on table	Standing up in circle	TEA and COFFEE + welcome words Invite participants to put down their belongings in the room, have a coffee and start working at the same time ;-) They have to choose an image to introduce themselves to the others and choose a second image to explain their vision of the eco2School project	Participants feel welcomed, they all have 2 images in their hands.
9:10AM >9:45	INTRODUCING 5 minutes	A3 with goals Paper board for rules and for the common canva Painters tape or patafix	Plenary session	Presentation of the context: why we are here Introduction of the pilote site manager : who am I Presentation of the objectives of the meeting, the programme Bring out the rules of the meeting on a collaborative way on a paper board. (exple : listening, be there, no phone, etc...)	Goals Programme Rules displayed
9:45AM >10:05	ENERGIZING & PRESENTATIONS 30 minutes	Draw a picture frame on the paper board Scotch Post-it	Plenary session	Each participant will stand up and speak about his picture and stick them on the board 1. Present himself : Who I am, what is my interest in taking part in this core team with his picture. 2. Explain his vision for the project. While doing this, the facilitator note key workds on post it and place them next to the pictures.	Everyone speaking Value board completed
9:45AM >10:05	EXPLAIN THE PURPOSE OF BEING IN THE CORE TEAM 20 minutes	Power point presentation ? Computer + videoprojector Core team charter of commitment Core team Certificate of commitment	Plenary session	Presentation of Eco2SCHOOL PROJECT + Questions -CONTEXT : One slide about the context of the project (Eco2school, as part of the NEB LAB) - WHO : present stakeholders (coordinator, sponsor team, stakeholders map) - WHAT : What you are doing with participatory design workshop - WHY : Why you believe you need all stakeholders skills - HOW : Road map of the 3 co-design workshops, explaining the final objective and the objectives of each workshop + the deliverable feedback times	Core team certificate of commitment signed
10:05AM >10:40	STAKEHOLDER IDENTIFICATION 20 minutes	Templates printed Felt pen Camera Computer for excel spreadsheet	Plenary session	Presentation of templates and excel spreadsheet. Each Core team member need to place his name on a template so we have at least 1 person on each template. (5 min) Start with the first template. The core team member can start by adding names Brainstorm to find as many stakeholders as possible Someone can use the computer to write the names on the excel software	All templates completed
10:40AM >11 AM	CLOSING & PREPARING NEXT STEPS 20 minutes	Templates Gummies Agendas INPUTS for co-design session (list of tasks ?)	Plenary session	Thanks everyone for their participation Explain the next step : co-design workshop 1 & workshop 2 Synchronise the agendas so everyone will be available Start by pointing on stakeholders maps people that should attend co-design workshops Show a list of task to do for organising co-design workshops and ask them what they want to do	Agendas synchronised (dates for co-design workshop) Keep all inputs for co-design workshop



Tool 1 – Eco² Schools stakeholders map of the community (check list, guidance for filling in the map):

TOOL 2 Eco²-SCHOOL STAKEHOLDERS MAP of the community 1/2

Why using this tool ?

To identify a comprehensive list of people and groups who may be affected by, can affect or have an interest in your project. This can be used for consultation purposes, impact assessment and partnership assessment as the project evolves.

Stakeholder identification provides a starting point in building the relationships you need for successful project development and for successful community development.

Relationships are the most important element of any successful community development program. The best-designed plans will falter if there is insufficient trust between the various stakeholders involved. It is therefore essential that all parties know who the other stakeholders are, know why they are involved with the project and for all stakeholders to learn to know each other so they can work together to develop programs acceptable to all of them. Consultation is both the best means of coming to understand other stakeholders and of building good relationships with them.

When to use this tool ?

Stakeholder identification is a dynamic process – some stakeholders disengage, others join in at different stages of project development. There is no such thing as a static list that can be filed away once all stakeholders have been successfully identified.

Take care to remember internal stakeholders – for example your own employees – form an essential part of the community and should be kept informed and listened to just as much as external stakeholders. This will enhance employees' feeling of "ownership"

In addition, many external stakeholders gain knowledge of your activities through interactions with your employees, so it makes sense to keep your own staff engaged. From the earliest exploration stages of a project, you should start to build your stakeholder list, and then revise the list whenever there are any changes in project design, scope, social environment or activity, right through to closure. Revise the list systematically at least once a year, more often if changes are observed.

How to use this tool ?

1. You need to identify your core team.

A Core team is ideally composed of 6 peoples. We are talking about a team and not individuals that are together. They collectively need to represent all points of views.

Individually, each person needs to be responsible of a part of the problem.(Renovating, learning, operating) This may be a level of direct responsibility on the answer, but they must be able to guarantee success. They have a leadership role to play. (exemplary attitudes, true conviction that participants will produce collectively a better result than individually, they need to be aligned for decision making) The Core team is also important for identifying and analyzing stakeholders.

2. Identify all stakeholders

Your initial objective is to identify everyone and every group that might have an interest in the project in order not to miss anyone out. Later, you will ascertain who has an enduring or deep interest in the project, but to start with, you should aim for inclusivity.

In all four functions, you will need to identify as many structures or component as possible that are part of the landscape of your project. You can start alone or with the sponsor team.

We recommend that you use 2 tools with the same data. Both tools will be used all along the community building.

TOOL 1 : is an excel document where you will keep all the contact details.

BELONGING : renovate, learn, operate. (some stakeholders can have more than one belonging)

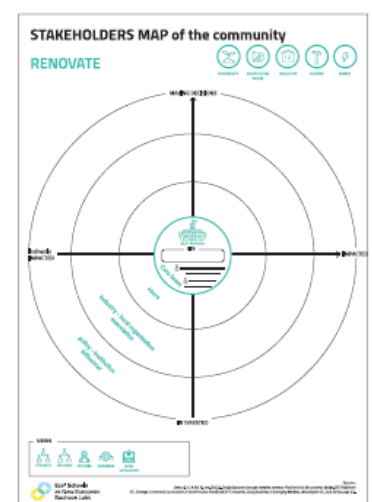
ROLE : indirectly impacted, impacted, interested, making decisions

POSITION : OPPOSED, CURIOUS, OF ADVICE, ACTOR, PARTNER

TOOL 2 : is a template : visual tool that can be use in collaborative meetings.

TOOL 1 : EXCEL STAKEHOLDER TOOL

TOOL 2 : TEMPLATES



TOOL 2

Eco²-SCHOOL STAKEHOLDERS MAP of the community

2/2

STEP 1

Brainstorm existing stakeholders. This is best done by a team of people who have interactions with parties external to the organization. Every project already has existing relationships – list those to begin with. Using the checklist, name the stakeholders for the project you are working on.

Some stakeholders are easily identified, such as people in the neighbourhood of the project, interest groups in the country where the project is located, local and regional government people, and so on. Do not forget that employees are also stakeholders and need to be considered for consultation plans. Other stakeholders may be more difficult to identify, requiring you to think more laterally about how you establish and maintain relationships with them.

Examples of these may be NGOs or academics situated in locations remote from the project but nonetheless with an interest in it.

Use tool A to fill in all contact details.

Use tool 2 to brainstorm and to start placing stakeholders on 2x2 quadrant:

-indirectly impacted/impacted,

-interested / making decision.

if you know the position they want to take in the project you can give them the color associated.

STEP 2

Organize an actor map workshop with your core team to expand the list.

Be inclusive. Do not worry about numbers – they will even out in the end. Worry more about leaving people out. It may be helpful to consider the following questions to ensure the widest number of possible stakeholders are included:

- Who will benefit from the project?
- Who will be affected by negative impacts of the project?
- Who will be responsible for implementing measures to mitigate the negative impacts?
- Whose co-operation, expertise or influence would be helpful to the success of the project?
- Who are the most vulnerable, least visible and voiceless for whom special consultation efforts may have to be made?
- Who supports or opposes the changes that the project will bring?
- Whose opposition could be detrimental to the success of the project?
- Who might have resources to contribute?
- Who will make decisions?
- Who will the project impact (positively or negatively) and whose support or lack of it might significantly influence the success of the project?

STEP 3

Check that you have included all the possible stakeholders that you and your core team can think of. Also check that you have taken care to include women and vulnerable and/or marginalized stakeholders, not just the influential members of society.

Organize a stakeholder mapping workshop with your core team or other stakeholders (see TOOL 3)

Stakeholders ideas of categories.



Communities

- Students (from children to adults)
- Families of students
- Nearest neighbours
- The local community near your site
- Others



Schools

- Local schools
- From open schooling community
- National schools
- Others



Associations

- Local associations
- National associations
- Educational organizations
- Fraternal organizations
- Charitable organizations
- Organizations serving children
- Others



Universities

- Local universities
- Design, architecture, urbanism
- Ingeneering



Research labs

- Design
- Territory
- Transitions



Industry

- Individual companies
- Local companies
- National companies
- Competitors
- Suppliers
- Innovators
- Industry associations
- Business associations
- Others



Government officials

- Local officials (elected and appointed)
- Regional officials
- State officials
- National officials
- Opposition officials

- Administrative representatives from each of the ministries based in your local area or region

Internal

- Board of directors
- International Advisory Board
- Senior management
- Unions or other organized labour groups
- Legal team
- Health, safety and environment teams
- Human resources team
- Medical services team
- Logistics team
- Employees
- Retirees
- Families of employees
- Others



Eco² Schools
as New European
Bauhaus Labs

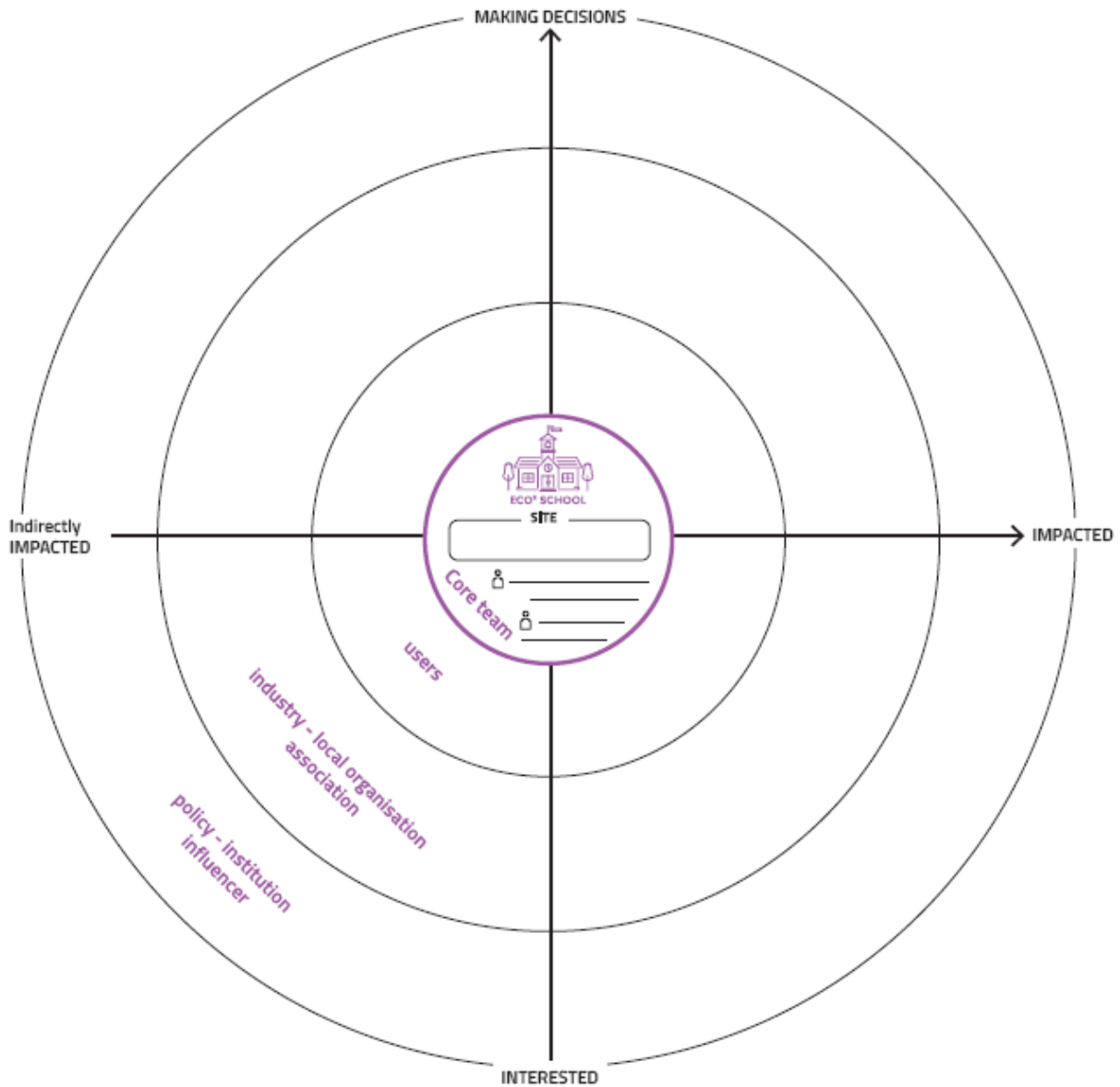
Sources :
Jones, P. H., & Ael, K. van. (2022). Design journeys through complex systems: Practice tools for systemic design. BIS Publishers
IFC, Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets,
Washington DC, June 2010, page 27.



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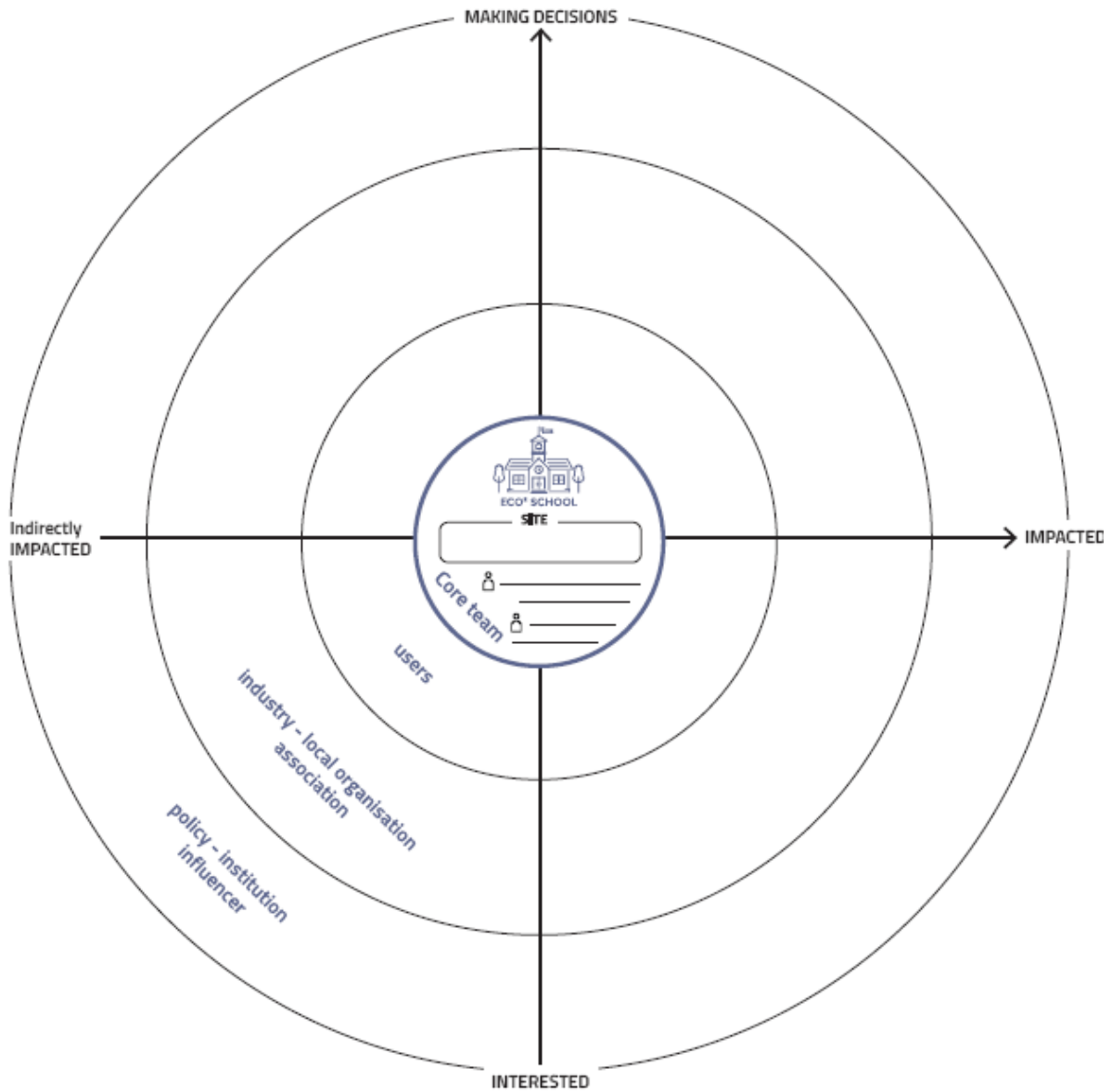
STAKEHOLDERS MAP of the community

OPERATE



STAKEHOLDERS MAP of the community

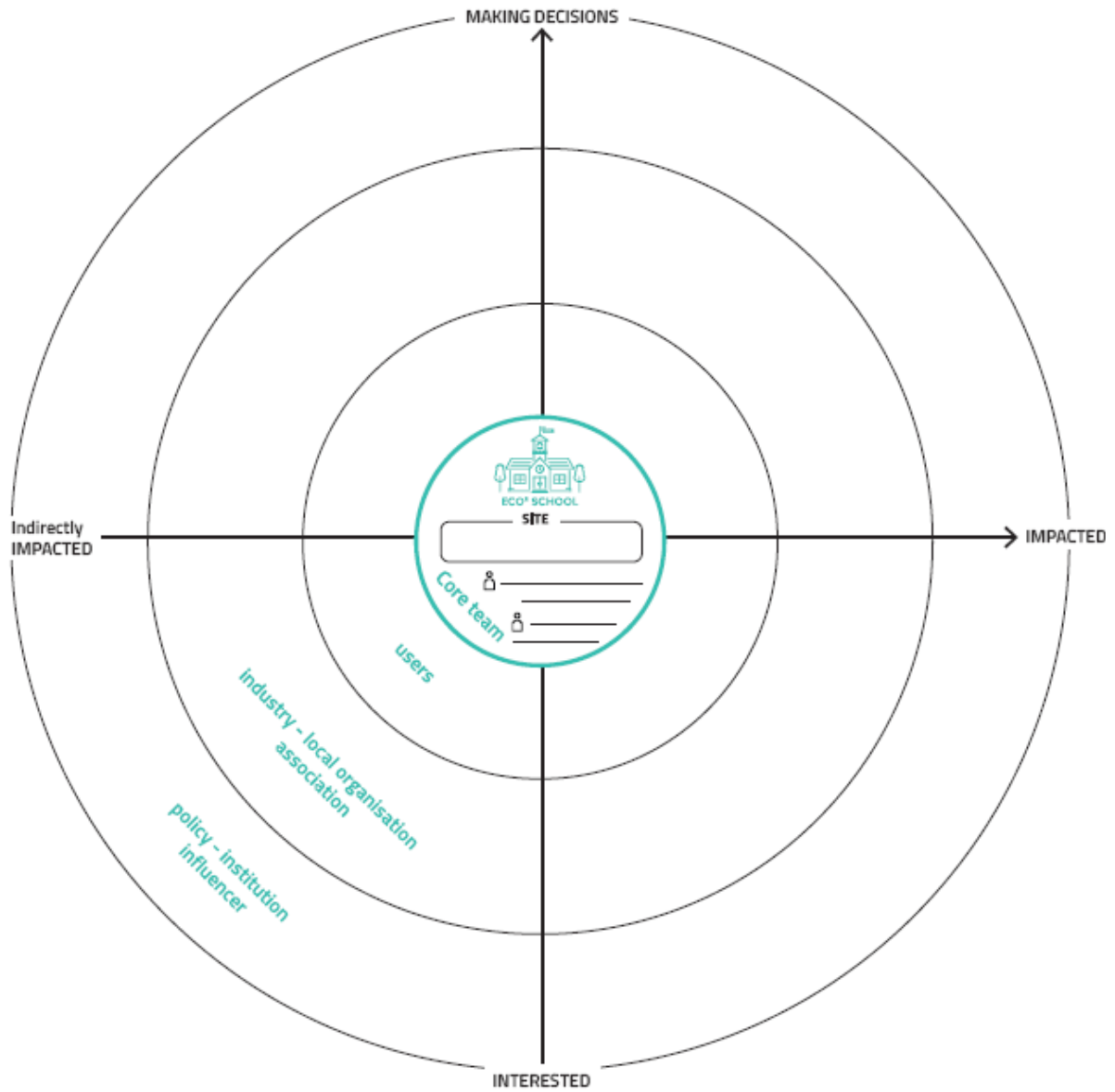
LEARN



Sources :
 Jones, P. H., & Ahl, K. (2022). *Design journeys through complex systems: Practice tools for systemic design*. BIS Publishers
 IFC, *Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets*, Washington DC, June 2010, page 27.

STAKEHOLDERS MAP of the community

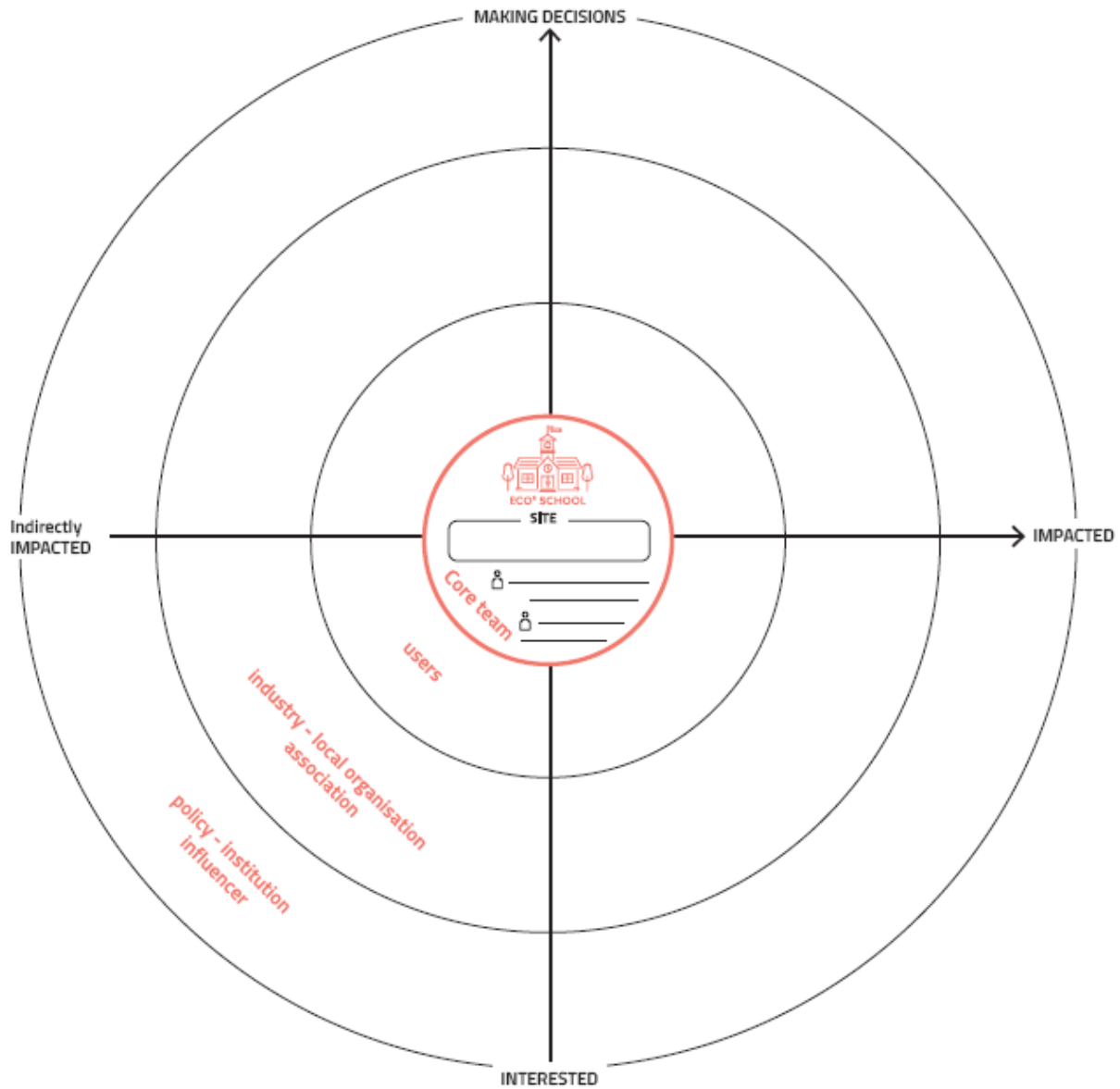
RENOVATE



Sources :
 Jones, P. H., & Ael, K. van. (2022). *Design journeys through complex systems: Practice tools for systemic design*. BIS Publishers
 ITC, *Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets*, Washington DC, June 2010, page 27.

STAKEHOLDERS MAP of the community

COMMUNICATE



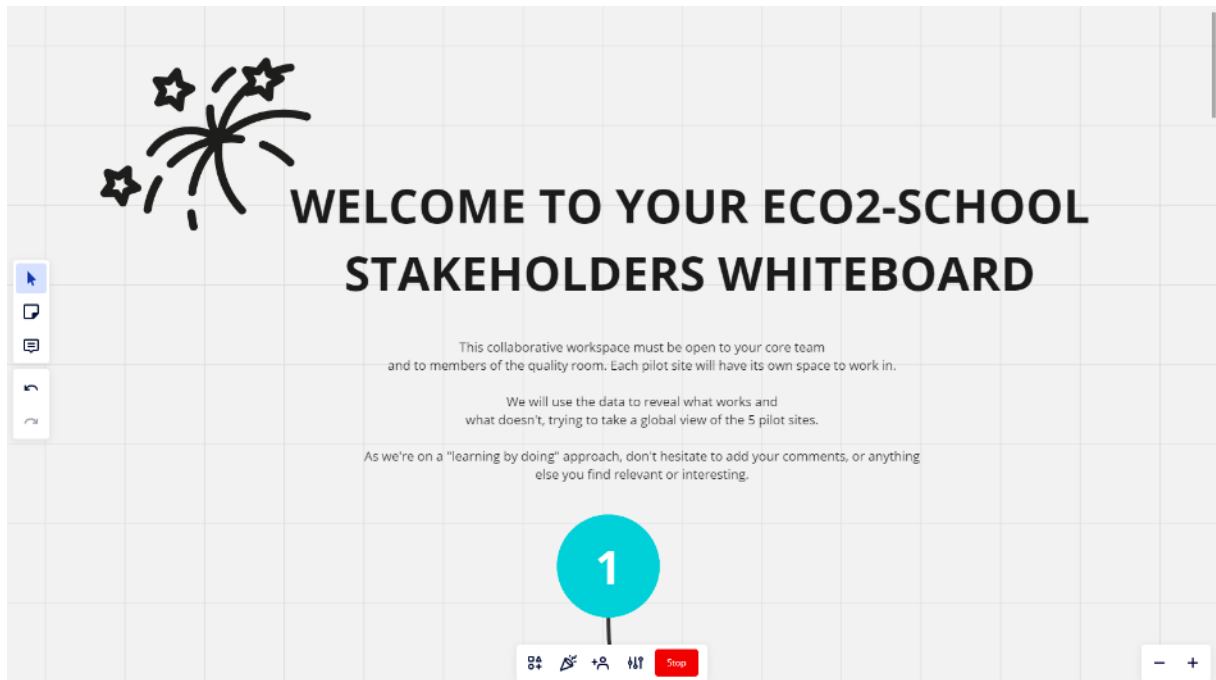
Sources:
 Jones, R. H., & Ari, K. van. (2022). *Design journeys through complex systems: Practice tools for systemic design*. BIS Publishers
 IFC. *Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets*. Washington DC, June 2010, page 27.

Template 3 – Common contacts database, .xls sheets document (core team, stakeholders) :

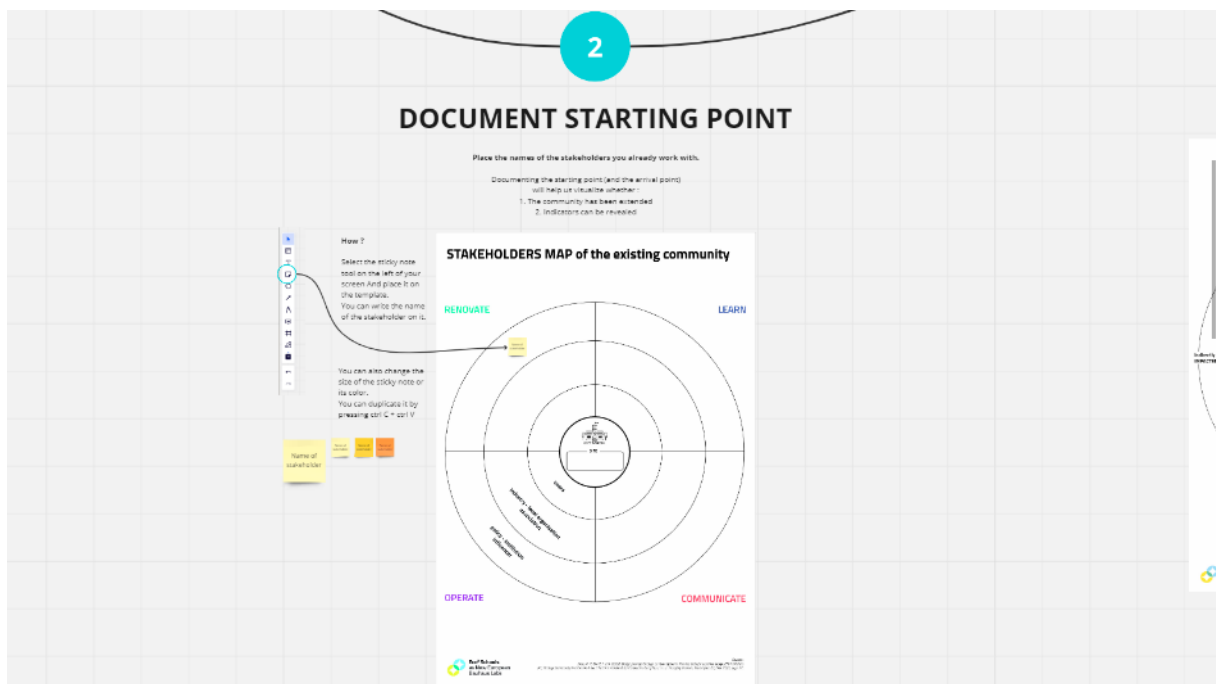
The image displays two Google Sheets templates for contact management. The top sheet, titled 'PILOTE SITE', is designed for a pilot site and includes a 'Team manager' section with columns for Surname, Firstname, Function, Email, and Phone. Below this is a 'Core team' section with columns for Surname, Firstname, Belonging, Position, Relation to Project, Role, Function, Email, and Phone. The 'Core team' is categorized into four groups: LEARN (blue), UPDATE (purple), RENEW (green), and COMMUNICATE (red). The bottom sheet, titled 'STAKEHOLDERS', is a more detailed contact database. It features a 'Stakeholders' section with columns for Surname, Firstname, Belonging 1, Belonging 2, Position, Role 1, Role 2, Email, Phone, and Comments. The 'Stakeholders' are categorized into various groups: PARENTS, TEACHERS, SCHOOLS, MUNICIPALITIES, INSTITUTIONS, ASSOCIATIONS, ENVIRONMENTAL, LOCAL AUTHORITIES, and NGOs. Each group has a set of columns for Belonging, Position, Role 1, Role 2, Email, and Phone.

Template 4 – Common MIRO Whiteboard Template for a coproduced STAKEHOLDERS MAP (living document)

- 1st stage- Welcome to your Eco² Schools stakeholders whiteboard,



- 2nd stage- Document starting point,



- 3rd stage- Visualize your Core Team,

3

VISUALISE YOUR CORE TEAM

1. Identify your core team
You must have at least 2 core team members in each topic area: RENOVATE, LEARN, OPERATE, COMMUNICATE.

2. Place them on the core team template
Find out whether or not the member is directly affected by the project, and whether he or she is only interested in the project or capable of making decisions.

RENOVATE
Name of core team member - position

LEARN
Name of core team member - position

OPERATE
Name of core team member - position

COMMUNICATE
Name of core team member - position

POINT

unity

LEARN

COMMUNICATE

- 4th stage- Map your stakeholders,

4

MAP YOUR STAKEHOLDERS

You will map your stakeholders according to your team activity.

When we map stakeholders, we do it around the project. To begin your stakeholder map, you will need to have thought of all the stakeholders in your project. Who are the people or organisations that are affected by your work? Who are your partners? Who are your customers?

When is your team active? What is the objective of the project?

Is a line here, describe your stakeholder.

You need help to think outside the box? You can use the distribution lists of subject areas to help you.

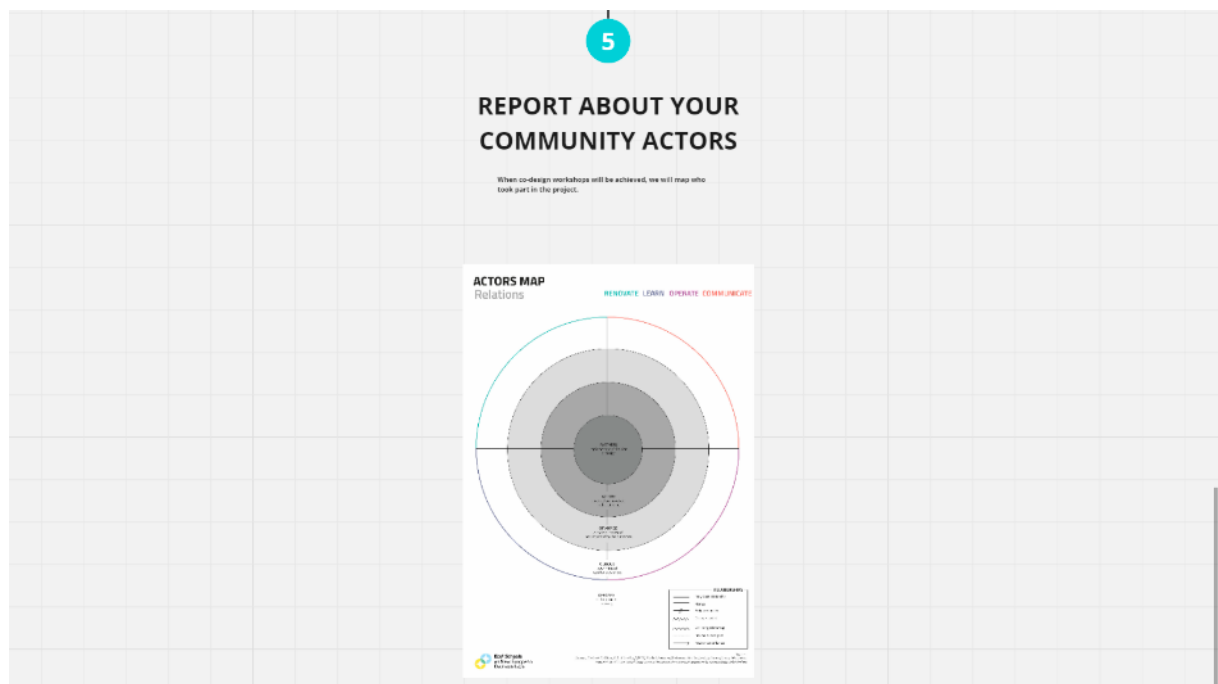
STAKEHOLDERS MAP of the community
RENOVATE

STAKEHOLDERS MAP of the community
LEARN

STAKEHOLDERS MAP of the community
OPERATE

STAKEHOLDERS MAP of the community
COMMUNICATE

- 5th stage- Report about your community actors.



Evaluation

This test activity will be successful if :

- You organize the Core team meeting and have at least 4 Core team members
- You have expended your community beyond the first mapping (you have at least 20 stakeholders in each section : learn, operate, renovate)
- You have engaged people to participate to co-design workshops (min 15 people for each co-design workshop)
- Participants are aware of their skills regarding the project and feel able to do things
- You have - at least- 10 people that agreed to be on your list of “actors” and 50 people on “curious”
- The community has set up the documentation space “permanent project space”

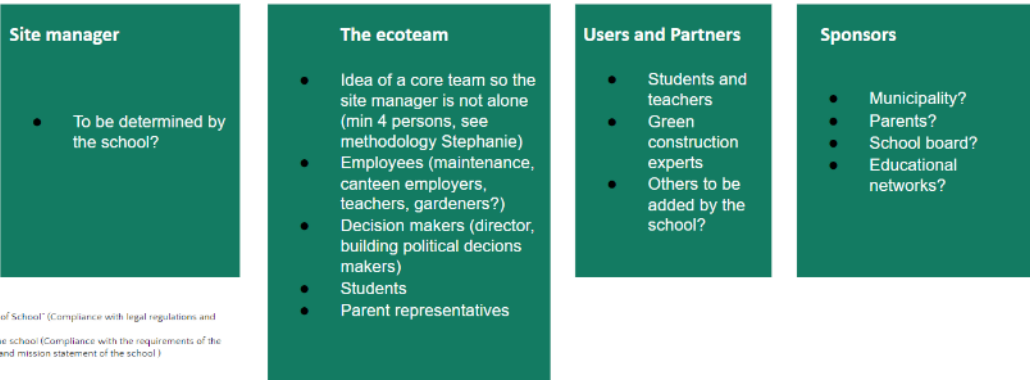
Test activity 2.

Guidance for step by step implementation:

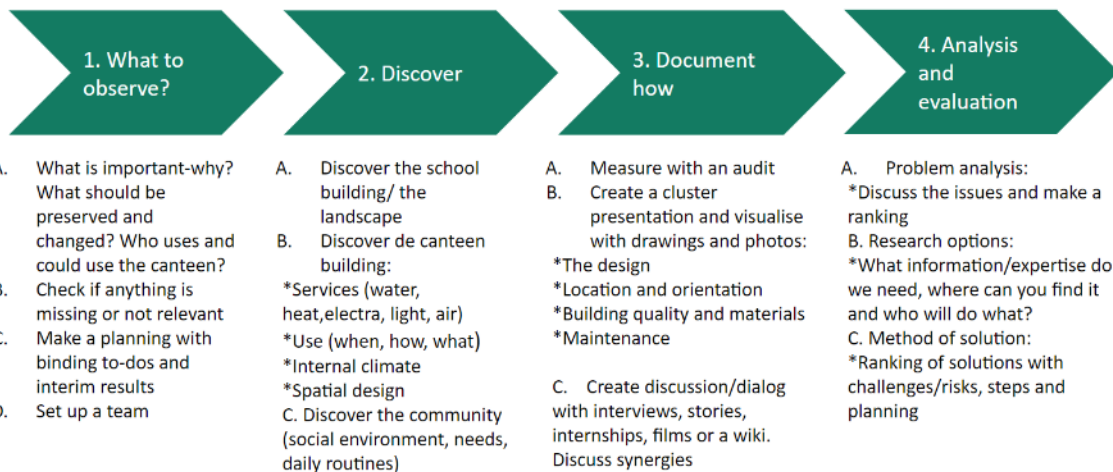


Team*

(describe the involvement of the needed team: name organization and roles – (according to doc Stéphanie) – we set the type of people engaged but the precise composition of the team should be engaged by the Pilot Site.



Steps





Monitoring and evaluation

A. Logbook:

- Record every step of the process that can be done in various ways (text/visuals; off or online) drawing) by various actors (make sure logging is representative of voices and power differences). A final check of the user community is needed.
- Include the decision making process, how problems were resolved and why the decisions were made that way
- Record sources of information about innovations or techniques, sources of expertise (knowledge library).

B. Monitoring: regular intervals of checking in and reflection

C. Evaluation: e.g. outcome harvesting



Resources

What do you need to organize or realize it

1. What to observe?

- Organize the core team
- Define the stakeholders
- Define a way to take joint decisions
- Invite the public, neighbourhoods and users, also politicians
- Define who will collect data and materials
- Identify relevant sources of information and other stakeholders
- Define educational/pedagogical objectives
- Define requirements in terms of ecology, economy, lightning, outdoor area, inclusion and integration, acoustics, etc..., define space requirements
- Prepare the audits
- Prepare material for visualisation and interviews
- Introduce an easily accessible functional scheme/cluster presentation
- Make the material accessible for everybody
- Identify necessary expertise for ranking solutions
- Evaluate interim results and ask feedback from user community (strong link to testing activity 3?)





Inspiration / toolbox

Diagnosing tool from the IADB allows to discover and observe* (linked to step 1 and 2 above):

- The location
- The functionality and relevance of the school's spaces
- Comfort
- Health hazards
- Water supply and consumption
- Safety
- EE
- Environmental impact
- Design and materials
- Potential additions
- ...



Inspiration / toolbox

Audits focused on the school and environment (linked to step 3 above):

- Resource Smart Schools energy audit tool*

Spatial games:

- Project "Wijzijnruimte":
 - Game 1: interviews with community, linked to YRFTE. Collecting stories about usage, history and challenges of space
 - Game 2: dream big. This can help to come to elements and an action plan for a joint objective

*<https://assets.sustainability.vic.gov.au/susvic/ResourceSmart-Schools-Energy-audit-tool.pdf>

Test activity 3.

Steps



Inspiration / toolbox

FEE Young Reporters for the environment (YRE)

4 steps challenge :

S1- Investigate

S2- Propose/bring in light Solutions

S3- Report the achievements

S4- Disseminate the learnings/best practices

*From <https://www.yre.global/handbook>



Inspiration / video competition

Film4Energy challenge

The European Commission organised the "Film4Energy Challenge" competition from October 2021 to March 2022. Schools across the EU were invited to create short videos about the importance of energy efficiency and the benefits of saving energy for their school, commune or city; by creating a short film about the importance of saving energy.

This open competition was not only aimed at stimulating creativity, but also a deeper consideration of the importance of saving energy in the fight against climate change.

To participate, students had to produce a video up to 1 minute long (with the help of their teachers) about how they can save energy in their daily lives, highlighting the benefits of energy efficiency and encouraging the use of energy-efficient alternatives.



*From https://wayback.archive-it.org/12090/20230929125707/https://energy.ec.europa.eu/energy-explained/film4energy-challenge_en

Test activity 4.

Guidance for step by step implementation:



Team

Site manager and Core team are the same along the all study process. They are in charge of organizing and moderating the activity process.

Users and Partners

- Students / teachers / community = participants
- technical experts

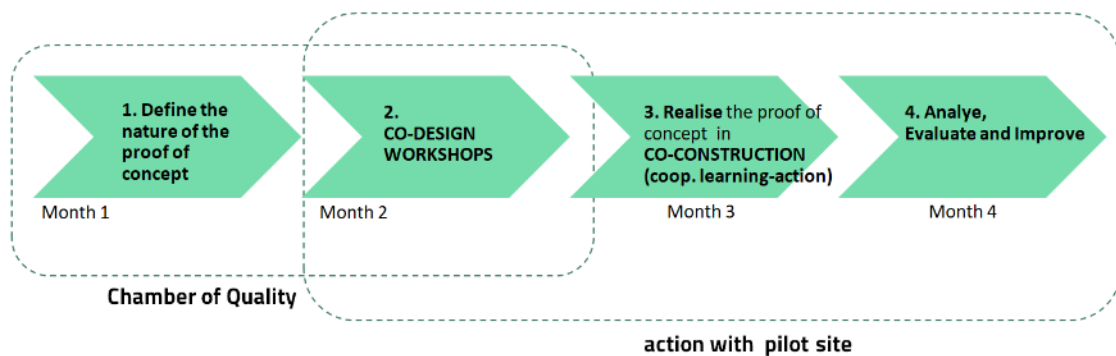
Sponsors

- local companies that are ready to give input in the research with knowledge en/or materials in relation with the chosen nature of the proof of concept



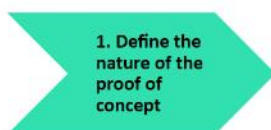
Steps

Describe the Type and time



Ressources

What do you need to organize or realize it



1. Define the nature of the proof of concept

Define programmatic and technical specifications: type, scale, requirements, KPI' etc

Set up team of partners and sponsors

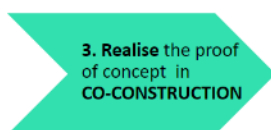
find founding



2. CO-DESIGN WORKSHOPS

organize creative workshop with the expert team and the Chamber of Quality to initiate sketch design of the proof of concept

work out the sketch design with experts into final design



3. Realise the proof of concept in CO-CONSTRUCTION

Prepare the construction phase of the proof of concept : planning / materials / logistic and communication. > ATELIER with pilot site

Organise co-construction atelier in order to realise the proof of concept according the final design. Depending the nature of the POC could be organised in multiple ateliers.



4. Analyse and evaluation

- Collect measurements of results of the POC according to the KPI define initially.
- Discuss the issues and achievement of the POC
- Gather lessons learned and advices and publish them - open source

Proof of Concept description

Solar canopy with bamboo construction



Proof of Concept partners

Solar film experts



ASCA <https://asca.com>
 HEOLE <https://heole.fr/>
<https://oe-technologies.com/index.php/opvs-2/>
 > SUNOLOGY <https://sunology.eu/>

Proof of Concept partners

Bamboo experts

Bambuparque | 200km from Lisbon
<https://bambuparque.com>



INTERACTION / CLIMAT / SOL / BAMBOU / MICROORGANISME



<https://bambooforlife.fr>