



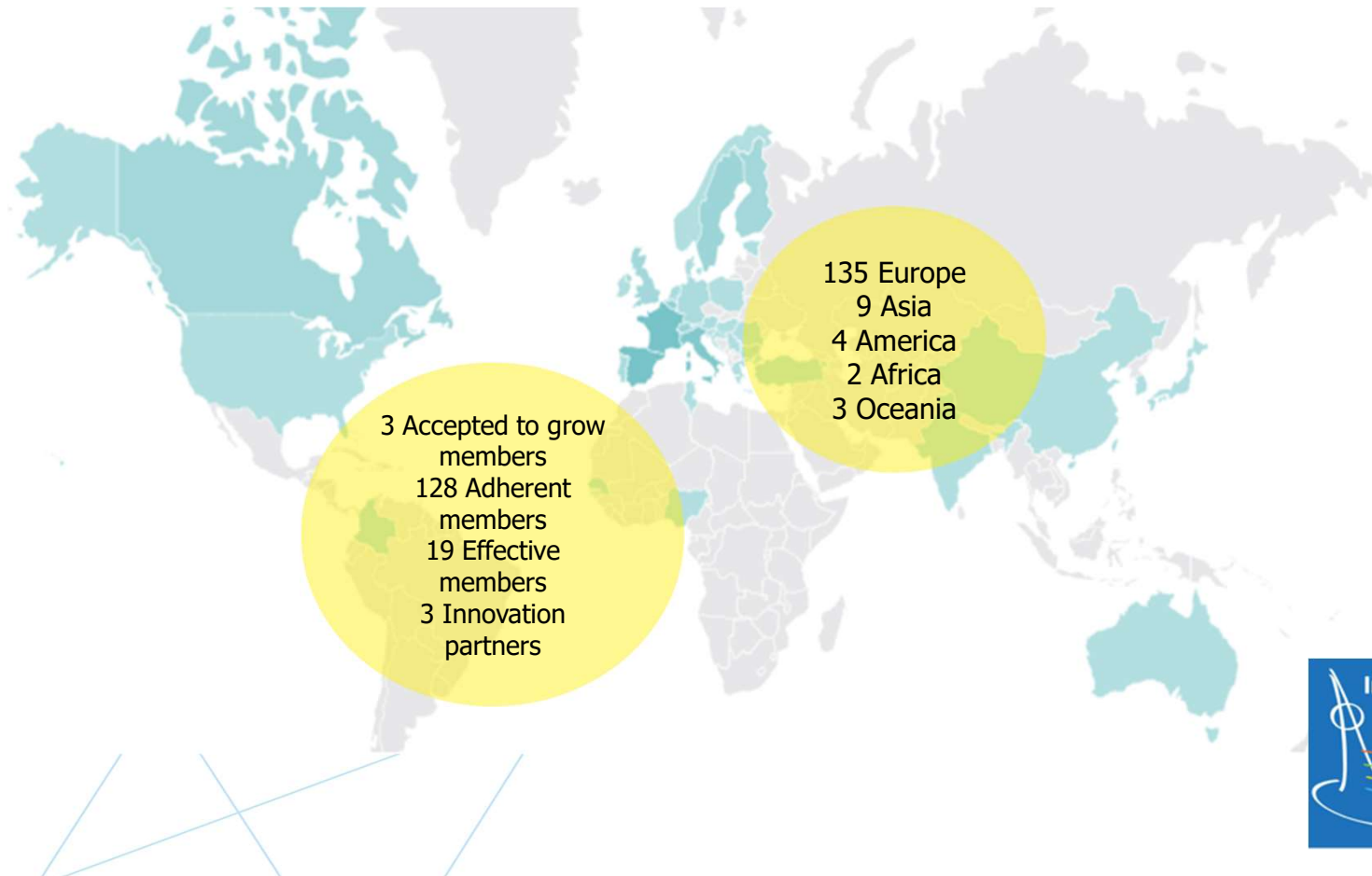
**European
Network of
Living Labs**

“Improving the innovation capacities
of SMEs: the support of Living Labs”

Francesca Spagnoli - *Head of Projects & Capacity Building*
European Network of Living Labs



Our network



Our building blocks

SOCIAL INNOVATION



Function as vehicle for systemic change by experimenting with social innovations.

Focusing on people/citizen-oriented strategies to thrive inclusion, engagement, co-creation and collaboration.

Act as multidisciplinary and transversal enabler for Digital Innovation Hubs to bring the human factor in urban and large-scale pilots.

INDUSTRIAL DEMONSTRATION



Europe needs a **Pan European Large-scale Open Innovation Ecosystem, a Collaboratory**. That is not only about research for innovation but rather about **participative RDI work of experimenting for innovations and their diffusion through scalable RDI activities** including pre-market experimentation, piloting and testing for new open ecosystem-based technologies, services, and businesses.

OPEN SCIENCE



Scientists, citizens, publishers, research institutions, public and private research funders, students and education professionals as well as companies from around the globe are sharing an open, virtual environment called The Lab”.

(Carlos Moedas, Open Innovation, Open Science and Open to the World. 2016 : 22.)

Open Science Policy Platform

Action Oriented Task Forces

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SOCIAL INNOVATION &
DIGITAL RIGHTS

SOCIAL IMPACT OF
ARTIFICIAL
INTELLIGENCE

HEALTH
&
WELL-BEING

RURAL
LIVING LABS

ENERGY
&
ENVIRONMENT

Website: <https://enoll.org/task-forces/enoll-action-oriented-task-forces-program/>

- + Culture & Creativity
- + Mobility
- + Agrifood

- + Digital for Sustainability, including zero pollution
- + Living Labs as a regulatory tool for learning

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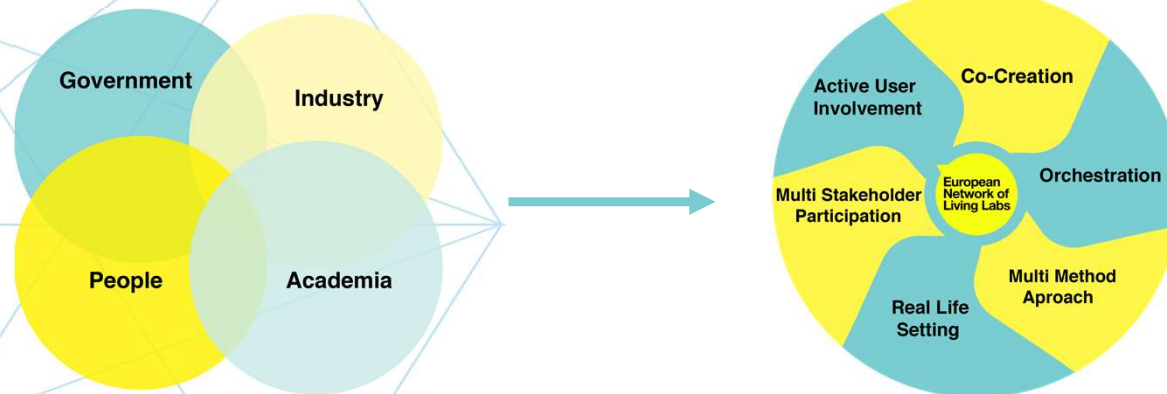


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How living labs empowers SMEs to innovate

What are Living Labs?

- Living Labs operates as **intermediaries/orchestrators** among citizens, research organizations, companies & government agencies/levels.
- They focus on **joint-value co-creation**, rapid **prototyping and testing** and **scaling-up** innovations & businesses.
- They are open innovation ecosystems in **real-life environments** using **iterative feedback processes** throughout the **lifecycle approach** of an innovation.
- Within the **wide variety of types of living labs** and their implementations they all have **common elements**.



LIVING LABS, A THREE LAYER MODEL

	DEFINITION	RESEARCH PARADIGM
MACRO	Living Lab constellation consisting of organised stakeholders (PPP-Partnership)	Open Innovation: Knowledge transfers between organizations
MESO	Living Lab innovation projects using Living Lab methodologies	Open & User Innovation: Real life experimentation, active user involvement, multi-method and multi-stakeholder
MICRO	Individual Living Lab research steps and activities linked to the stakeholders' assets and capabilities	User Innovation: User involvement & contribution for innovation

SOURCE: Schuurman, D. (2015). *Bridging the gap between Open and User Innovation?: exploring the value of Living Labs as a means to structure user contribution and manage distributed innovation*. Ghent University. Faculty of Political and Social Sciences; Vrije Universiteit Brussel. Faculty of Economic and Social Sciences, Ghent; Brussels, Belgium.

Transnational experimentations



Discover ENOLL members via
<https://enoll.org/network/living-labs/>

Living Lab(oratories)

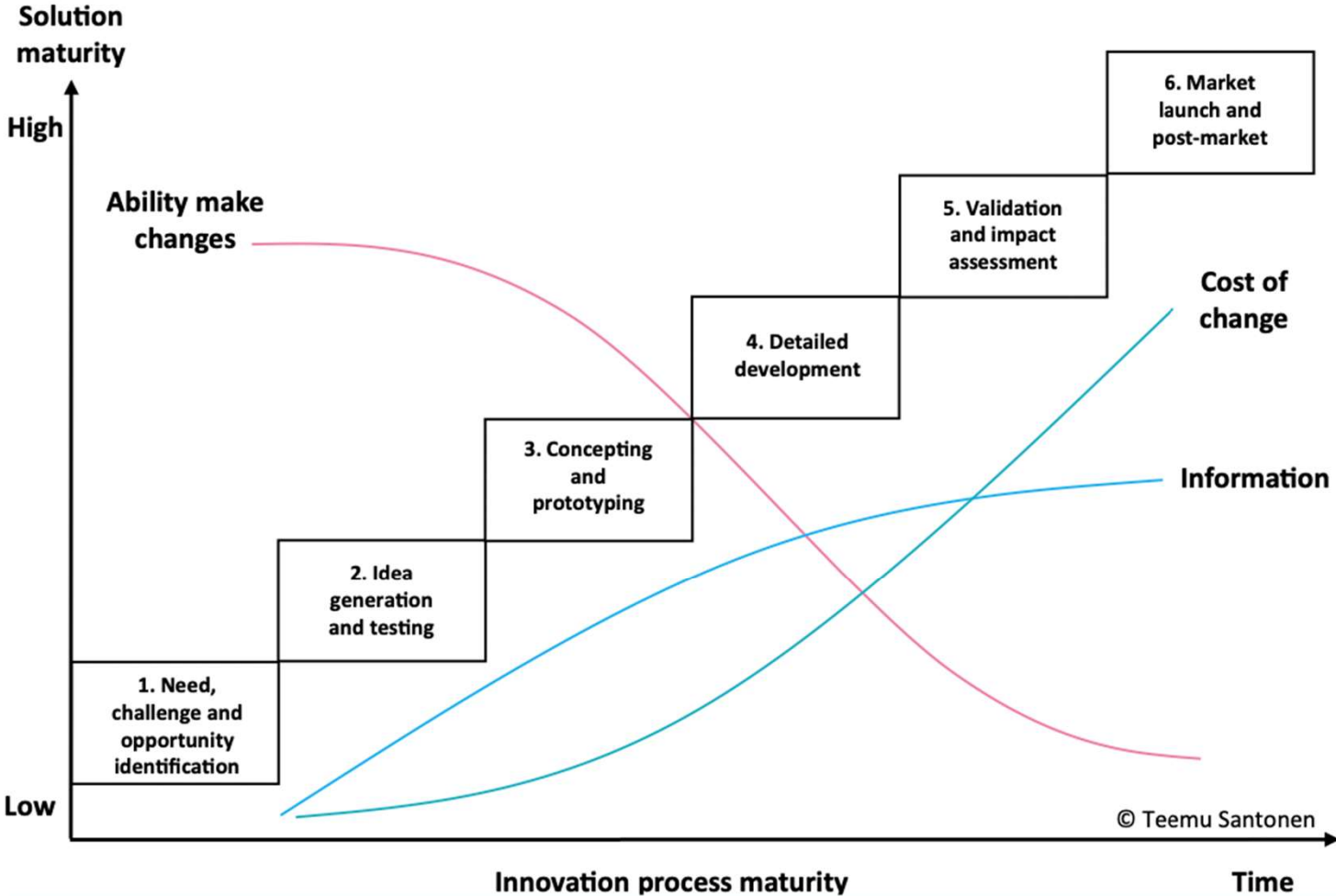
A Living Lab is an innovation intermediary which orchestrates an ecosystem of actors in a region.

Its objective is to codesign products and services, on an iterative way, with the key stakeholders.

One of the results of the codesign process is the co-creation of social value (benefits).

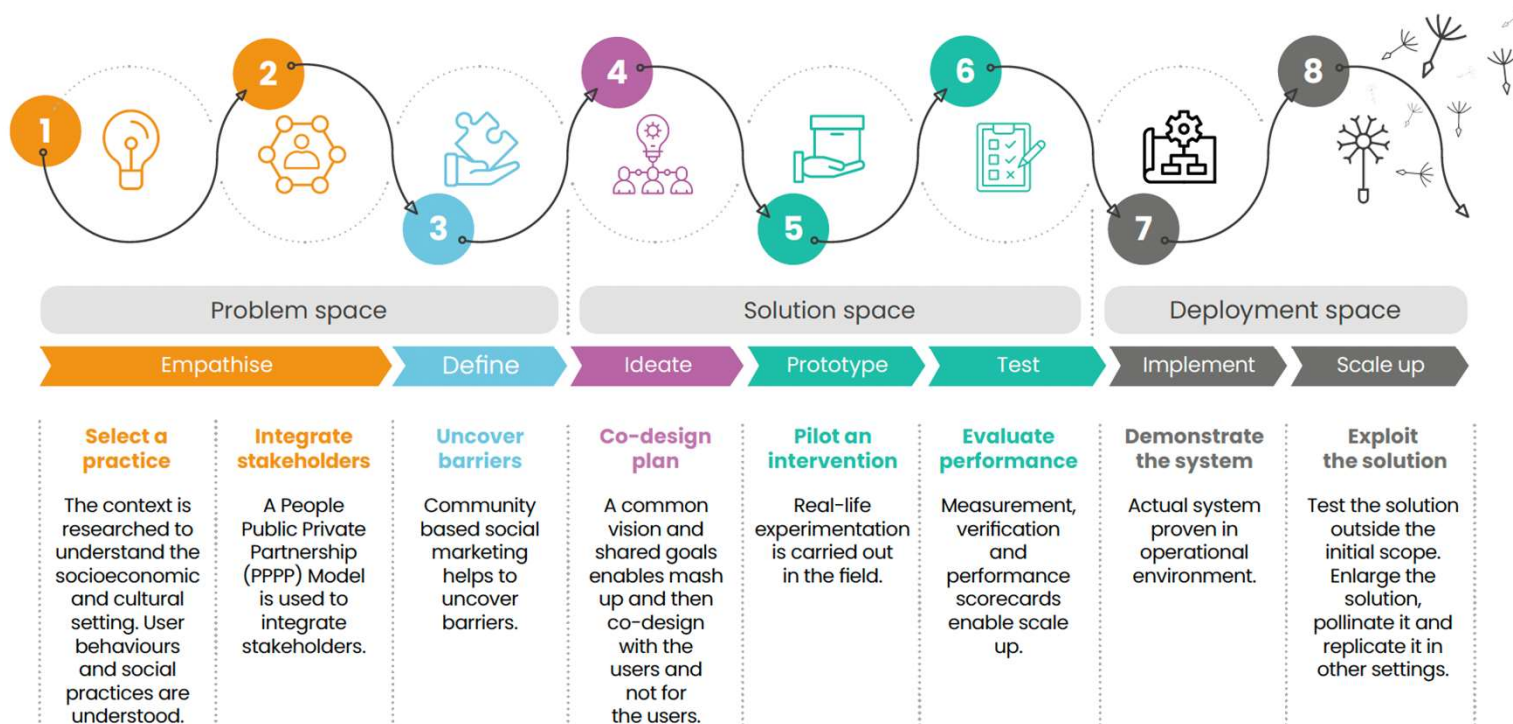
Mastelic, J. (2019), *Stakeholders' engagement in the co-design of energy conservation interventions: The case of the Energy Living Lab*, Doctoral Thesis, University of Lausanne.

Overview of a Living Lab innovation process



Living lab innovation process phases relationship to amount of information, cost of change and ability to make changes (own illustration based on Ullman, 1997 and von Hippel, 1993, Herstatt & Verworn, 2004)

Living Labs Integrative Process



*Adapted from Mastelic, 2019



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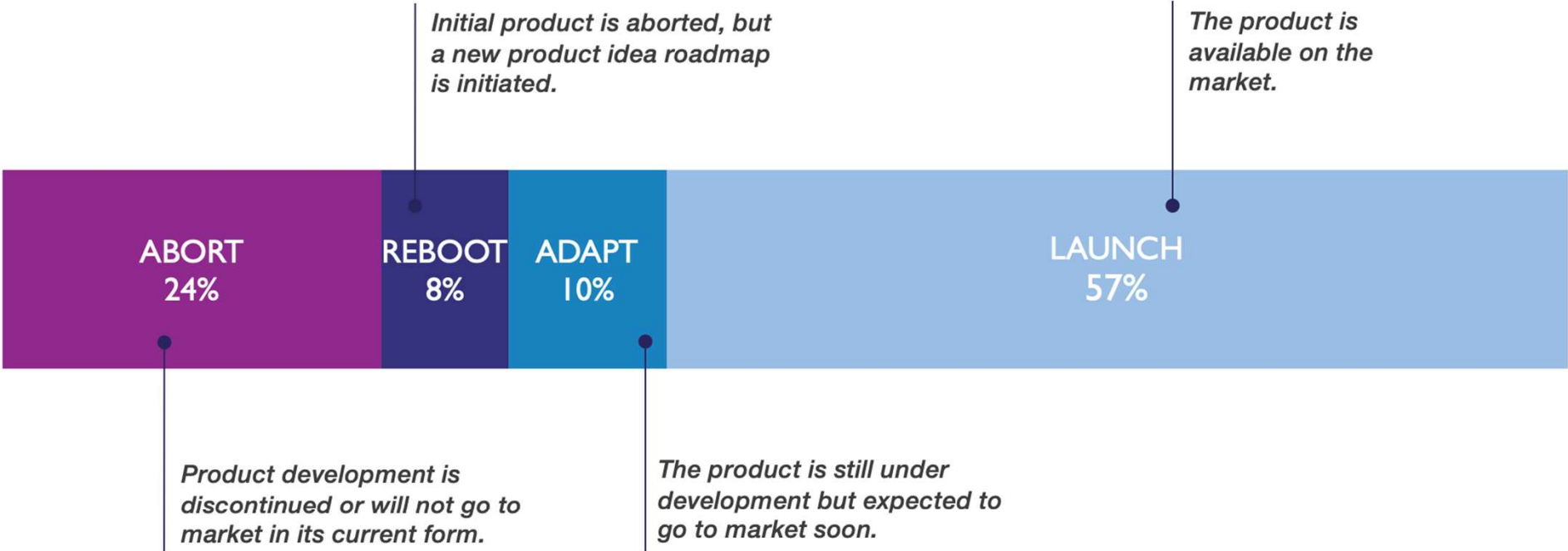
Inspirational stories from ENoLL Living Labs



lmeC

embracing a better life

OUTCOMES OF LIVING LAB SUPPORT OF SMES & START-UPS



*N=86

IMPACT OF REAL-LIFE EXPERIMENTATION

Status	Living Lab projects (real-life test)	Innovation project (without RLT)	Overall
Abort	10 – 28%	11 – 22%	21 – 24%
Reboot	5 – 14%	2 – 4%	7 – 8%
In development	2 – 6%	7 – 14%	9 – 10%
On the market	19 – 53%	30 – 60%	49 – 57%
Total	36 – 42%	50 – 58%	86

<https://timreview.ca/article/1201>

ECONOMIC IMPACT OF LIVING LAB PROGRAMME FOR SMES

- “[...] significant positive economic effects in terms of investments, employment and turnover. For 1 public euro invested in the living lab projects that were evaluated, 1.5€ was realised in follow-up private investment, with an additional 11€ foreseen. Also, at the time of the survey **8.7€ in employment had been realised for every euro invested by public support agencies** in all living lab projects in the sample. Finally, and perhaps most importantly, 6€ of revenues were realised for every 1€ of invoiced living lab budget, with an additional 30€ expected in the following two years.”



Telematics and Informatics
Volume 35, Issue 5, August 2018, Pages 1201-1214



The effectiveness of involving users in digital innovation: Measuring the impact of living labs

Pieter Ballon ^a , Miriam Van Hoed ^b , Dimitri Schuurman ^c 

<https://doi.org/10.1016/j.tele.2018.02.003>

EVIDENCE OF IMPACT

- Innovatrix: <https://timreview.ca/article/1225>
- Living Labs & Lean-Start-up: <https://timreview.ca/article/1201>
- Living Lab methodology: <https://timreview.ca/article/956>
- Economic impact of Living Labs: <https://doi.org/10.1016/j.tele.2018.02.003>
- PhD on Living Labs, Open & User Innovation:
<https://biblio.ugent.be/publication/5931264/file/5931265.pdf>

Energy Living Lab Association Living Labs for Decarbonisation

Innovation
Booster

powered by
Innosuisse

Innovation Booster



Our mission

To **change the culture** of how energy projects are designed and implemented. Living Labs orchestrate the co-design of new products, services, programs with key stakeholders and experiment them in a **real-life setting**.



IDEAS
PLATFORM OPEN
LAB DAYS

80% IDEAS
FUNDING
20% CO-FUNDING

INNOSUISSE
FUNDS



2021 in numbers

13 Innovation Teams funded



Discover the ideas on [this link...](#)

8 hybrid events



With a total of 362 participants



OZEAN Living Lab

A large-scale Sustainable Open Innovation Lab



Ozean Living Lab was born to face territorial challenges by promoting Urdaibai's natural environment and the competitiveness of its companies through open innovation. A regional strategy with an international perspective:

Improve the quality of life through its environmental, social and economical credentials, based on the multifunctional use of Urdaibai's natural capitals.

Objectives:

1. **Protect ecosystems state and biodiversity**
2. Improve **ecosystem functioning** and promoting ecosystem **services**
3. Promote **societal wellbeing and health**
4. Support the **development of a green economy**, and **sustainable land and water management**

A LARGE-SCALE OPEN INNOVATION LAB TO ATTRACT COMPANIES THROUGH INNOVATION IN STRATEGIC SUSTAINABLE PROJECTS



Three priority Work Areas



CLEANTECH

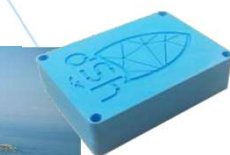
Water management and monitoring
Control of spills and plastics
...

SPORTS AND TURISM

Control of tourist overcrowding
Safe and sustainable sport
...

SAFETY

Safe practice of sport (beacons, buoys, etc.)
Solutions and services for silver economy
...



Ozean Living Lab's Strategy

1. **Connect companies in the territory with smart specialization strategies**
2. **Promote the culture of innovative and creative entrepreneurship**, in a process in which the focus is the population
3. Development of an **innovation strategy based on sustainability**
4. Implementation of a **testing laboratory for new technologies for sustainability: Water Lab**
5. Generation of an **entrepreneurship and talent management strategy** that allows business projects that arise from the territory and to be established in the territory
6. **Involve the population in the transformation process** through open innovation dynamics or other interaction dynamics

START UP PROMOTION

THE 5 PILLARS IN OZEAN LAB



START UP PROMOTION

SUPPORT TO THE INTERNATIONALIZATION

EMERID SYSTEM

Start up located in Bilbao that has a new system based on NFC technology for the protection of citizens on the beaches.

Support of the Ozean Living Lab:

- Collaboration strategy launched Currently in the testing phase of the technology in deep combinations
- In conversation with QuikSilver to become the technology supplier of their combinations
- Collaboration in projects: Interreg Poctefa, Hazitek, Interreg Europe, etc.

INNOVATEC

SME with an office in Bilbao dedicated to the development and commercialization of microencapsulates and new technologies.

Support of the Ozean Living Lab:

- Short-term implementation in Iparralde with interest in France for its technology
- Technological provider of the collaboration project with the SHIELD meeting. Scholarship obtained of 15,000 euros
- Presentation of more than 5 R + D + i projects



3R3D

A recently created company in Irún dedicated to the processing of plastics and all kinds of materials for 3D printing coils.

Support of the Ozean Living Lab:

- Presentation of five R + D + i projects in collaboration with other entities of the ecosystem
- Short-term implementation in Iparralde with interest in France for its technology



START UP PROMOTION

DEEPLY

SONAE group company dedicated to the creation and sale of products for the practice of surfing, skateboarding and snowboarding (combination of wetsuits, skateboards, etc.) as well as linked to the way of life of users of these sports. 30 employees in Portugal.

In 2018, international launch: a strategy mainly focused on Spain and France.

Interest of implantation in the Basque Country to search for:

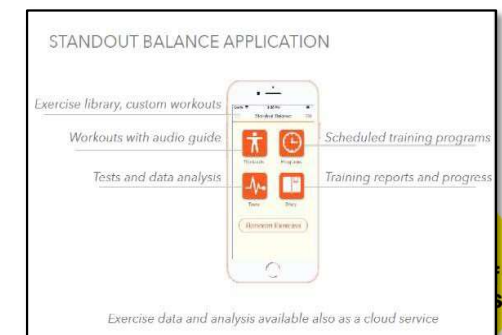
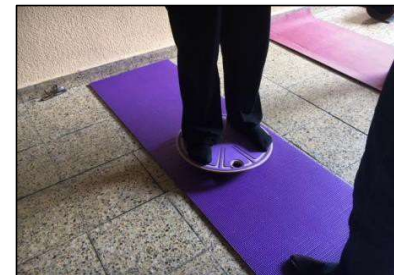
- **Technological partnerships for the development of innovative services**
- **Development of social projects**

SMARTIFIER

SMARTIFIER is a Finnish high-tech entity. Its Stand Out Balance product has been tested and introduced in the Spanish and French markets via the Ocean Work Center Bilbao.

- Smart card with integrated wireless sensors
- Mobile application and service for consumers and professionals
- Training, rehabilitation and injury prevention
- APP available

ATTRACTION TO THE BASQUE COUNTRY



GALVANO TECHNIC INDUSTRIAL DISTRICT GREY WATER MANAGEMENT PROJECT



November 2021

PURPOSE

To ensure that the values of the treated grey water from Galvano Technic Industrial Site are inline with İSKİ criteria and implement an innovative infratstructure and IT platform that collects real time reliable data, calculates fair costs to SME's and has a unique value adding reporting system.

The developed system will be replicable to similar Industrial Sites that need a environmentally water treatment and re-use system.

As a result all SMEs in the Industrial Sites will benefit from re-usable clean water, use of better treatment systems and hence benefit from the cost reductions making their businesses more greener and cheaper

The project will be funded by national or international funds.

PROJECT MANAGEMENT

<i>Project Coordination</i>	: Başakşehir Living Lab (BLL)
Project documentation and fund application	: BLL
Project owner and pilot area providor	: Galvano Technic Industrial Site Management
Software and Data Management	: Workiom
Design & Technology Research	: Istanbul Technical University Environmental School

PRESENT SITUATION

- 190 SME's. Electro coating, chemical manufactureres and galvanize material manufacturers.
- They collect physical data over a system called SCADA designed 20 years ago
- The present system doesn't collect reliable chemical values of the grey water and doesn't calculate correct costings
- Sludge separation process doesn't work properly due to lack of automation and control mechanisms.
- There is no re-cycling system for the treated water
- Present accounting system is based on selling clean water to the SME's rather than charging for the waste they produce
- There is a poor inventory control and purchasing system.

NEEDS

1. AUTOMATION

a. Physical measurements

- i. Water levels
- ii. pH level of discharge from SME's
- iii. Chemical measures (nickel, tin etc)
- iv. Flow rate
- v. Integrated press system
- vi. Operational mixers

b. Data Management

c. Operations Management

2. OPTIMIZING TREATMENT PROCESS, COST CONTROL & INVOICING

a. Software – Management of below

- i. Chemical value recording
- ii. Inventory
- iii. Costs
- iv. Pump levels
- v. Maintenance plans & hours

b. Invoicing

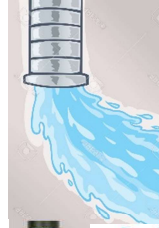
- i. Water used by each SME
- ii. Discharged chemical levels and treatment intensity



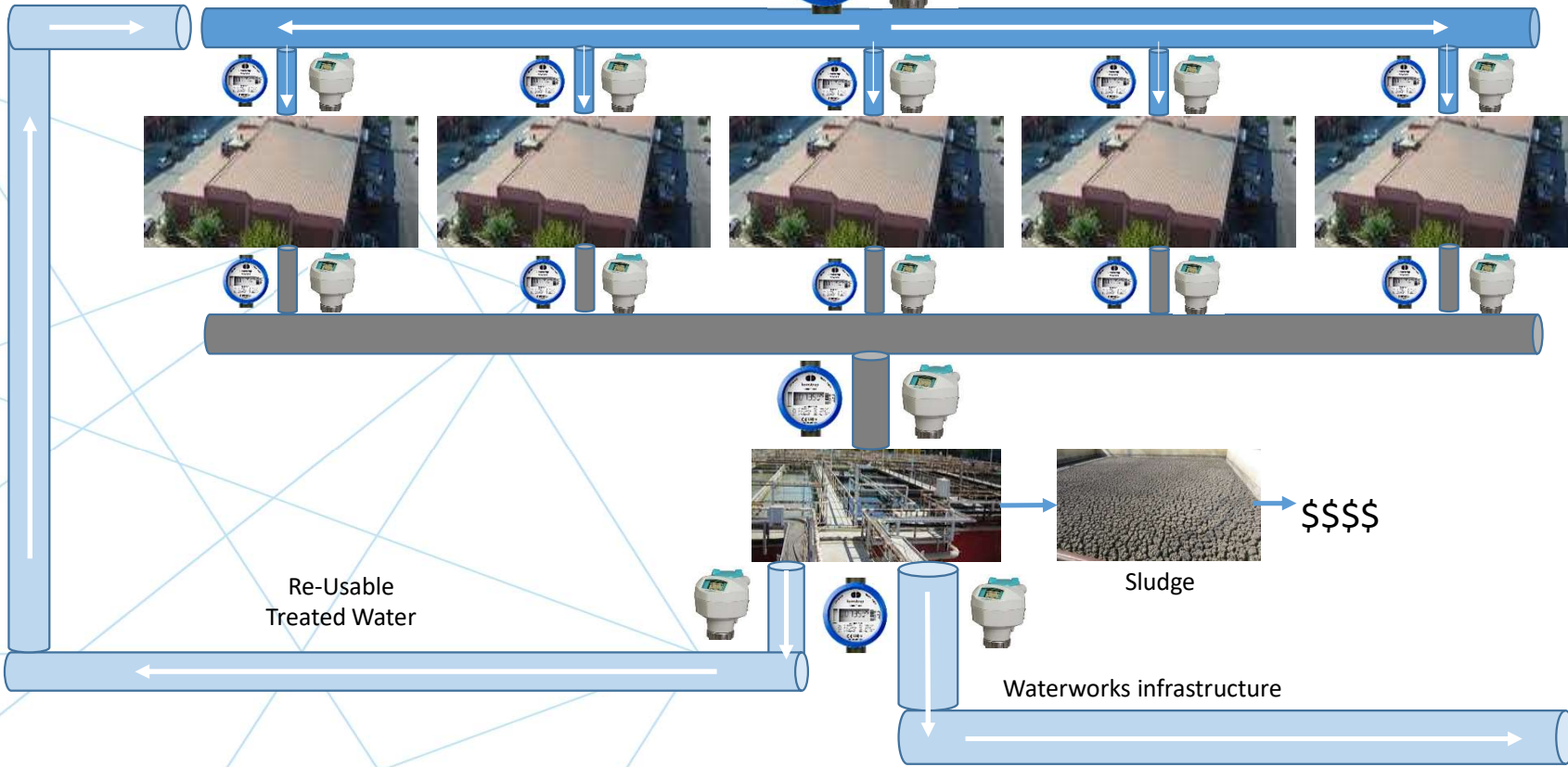
Water Meter



Chemical Measurement Sensors



Clean Water



Re-Usable
Treated Water

Waterworks infrastructure

Sludge

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Biological Treatment

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Want to know more
about Living Labs?

ENoLL Capacity Building Program

Tailor-made mentoring plan

The ENoLL Learning Lab Training & Mentoring creates a tailor-made mentoring plan specific to your organisation, needs and aspirations

Living Lab Expert support

Your mentor(s) are selected from a large pool of Living Lab experts from the ENoLL network with long standing experience in the field of Living Labs and specific areas of expertise

Training & Mentoring offers

- One day tailor-made Face-to-face training (theory + practical work)
- Online/Presential mentoring meetings (on a recurring basis)
- Site visit mentoring (a one-time visit on site)
- Supporting e-course materials

Accelerating your learning curve

The training & mentoring is a fast-track to increased, in-depth and customized learning, resulting in individualized evaluation & recommendations

European Network of Living Labs



Face-to-face Training

Tailored lectures & workshops

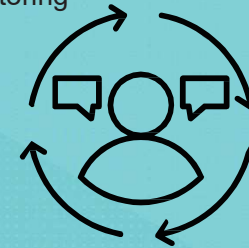


Site visit Mentoring meeting on site



Online / Presential mentoring

Recurring mentoring meetings



E-courses Complementary learning materials

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VIRTUAL LEARNING LAB

Home / Virtual Learning Lab

The Virtual Learning Lab brings together a community of participants and experts in exchanging knowledge on the key elements of Living Labs. A course that will fast-track your learning through lectures and interactive sessions, a case study approach connecting theory to practice, as well as hands-on assignments to apply the learnings in your own context.



Why join the Learning Lab course



LEARN ABOUT KEY COMPONENTS

Join the training to learn about the essence of Living Labs, their key elements and innovation processes



HANDS-ON APPLICATION TO YOUR OWN CASE

The sessions will conclude in actionable work where you will be guided to reflect & consider how these apply in your own setting



CONNECTING THEORY TO REAL-LIFE SETTING

Expert Living Labs will share their experiences and steps followed throughout their Living Lab



FAST-TRACK LEARNING

A holistic overview: key elements of Living Labs through a learning journey approach, including peer-to-peer learning and support

Virtual Learning Lab 2.0

5 April - 31 May 2022

The 8-week Learning Lab Program combines:

- **Expert presentations**, hands-on **co-creative sessions** and **interactive discussions** with real-life **case studies**
- Hands-on **assignments** and **application of learning materials** to your own Living Lab case, in between the weekly sessions
- **Expert & peer-to-peer support** and **evaluation**, learning from each other while **networking**
- **Dynamic & interactive** environment facilitating **knowledge exchange** in various formats and learning styles!
- Taking the first step in **joining the community of Living Labs**, interacting with **like-minded people and organizations**

The program consists of **weekly scheduled sessions** to attend as well as **assignments in between the weekly sessions** to apply the learnings in the various cases brought in by a diverse group of participants and experts. The collaborative platform allows for continuous feedback and interaction. Course attendees will also receive a repository of **learning materials** with e-courses, papers and publications and actionable methods and tools for Living Labs.

Curriculum

- ✓ **Living Lab Basics, Long-term Vision & Openness of Innovation Processes** (05/04/2022, 10-12:30 CEST)
- ✓ **Stakeholder Engagement Methodologies & Tools** (12/04/2022, 10-12:30 CEST)
- ✓ **Governance Models of Living Labs** (26/04/2022, 10-12:30 CEST)
- ✓ **Business Models, Funding & IPRs of Living Labs** (03/05/2022, 10-12:30 CEST)
- ✓ **Implementation & Strategic Plans of Living Labs** (10/05/2022, 10-12:30 CEST)
- ✓ **Experimentation and Co-creation in the Living Lab Environment** (17/05/2022, 10-12:30 CEST)
- ✓ **How to Successfully Promote and Communicate Value and Activities of Living Labs Over Time** (24/05/2022, 10-12:30 CEST)
- ✓ **Evaluation & Impacts of Living Labs** (31/05/2022, 10-12:30 CEST)

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projects@enoll.org

[@openlivinglabs](https://twitter.com/openlivinglabs)

www.enoll.org

Thank you!
