E³UDRES²

Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions

3. E³UDRES² Learners & Educators

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Deliverable nr.	Deliverable name	Person responsible	Corresponding HEI
D3.5 – D32	Fourth design trajectory: visual narrative and updated manual.	WP3 Lead	UCLL

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1. Introduction

Included you can find our visual narrative and updated manual regarding the I Living Labs for the WP3 Deliverable 3.5 D.32

2. Final update manual learners guide & student guide

1.1 Changes on the Learners' Guide

In general, the structure of the learners' guide was kept and updated with new information and more details for the fourth round of I Living Labs.

The three kind of I Living Labs were renamed to be more precise and clear to students: 'Single and Double ILLs' became 'Classic ILLs'; 'Umbrella ILLs' became 'Blended ILLs'; 'Latvian ILL' became 'Intensive ILL'. In this way, the kind of the format is represented in the name of the type of ILLs.

The process of choosing an ILL was explained, where students sign up online by choosing a format and then a theme. However, the precise challenge will be allocated during the onboarding phase. This new process allows us to form groups based on their talents and competencies and gives us a greater flexibility in distributing students over all challenges more uniformly.

The team creation via the Talent Profile test by Thalentos and an algorithm was explained in detail. It also included an overview of the six batteries of change model and the different types of competencies.

The timeline of an I Living Lab was completed with adapted timelines for the Blended ILL and the Intensive ILL.

A section about how to log in to uniCampus for the first time (including screenshots) was added to facilitate the access to uniCampus.

1.2 Changes on the Guide for Educational Entrepreneurs

Similar to the learners' guide, the structure of the guide for Educational Entrepreneurs was kept and updated with new information. All information mentioned above was also included or updated in the guide for Educational Entrepreneurs.

1.3 Learnings for E³UDRES² 2.0

These two guides contain the collected information about an I Living Lab: from the registration to the assessment. It has evolved over the past four rounds of I Living Labs and is now a comprehensive guide for learners and Educational Entrepreneurs.

However, we got the feedback, that due to the amount of information and details that are contained in the guides, they are also very long and some students tend to not fully read them before joining the first session of an I Living Lab.

Different ideas emerged during this round of I Living Labs to provide a more user-friendly guide for students:

- A shorter summary would be necessary to highlight the most important information.
- All the information contained in the current guides could be represented in a 2-3-minute-long video which would be more interesting to students.
- The guide could be redesigned by students for students, so that becomes more interesting to our target group.

In a feedback talk with Educational Entrepreneurs it became clear, that one topic that is still missing in their guide is the precise assessment of students, i.e., how the different components such as presence, engagement during the sessions, outcome, etc. are measured and weighted.

These feedbacks will be incorporated in the next versions of the guides, together with new updates from the I Living Labs.

3. Description of the learning process between round's ILL 3 and ILL's 4

E³UDRES² is a project aimed to collaboration between universities in many fields such as teaching, researching, innovation etc. E³UDRES² includes such activities as I Living Labs, Bootcamps, Hackatons and iResidencies.

3.1 Similarities between round 3 and 4

Regarding the similarities between round 3 and round 4 we have to following information.

In both rounds we kept the major principles of ILLs, such as interactive, engaging and challenge-based teamwork is the core of that activity. Stakeholders are still vital to put their input to that creative process. Educational Entrepreneurs are coaching their group of learners, so one of the outputs is a well-organized team at the end of the process.

We kept the diversity between the 3 types of I Living Labs that we created in the past. We wanted to ensure that the students could choose the best option and experience the best learning path possible.

General structure of the ILL, ice breaking methods, online tools used and number of students was similar between ILL round 3 and ILL round 4. Also, using the design thinking process was fundamental to both rounds.

The students had been provided with mostly the same learning tools and the meetings were organized in a similar way.

The students used a common registration platform (https://ill-registration.E³UDRES².eu/) expressing their interests regarding a theme (more on this in the differences section) while the final matchmaking was done using the 6 batteries of change by the Belgian representatives and using data provided by Talentho (https://www.thalento.com/). The Six Batteries of Change is an evidence-based method for implementing change. The model helps to identify the roles that are needed in a team. All six batteries have to be charged, in order to generate the amount of energy necessary in a successful team. If one or more batteries remain empty, the success rate of the team will be limited. The Six Batteries of Change show how to develop transformation competencies by creating a more energised team capable of dealing with faster and more complex challenges. Included is an example of a talent profile report.

TalentProfile_Report_Example.pdf

3.2 Differences between round 3 and 4

We integrated some differences between round 3 and round 4.

For round 4 we had a better future skills selection method for the students (refined from round 3). We also had a more simplified (and more efficient) grading process.

The students within an I Living Lab were in round 4 more diverse, with backgrounds in a lot more fields, than the ones participating in round 3. Maybe, this was the reason they were more willing to learn new things. They were more open to new. They have chosen a leader and the team work was organized by the EE's together with the leader in specific work packages and then distributed to the team's members.

In Round 4 there was a lower number of choices for students during the registration phase, a few ILL's with similar subjects being grouped together

and creating categories (which were a reinterpretation of the "umbrellas" from R3) while the actual allocation of students to specific ILLs was done "offline" by Belgian partners and using data provided by Talentho. This provided a better distribution of effort so that each ILL had an improved diversity of students and the situation of ILLs having a low number of students was avoided.

An another important difference between round 3 and 4 was that there was a lower number of dropouts/no-shows which can be considered an improvement regarding round 3.

In round 3, there were up to 3 EEs per I Living Lab, while in round 4 there were at maximum 2 EEs per I Living Lab. The fact that some ILLs didn't exist anymore in round 4 was somehow confusing for some EEs.

3.3 What can be improved for E³UDRES² 2.0 ?

3.3.1 What do we want to keep?

E³UDRES² is based on an international collaboration which expands horizons for students, Ph.D. students, university professors, innovators, entrepreneurs, companies.

This project aims at developing innovative approaches in education and entrepreneurs and strengthen connection between universities and the business environment.

ILLs are proven techniques for a creative and engaging community we have created during E³UDRES² 1.0. Multinationalism and multidisciplinary approach are also vital parts. Due to financial and time constraints a relevant part of these ILLs will be still online. That kind of work will be augmented by intensive ILLs and blended ILLs.

For the students it was a very useful experience because they achieved many aims: they got out of their comfort zone, learned to work in an international environment, improved their English, acquired scientific (innovation, digital, cooperation, collaboration, etc.) skills. It was a great experience and contribution to their future development. The atmosphere during meetings was very friendly and several questions were discussed.

For ILLs with mobility options, the use of travel tokens issued through the university coordinators

From the point of view of **a university professor or as we call it an Educational Entrepreneur,** it was very interesting collaboration, experience exchange, new knowledges and skills in scientific and innovation. It was also offered the possibility to collaborate with stakeholders, which showed new sides and opportunities of scientific projects.

The ILL concept, as it arrived to a more mature state and can be extended successfully. In this regard, the design thinking method, as well as the poster and video pitch results should be kept in E³UDRES² 2.0.

Other specific items that should be further kept are the blended ILLs and the intensive ones. The opportunity to work face to face also was highly appreciated, therefore the ice breakers activities always helped in creating a good mood during the working sessions and also it enabled connections between students.

In each ILL should be at least 2 EEs, preferably with different background and expertise, both related to the topic.

The topics of ILL should be kept in E³UDRES² 2.0.

3.3.2 Improvements

As always every project is an ongoing process of improvements. We have successfully worked on E³UDRES² but have on the other side some improvements that should, can be made for E³UDRES² 2.0.

Since there are new HEIs joining E³UDRES² 2.0, there is a possibility to broaden our field of topics. Not neglecting the 3 major themes, we might find such topics which provide involvement for those universities which have additional resources and knowledge fields.

Onboarding (and pre-onboarding) is a first thing that should be improved – **students** need to know (exactly) what is expected from them in terms of output and effort. As an alternative - a much more condensed version of the learner's guide (2-3 pages maybe) should be available before the start of the I Living Labs. Some further improvements could be brought on the registration system - students with common ground with the challenge behave much better within the team.

More offline activities should take place and a much more close connection with other activities and work packages should be created. More time should be devoted to business modelling and the development of the project as a future business. There were also wishes to give tasks and explanations in a more playful way.

From the beginning there should be a budget available for the winning teams for an ILL part 2 where the students can actually implement the proposed solution, build the prototype (the solution) that they are offering.

For E³UDRES² 2.0 there should be an intermediary deadline for the design thinking part. Students spend too much time on the design thinking part and after that they don't have enough time to concentrate on giving a shape to their solution.

Regarding the improvements for the teacher of the I Living Lab, **the educational entrepreneur,** we also see the need to optimise the use of resources, the diversity of knowledge, competences and skills. To Improve resource management, process facilitation, team management, and human skills and include business design knowledge.

For an EE we see profit in sharing tips and knowledge about how to work in multicultural teams

The biggest improvements that can be possible is regarding **the engagement of the stakeholders** – challenge owners. Increasing the involvement of the stakeholders from even before the start of the I Living Labs to more challenge owner engagement & commitment during an I Living Lab

Active participation of the challenge owner in the teamwork and the design thinking to increase the learning experiences and personal growth of students and to ensure more tangible and usable outcome

4 Annexes

Annex 1: Learners guide

E3UDRES2

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I Living Lab

Learners' Guide

Co-funded by the Erasmus+ Programme of the European Union

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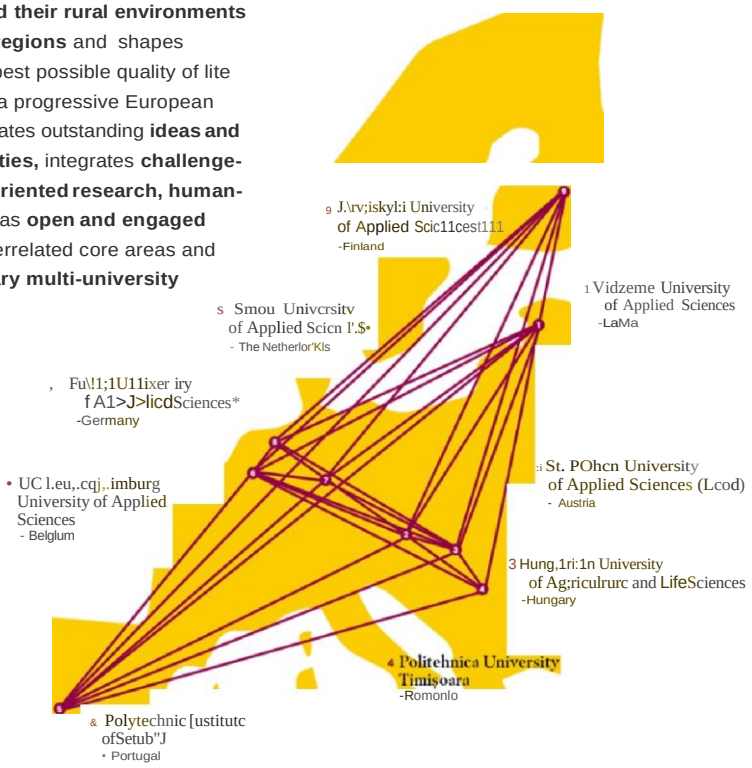
E³UDRES² European University

E'UDRES' stands for *Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions.* It is one of 41 "European Universities" - a flagship initiative of the European Union that aims to build strong and long-lasting alliances between universities all over Europe in order to strengthen the European Higher Education Area and create a European Education, Research and Innovation Area - allowing a *new generation of creative Europeans* to cooperate across languages, borders and disciplines to address societal challenges and skill shortages faced in Europe.

The E'UDRES' European university Alliance comprises a total of nine international partner universities: The **Polytechnic Institute of Setiibal (Portugal), the Hungarian University of Agriculture and Life Sciences (Hungary), UC Leuven-Limburg UAS (Belgium), the Politehnica University Timi,oara (Romania),** and the **Vidzeme University of Applied Sciences (Latvia),** all under the leadership of the **St. Polten University of Applied Sciences (Austria). Fulda University of Applied Sciences (Germany), Saxion University of Applied Sciences (The Netherlands)** and **Jyviiskylii University of Applied Sciences (Finland)** will join the Alliance from Autumn 2023.•

The alliance aims to promote the **development of small and medium-sized cities and their rural environments** into **smart and sustainable regions** and shapes a prosperous future with the best possible quality of lite for self-determined people in a progressive European society. E'UDRES' also co-creates outstanding **ideas and concepts for future universities,** integrates **challenge-based education, mission-oriented research, human-centered innovation** as well as **open and engaged knowledge exchange** as interrelated core areas and aims to establish an **exemplary multi-university campus across Europe.**



What's an I Living Lab?

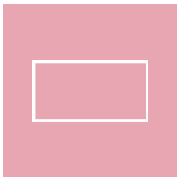
I Living Labs (IIIs) are special course units developed in E³UDRES². They are part of a study program (or extracurricular course units) in which teams of students from different universities **set to work on a challenge.** This challenge is a **complex problem** that has been handed in by an entrepreneur, a (non-profit) organization or local government for example, for which there is no cut-and-dried solution and for which a solution can have a positive impact on the region they are located in.

The "I" in the I Living Lab stands for the adjectives that form the core of what an I Living Lab should be: Inspiring, innovative, intercultural, international, interdisciplinary, intersectoral, inclusive and intense. The didactic design of the I Living Lab is oriented on the concept of flipped / inverted classroom: Students should be supported to evolve their self-reliance, self-efficacy and possibilities to co-create every step of the I Living Lab.

The **student teams** working together over the course of several weeks in the I Living Lab have the benefit of profiting from all the individual backgrounds of each student - coming from different study programs, different countries and being equipped with different skills, the teams represent a diverse mix of people, each bringing in their own strengths to solve the challenge they are working on. This is what we call **trans-disciplinary work** - and it's also an important component in the tool belt of future jobs. Students might also work with **entrepreneurs, policymakers, citizens, researchers,** and other groups of people, who may offer a different perspective on the challenge the students are facing. Finally, **education professionals** will supervise the students in every step along the way. They are not there to tell them what to do and how to do it, but to coach the teams and provide maximum support

Different Formats of I Living Labs

In round 3 of the I Living Labs in winter term 2022, there will be different formats of I Living Labs:



Single & Double I Living Labs

Single I Living Labs are the standard format of ILLS - a group of students works together to solve a challenge, and collaboration takes place exclusively online. In Double I Living Labs, two groups of students work on the same challenge. Each group develops their solution individually, but the two teams meet regularly and give and receive feedback from each other.

Umbrella I Living Labs

The format of an Umbrella ILL is created and offered by UC Leuven-Limburg UAS. The Umbrella ILL is a cluster of different sub-challenges under one topic. This makes it possible to define more concrete challenges that all work together on a (partial) solution of a defined problem.
Collaboration takes place partly on-site and partly online.

Latvian I Living Labs

This format of the ILL is a mixture of a one-week online collaboration and a one-week intensive on-site work at the Latvian Vidzeme University of Applied Sciences. While the other ILL formats give students 6 ECTS, students participating in a Latvian I Living Lab will receive 3 ECTS.

Different Roles in the I Living Lab

Educational Entrepreneur (EE)

The Educational Entrepreneur is the coach of the I Living Lab. They guide the students in their co-creative design-thinking process and stimulate them to evolve their future skills. Together with the stakeholder, they work towards smart and sustainable ideas and prototypes for the challenge presented in the I Living Lab.

Student Team

The student teams are the core players of an I Living Lab. Consisting of various students from different institutions, ;:ountries and disciplines, the teams regularly get together to co create ideas and prototypes for the challenge they are working on.

Stakeholder

A stakeholder is the owner of the challenge - the person who originally identified the problem and is willing to contribute to the development of smart and sustainable ideas and prototypes in the I Living Lab. They can be anyone from the regional society: a business owner, a local authority, a civilian, a student, a (nonprofit) organization or any other regional player. Together with students and coaches (see "Educational Entrepreneur"), they start a process of co-creation within the ILL.

T-ShapedInnovator

T-Shaped Innovators work in each university participating in PUDRES[2]. They support the Educational Entrepreneurs and together they evaluate, reflect and evolve the concept of the I Living Labs. T-Shaped Innovators are people who are allrounders, but also have very specific expertise in a certain field. This is represented by the 'T' in "T-Shaped": The vertical bar on the letter represents the depth of related skills and expertise in a single field, whereas the horizontal bar is the ability to collaborate across disciplines with experts in other areas and to apply knowledge in areas of expertise other than one's own

Phases of an I Living Lab

Phase 1

Onboarding

Preparation for the I Living Lab

Phase 2

I Living Lab

Working on the challenge with your team

Phase 3

Outboarding

Final steps of the I Living Lab

Phase 1

Onboarding

Onboarding

The goal of the onboarding phase is to get to know the other students and to form a team. Furthermore, this time is meant to get the basic information about the Design Thinking method and the tasks for the ILL in detail.

The Learner's Camp for all I Living Labs on E³UDRES² uniCampus

Please visit this Camp before the start of the ILL and look at the materials there. They will help you to have a good overview to the concept of the ILL and all steps within. What's more you find impulses that help you to be a self-reliant and active part of the whole ILL

You will find in the Learner's Camp:

- Basic time structure of an I Living Lab
  - Overview of tasks and deadlines (i.e. be present and co-create the meetings, working in between the meetings alone and in small groups / the whole group without EE, Portfolio, Midterm-Pitch, preparation for Showdown)

- Videos with accompanying written information on what to focus on when watching and what are the next steps:
  - Future Skills
  - Design Thinking
  - Portfolio in the ILL
  - Information on self-assessment with questionary
  - Information on Assessment

Other materials

- Short descriptions and links of helpful tools for group- / self-management (e.g., for creating Kanban, Canvas, (elements of) presentations ...)
- Impulse questions for Portfolio

Announcements

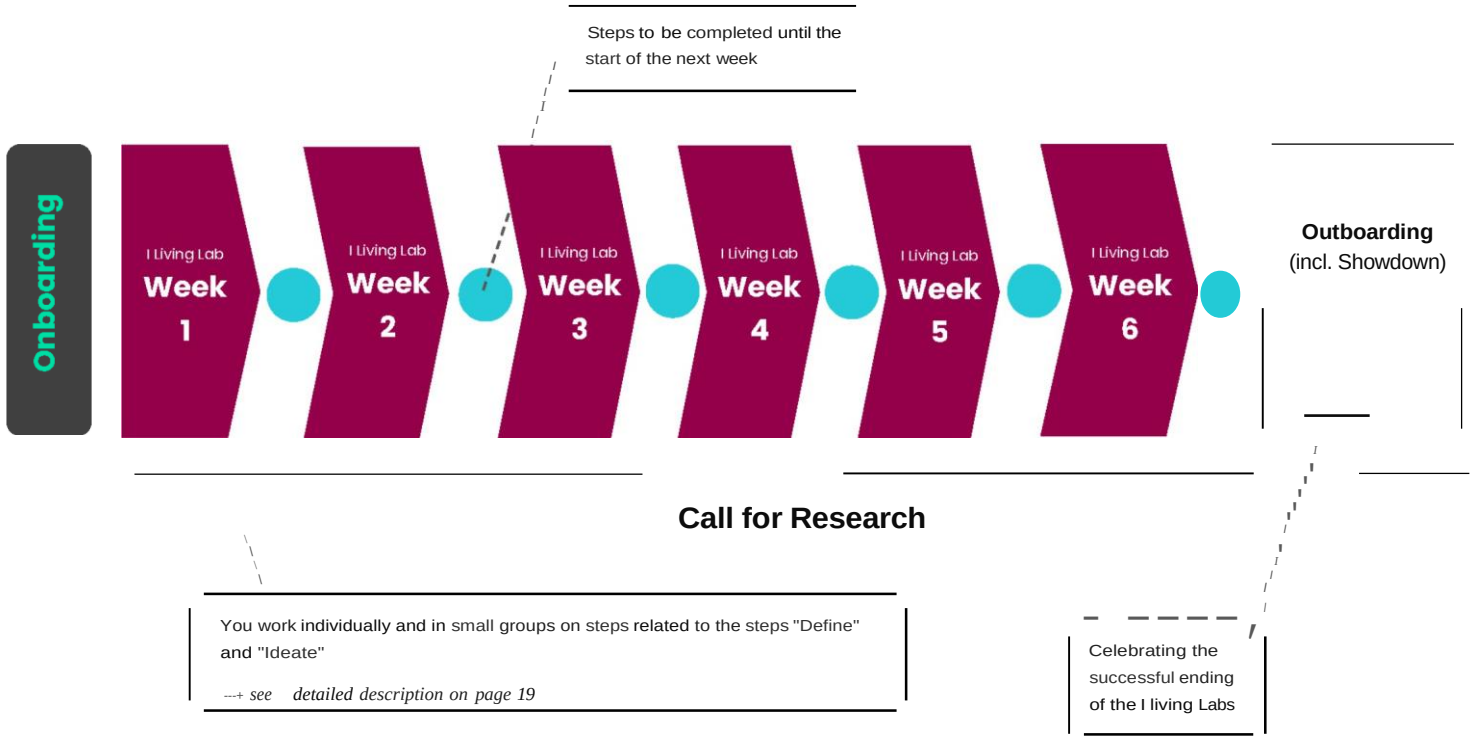
- Welcome message with overview on the Learners Camp
- Students' questionnaire at the beginning of the **ILL**
- News from E³UDRES² (i.e. about events like upcoming E³UDRES² Hackathons)
- Students' questionnaire at the end of the ILL

Onboarding

Phase 2

I Living Lab

Timeline of an I Living Lab[1]: Overview



[1] Everything shawn in this timeline happens inane full-time week far the Latvian I Living Lab

I Living Lab

Timeline of an I Living Lab: Details

Week 1

re:;, 1st Meeting
\... (more if needed)

- **Mutual introduction**
- **First brainstorming activities on the challenge**
- **Outlook & co creating activities to do for the next week**

Each student chooses a "reflection partner". Bi-weekly meeting reflect entries on portfolio. Exchange on ··sparkling moment **of** the two weeks related **to** the project" (e.g. something worked out very well, an innovative idea emerged).

Steps until week 2

Part ofJmpathize"

- *Students questionaire (start)*
- *start Portfolio with more detailed personal introductior.• within first week and choosing one to three Future Skills you want to develop*
- *Call to research*
- *look on brainstorming and add ideas/ find and name clusters*

../

ftsfi

S:S:;, 2nd Meeting
\... (moreifneeded)

Interactive Presentations of the students
Group discussion/ Feedback of EE
First Brainstorming and co creation activities on the way to *'Define'*

- **Outlook & co creating activities to do for the next week**

Steps until week 3

Part of 'Vefine"

Portfolio working with the questions + giving Feedback to other entries
Call to research
Add on to the brainstorming of define

3rd Meeting
(more if needed)

Interactive Presentations of the students
Group discussion/ Feedback of EE and Stakeholder
First brainstorming activities and co creation on *•1cJBate•*
Outlook & co creating activities to do for the next week
Gather first feedback of stakeholder

Gathering feedback of the stakeholder can also be a part of the preparation of this / these meeting(s)!

Steps until week 4

Part of "Ideate"
Working on portfolio with the questions AND giving feedback to other entries
Call to research
Ideation activities: Using various brainstorming methods alone, in tandems/ triads and visualize outcome
Giving access to ideas to stakeholder

Week 4

4th Meeting
(more if needed)

Pitching ideas from ideation steps, combining and evaluating them(= Midterm Pitch)
- **Group discussion/ Feedback of EE and Stakeholder**
- **Outlook & co creating activities to do for the next week with the focus of "Prototyping"**

Stakeholder should have access to ideas before this/ these meeting(s)

Steps until week 5

Part of "Prototyping"
working on portfolio with the questions AND giving Feedback to other logbook entries
Call to research
*Working on Prototypes in small groups (Stakeholder could **visit** such meetings)*
Giving access to prototypes to stakeholder
EE conducts short interim meetings with each student giving individual feedback

5th Meeting
(more if needed)

Dialogue orientated presentations of prototypes
Group discussion/ Feedback of EE and Stakeholder
outlook & co creating activities to do for the next week with the focus of preparing for the showdown

Stakeholder should have access to prototypes before this/ these meeting(s)

I Living Lab

Steps until week 6

Refining Prototypes
Call to research
Preparing stuff for "ILL - Showdown"
Working on portfolio with the questions AND giving Feedback to other entries
Working on stuff for "lll showdown" in small groups (see phase 3 "Showdown"!)

Week 6

d;, 6th Meeting
\... (moreifneeded)

Discussion on the stuff tor "ILL - Showdown" AND testing steps for this event
Looking back on the learning journey together with various creative methods
Finding ways to stay in touch with each other

Steps until Showdown

Finalizing preparations for Showdown
Final entries in the Portfolio + Assessment report

Outboarding

Outboarding Phase

- Celebrating the successful ending of the ILLS in the Showdown
- Educational Entrepreneurs conduct assessment talk meetings with each student including deciding together on the grade
- Team Feedback about the time in the ILL within the group

Infrastructure for working in an I Living Lab

Working with an international team in an I Living Lab requires tools that make this type of collaboration possible. For the basic infrastructure of the I Living Labs, the E[a]UDRES[2] uniCampus is used to get people together, organize their work and share news.

Learners' Camp

The Learners' Camp acts as the learning space for all people involved in the current I Living Lab edition, regardless of the ILL/challenge they work on.

Examples of the information shared in the Learner's Camp:

- General Timeline and deadlines of the current I Living Lab
- Useful documents & links, e. g. on Design Thinking, Future Skills, the Portfolio as well as the assessment at the end

I Living Lab Camp

The I Living Lab Camp contains information for the respective student team in the form of texts, pictures, videos and more. There's one individual course on E³UDRES² uniCampus set up for each I Living Lab (= each challenge and their respective team). This space should also provide the following:

- Description of the Challenge as a reminder
- Easy to grasp overview: Background to the challenge (Text, Audio, Video etc)
- Overview of planned schedule
- Video or written introductions of the Educational Entrepreneurs & Stakeholders
- Schedule for team meetings with the whole group are entered in the schedule in E³UDRES² uniCampus course in advance

All results from every learning step of the teams as well as related activities are always accessible and can be evolved by every student.

Call to research

Each student individually looks to see if similar issues like their challenge are occurring elsewhere (scientific papers, newspaper articles, description of a thematically related project etc.) - ideally even related to their own sociospatial areas (work / different places of "home" / relations / hobbies etc.)

For every student in the team individually

- "Where do I come from" - questions from the Portfolio
- Each student researches for as current as possible background (scientific paper, newspaper, description of a thematic related project...) to the challenge in the best case related to own socialspatial areas (work / different places of "home" / relations / hobbies ...) - the findings are collected in the ILL camp
    - Combine it with methods of socialspatial research
- Find and list "experts in the field of the challenge" and conduct with at least three of them an interview

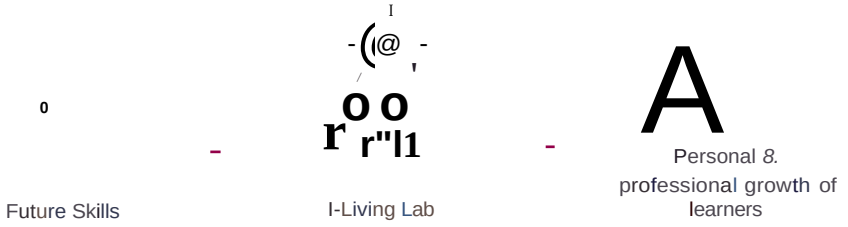
For tandems or triads of students

Students arrange an online meeting on their own to:

- share their findings
- sum them up together (consequences for the challenge of the ILL and its focus points)
- post them in the ILL camp together with a message to other students / groups on what they should focus / what they can add
- give Feedback / add ideas to findings of at least one other person / group (based on discussion in the small group)
- prepare short & crispy interactive presentation (for *Define* in the way of a pitch!)
- make a short protocol of the meeting and post it

Feedback and assessment in an I Living Lab

The I Living Lab is a safe working and learning space that allows learners to put ideas to test, succeed or fail and learn from these experiences. In doing so, they develop and sharpen their future skills and grow on a professional and personal level. Feedback and reflection play an essential role in supporting this process. Various assessment methods show the personal learning success of each student through the I Living Lab.



Learning outcomes of an I Living Lab

In an I Living Lab, students are encouraged to:

- Think independently, critically and creatively
- Learn various methods for analyzing and solving socially relevant problems
- Develop interdisciplinary cooperation skills, promoted through dialogue orientation and self-determined learning
- Develop future skills

After completing an I Living Lab, students are able to:

- Understand the functions and operation of a complex system
- Develop solutions for complex problems by using principles of Design Thinking
- Determine, design/choose the main elements for creating the desired system/ solution
- Present ideas in adequate and creative form

- Act as a member of a professional team
- Be responsible as an individual professional

In detail, students are supported to reflect on or evolve their status to realize the following self-statements:

- I participate in design thinking process actively.
- I can experiment with my skills and competences in situations that are new to me. I can actively search for new solutions that meet my needs.
- I can experiment with different techniques to generate alternative solutions to problems, using available resources in an effective way.
- I can communicate imaginative design solutions to stakeholders from different backgrounds effectively.
- I can work with a range of individuals and teams and contribute to group decision-making constructively. I am open to the worth that others can bring to value-creating activities.
- I can overcome simple adverse circumstances.
- I can compare the different possibilities within my team.
- I can judge the control I have over my achievements (compared with any control from outside influences). I am comfortable in taking responsibility in shared activities.
- I can reflect on my individual and group needs, wants, interests and aspirations in relation to opportunities and future prospects.
- I can reflect on failures (mine and other people's), identify their causes and learn from them.
- I can actively look for, compare and contrast different sources of information that help me reduce ambiguity, uncertainty, and risks in making decisions.
- I am driven by honesty and integrity when taking decisions.

These Learning Outcomes are Level 2 of the E³UDRES² ILL Competency Framework.

Giving and Receiving Feedback

360-degreefeedback

360-degree feedback is a type of feedback process where not just superiors but also peers and even external participants (e.g., stakeholder) evaluate learners. Therefore, I Living Lab students will receive continuous feedback from Educational Entrepreneurs (EE), stakeholders, team members & peers in different forms. Thus, they can develop themselves from a learner receiving feedback to a responsible, self-reliant, independent, adaptable I Living Lab alumni.

When is feedback given in an I Living Lab?

In general, learners are asked to give feedback and talk about their feelings in different situations:

- When giving presentations: The criteria for presentation are provided for them as a guideline for giving feedback.
- After each presentation they make.

For each of these situations, there are two forms of guiding the feedback: 1) with or 2) without given feedback criteria.

Feedback of stakeholders can be integrated in various ways, e.g., through attending official presentations or also in regular ILL meetings. However, learners should always be introduced and engaged in giving feedback.

Criteria	Definition
Professional knowledge base	Team can use professional terminology consistently during pitching.
Information seeking	Team can use different kinds of information seeking methods: interviewing and research / hard data. Information is compiled together meaningfully. Data is appropriate to the project.
Professional skills and activity	Team can use innovative or alternative idea for the project. Pitching is clear, convincing, engaging, passionate, honest and likeable.

Target of activity (client/ user)	Team can define appropriate client /user. Pitching demonstrates clear connection in order to understand the user's point of view.
Group work skills and leadership	Pitching shows that the team has been working in a goal-orientated manner. Team can demonstrate the exploited interdisciplinary of the team.
Responsibility	Team can act according to the ethical principle of their professional field. Pitch demonstrates how to identify the opportunity and the sustainability of the project.
Current situation of the project	Short description of the current situation of the project now.

Table I: Example for Feedback Criteria used for giving feedback for team presentations (based on OAMK Labs, Finland & ilab, St. Po/ten UAS)

After a presentation, moderation could be started as follows:

I. The presenting group itself describes how they felt and assess their own presentation.
2. Learners give them feedback
3. Feedback of Educational Entrepreneurs / stakeholder

Assessment

Personal Goals

Each learner defines their personal learning goals for personal development. It is important to define personal goals at the beginning of the I Living Lab. The learners need to set goals that they want to achieve for their future and therefore, develop their self-determination.

Already in the first days, you will be encouraged to reflect on your personal goals: You will set personal goals related also to the Future Skills (only a few) at the beginning and deepen them within the context of creating your portfolio. The goals are set together with the EE. This creates a clear plan for you and for the responsible EE to follow and give feedback on.

The personal goals are defined as smart goals. During the process, it is useful to check **if** the goals are still appropriate or need to be adjusted or changed.

Topics of the Personal Goals

The personal goals are linked to learning outcomes of the I Living Lab. The alignment of personal goals includes the following topics:

- Life and professional skills
- Learning and innovation skills
- Information, media and technology skills
- Critical thinking and problem solving
- Communication
- Collaboration
- Creativity

Portfolio

During the course of the I Living Lab, you will create your own Portfolio. In the Learners' Camp, you find basic information about keeping a portfolio. As inspiration you find a collection of reflection questions. In each week you make an entry to the portfolio, reflecting steps on Define, Ideate, Prototyping and the path to the Showdown. The first entry consists of a detailed personal introduction and the selection of three of the future skills they would like to develop during the ILL period. The entries can be combinations of text, drawing, audio and video. Additionally, you will be asked to give short Feedback to the entries of at least three other students in the ILL every week.

At the beginning of the ILL you choose a "reflection partner". Bi-weekly you meet and reflect your entries in the portfolio. You also exchange on "Sparkling moment of the week related to the project" (e.g., something worked out very well, an innovative idea emerged). The main outcomes of these meetings are also documented as part of the portfolio. One of the last entries is an assessment report: skills or knowledge that you have learned and how you achieved these skills and knowledge (integrate parts / outcomes of the project).

The basic possibility to maintain the portfolio is an ongoing entry in the shared folder in your I Living Lab course and it is also possible, that you build up / use own spaces like a blog or something similar. Important is the possibility to give feedback there.

By keeping the portfolio, you evolve your ability to reflect and learn why this is important. This is crucial for your development as reflective practitioners.

Phase 3

Outboarding

The Outboarding

The final phase of an I Living Lab includes the Showdown, where we celebrate the successful end of the I Living Lab, and the Assessment Talks.

The Showdown

The specific information for the preparation of the Showdown will follow during the ILL. The main idea of the I Living Lab Showdown is to present the outcomes of the challenges the different teams have worked on. This presentation could be done in the form of a pitch video, a poster, or in various other ways. More information about how the Showdown presentations should look like will be provided during the course of the I Living Labs.

Tips for creating a Pitch-Video

Main Goal: To give a sparkling overview to your ILL Output in a story mode.

Suggestion for parts of this video:

- Present your team: **All** persons of the team should appear (we want a pitch to show to potential investors, stakeholders and next ILL students)
- Present the challenge of the ILL
- Give insights in ideas, prototypes or solutions that emerged in the ILL
- End with the next steps of your project
- The video must contain the EUDRES Logo; an email contact should be presented on the last image.

Tips for creating a poster:

- What was the initial challenge of the ILL?
- Who was the ILL team (students, EE, stakeholder)?
- Based on the "Timeline of an I Living Lab: Overview", briefly provide insights in the process developed:
    - what was the concrete problem?
    - What ideas emerged?
    - Which idea was prototyped (if applicable)?
    - What is the added value of this idea/solution?

- In terms of learning:
  - what are the top 3 future skills that were most developed?
  - How did the design thinking framework support the learning?
- What are the next steps: What are the plans of the group after the showdown?

Assessment Report and Talk

In preparation for the assessment talk, you are expected to prepare a written assessment report as part of the portfolio as described above. In this report, you reflect on the defined learning goals. Based on your newly acquired competences, you will suggest the grade you deserve, and argue why to the Educational Entrepreneurs.

During the assessment talk, you will present your portfolio and argue your proposed grade with the responsible EEs. The grade decision will be based on a joint reflective discussion between the learner, the Educational Entrepreneurs as well as external stakeholders and end users, if different.

Summary

The I Living Labs aim to be a safe and fun working and learning space for students with all kinds of different backgrounds. The skills they learn and evolve during the ILL enable them to create their very own tool belt to be well-equipped for future jobs and to engage in society. Students might also work with entrepreneurs, policymakers, citizens, researchers, and other groups of people, who may offer a different perspective on the challenge the students are facing. Finally, education professionals support the students in every step along the way. This mix of diverse actors holds the potential for creating innovative solutions for European regions.

EUDRES

Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions

Find out more about E^{3}UDRES^2 online:

Facebook

Instagram

LinkedIn

Twitter

YouTube

www.eudres.eu

Annex 2: Guide to the I Living Lab

E3UDRES2
Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions

Guide to the

I Living Lab

September 2022

Co-funded by the Erasmus+ Programme of the European Union

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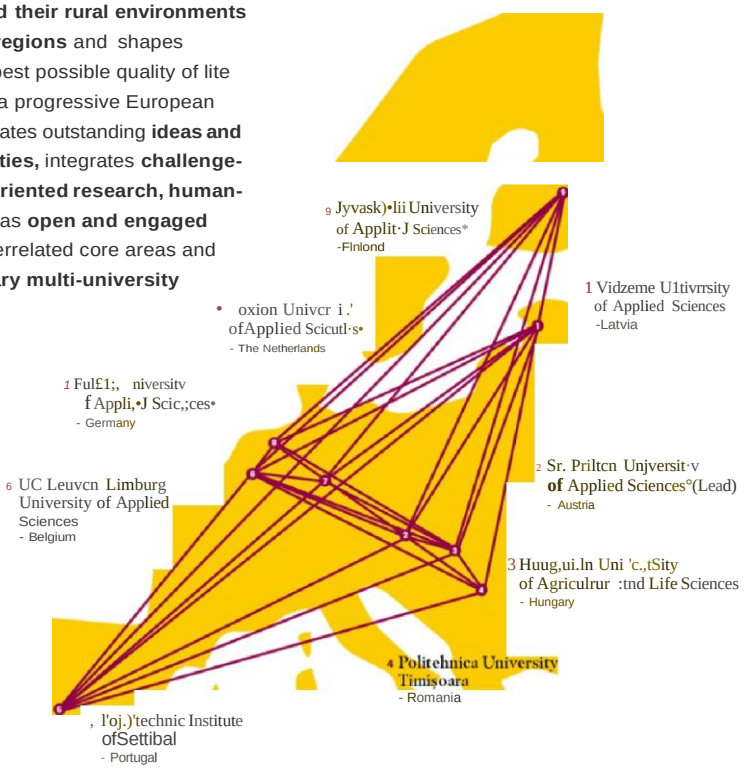
E³UDRES² European University

E'UDRES' stands for *Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions.* It is one of 41 "European Universities" - a flagship initiative of the European Union that aims to build strong and long-lasting alliances between universities all over Europe in order to strengthen the European Higher Education Area and create a European Education, Research and Innovation Area - allowing a *new generation of creative Europeans* to cooperate across languages, borders and disciplines to address societal challenges and skill shortages faced in Europe.

The E'UDRES' European University Alliance comprises a total of nine international partner universities: The **Polytechnic Institute of Setubal (Portugal), the Hungarian University of Agriculture and** Lite **Sciences (Hungary), UC Leuven-Limburg UAS (Belgium), the Politehnica University Timi,aara (Romania),** and the **Vidzeme University at Applied Sciences (Latvia),** all under the leadership of the **St. Polten University of Applied Sciences (Austria). Fulda University of Applied Sciences (Germany), Saxion University of Applied Sciences (The Netherlands)** and **Jyvaskylci University of Applied Sciences (Finland)** will join the Alliance from Autumn 2023.•

The alliance aims to promote the **development of small and medium-sized cities and their rural environments** into **smart and sustainable regions** and shapes a prosperous future with the best possible quality of lite for self-determined people in a progressive European society. E'UDRES' also co-creates outstanding **ideas and concepts for future universities,** integrates **challenge-based education, mission-oriented research, human-centered innovation** as well as **open and engaged knowledge exchange** as interrelated core areas and aims to establish an **exemplary multi-university campus across Europe.**



Goals & Content of this Guide

This document provides information and gives structure for Educational Entrepreneurs and consequently for students to gain the same high-quality level for each I Living Lab conducted.

This I Living Lab Guide deals with

- **general information about the I Living Lab**
- **the different types of actors and their roles in the I Living Lab**
- **the timeline and infrastructure for an I Living Lab**
- **relevant information needed for preparing an I Living Lab**
- **general learning outcomes, feedback and assessment**

What's an I Living Lab?

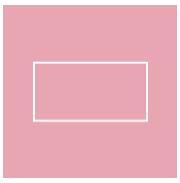
I Living Labs (IIls) are special course units developed in E³UDRES². They are part of a study program (or extracurricular course units) in which teams of students from different universities **set to work on a challenge.** This challenge is a **complex problem** that has been handed in by an entrepreneur, a (non-profit) organization or local government for example, for which there is no cut-and-dried solution and for which a solution can have a positive impact on the region they are located in.

The "I" in the I Living Lab stands for the adjectives that form the core of what an I Living Lab should be: Inspiring, innovative, intercultural, international, interdisciplinary, intersectoral, inclusive and intense. The didactic design of the I Living Lab is oriented on the concept of flipped / inverted classroom: Students should be supported to evolve their self-reliance, self-efficacy and possibilities to co-create every step of the I Living Lab.

The **student teams** working together over the course of several weeks in the I Living Lab have the benefit of profiting from all the individual backgrounds of each student - coming from different study programs, different countries and being equipped with different skills, the teams represent a diverse mix of people, each bringing in their own strengths to solve the challenge they are working on. This is what we call **trans-disciplinary work** - and it's also an important component in the tool belt of future jobs. Students might also work with **entrepreneurs, policymakers, citizens, researchers,** and other groups of people, who may offer a different perspective on the challenge the students are facing. Finally, **education professionals** will supervise the students in every step along the way. They are not there to tell them what to do and how to do it, but to coach the teams and provide maximum support

Different Formats of I Living Labs

In round 3 of the I Living Labs in winter term 2022, there will be different formats of I Living Labs:



Single & Double I Living Labs
Single I Living Labs are the standard format of ILLS - a group of students works together to solve a challenge, and collaboration takes place exclusively online. In Double I Living Labs, two groups of students work on the same challenge. Each group develops their solution individually, but the two teams meet regularly and give and receive feedback from each other.

Umbrella I Living Labs
The format of an Umbrella ILL is created and offered by UC Leuven-Limburg UAS. The Umbrella ILL is a cluster of different sub-challenges under one topic. This makes it possible to define more concrete challenges that all work together on a (partial) solution of a defined problem. Students register for the Umbrella I Living Lab and specific groups are formed through the Match-Making process based on the individual talents of the students.

The advantages of Umbrella I Living Labs are:

- Optimal use of resources and diversity of knowledge, competences and skills
- Improve resource management, process facilitation, team management, design thinking and human skills and include business design knowledge
- Educational Entrepreneurs sharing tips & knowledge how to work in multicultural teams
- Increasing the challenge owners' engagement & commitment during an I Living Lab

- Active participation of the challenge owner in the teamwork and the design thinking to increase the learning experiences and personal growth of students and to ensure more tangible and usable outcome

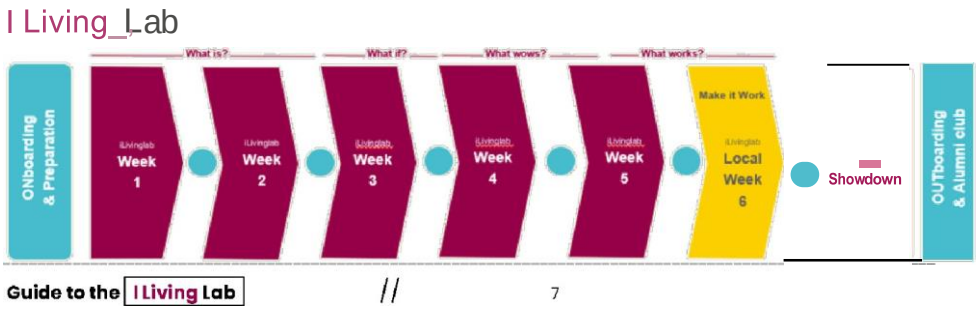
Topics of the Umbrella ILLs in 2022

In winter term 2022, there are two different Umbrella I Living Labs offered:

- Umbrella #1: Sustainable Energy Transition
  - Challenge definitions for 4 single I Living Labs:
    1. Moonshot a smart & social local energy transition model?
    2. How can we bring the energy transition to our living rooms?
    3. What could the social business model looks like for a 'neighbourhood' Energy Sharing grid?
    4. What could be a 'Mindset-Experience' Energy Transition Game looks like?
- Umbrella #2: Matching & Sharing Talents
  - Challenge definitions for 4 single I Living Labs:
    1. What could be a social enterprise co-work structure for Open Innovation?
    2. Create a Brand design & Omnichannel Experience for multiple stakeholders!
    3. Develop a social business model for this open Talent Matching platform.
    4. Define a Product & Marketing concept for the Talent Tinder opp that bridges students & entrepreneurs?

Process of Umbrella I Living Labs

Collaboration in Umbrella ILLs takes place partly on-site and partly online. Therefore, the format of the I Living Labs will 'shrink' to 5 weeks and an extra local week will be added. During this local week, students will work very closely with local entrepreneurs, engineers, business experts, designers and coding experts. The goal is to concretely transform their idea into a mockup and prototype.



Selection & Registration process of Umbrella Ills

Students register for the Umbrella I Living Lab on line, and specific groups are formed through the match-making process.

Therefore, students have to

- complete an online motivation essay
  - fill in thePUDRES² TalentME
- answer the online challenge owner **Q&A**

By taking these steps, it is possible to get a better idea of the growth potential of each individual student and this knowledge can be used to build a stronger and more diverse team.

Latvian I Living Labs

This format of the ILL is a mixture of a one-week online collaboration and a one-week intensive on-site work at the Latvian Vidzeme University of Applied Sciences. While the other ILL formats give students 6 ECTS, students participating in a Latvian I Living Lab will receive 3 ECTS.

Different Roles in the I Living Lab

Educational Entrepreneur (EE)

The Educational Entrepreneur is the coach of the I Living Lab. They guide the students in their co-creative design-thinking process and stimulate them to evolve their future skills. Together with the stakeholder, they work towards smart and sustainable ideas and prototypes for the challenge presented in the I Living Lab.

Student Team

The student teams are the core players of an I Living Lab. Consisting of various students from different institutions, countries and disciplines, the teams regularly get together to co-create ideas and prototypes to the challenge they are working on.

Stakeholder

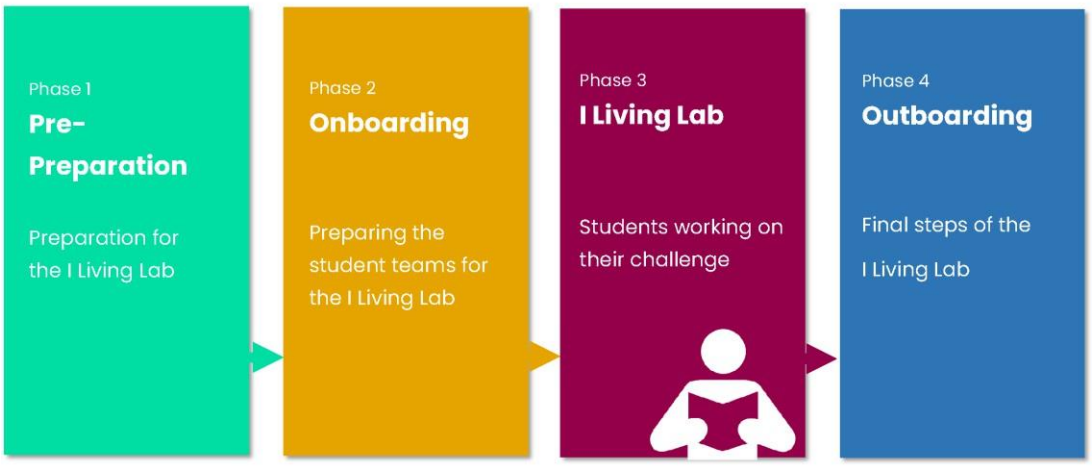
A stakeholder is the owner of the challenge - the person who originally identified the problem and is willing to contribute to the development of smart and sustainable ideas and prototypes in the I Living Lab. They can be anyone from the regional society: a business owner, a local authority, a civilian, a student, a (nonprofit) organization or any other regional player. Together with students and coaches (see "Educational Entrepreneur"), they start a process of co-creation within the ILL.

T-ShapedInnovator

T-Shaped Innovators work in each university participating in PUDRES². They support the Educational Entrepreneurs and together they evaluate, reflect and evolve the concept of the I Living Labs. T-Shaped Innovators are people who are allrounders, but also have very specific expertise in a certain field. This is represented by the 'T' in "T-Shaped": The vertical bar on the letter represents

the depth of related skills and expertise in a single field, whereas the horizontal bar is the ability to collaborate across disciplines with experts in other areas and to apply knowledge in areas of expertise other than one's own.

Phases of preparing an I Living Lab



Phase 1

Pre-Preparation

Pre-Preparation

Most important goals for this phase

Provide information to the students about

- The I Living Lab in general
- The challenges
- The timeline & schedule of the event

The goal of the Pre-Preparation phase is to develop the topics of the Ills and the marketing activities so that students (who have not yet registered) gain information that will motivate them to participate in an I Living Lab.

At present, the following content can be found on thePUDRES² website to make students curious to participate in an I Living Lab:

- Video series about the I Living Labs: *Educational Entrepreneurs/Stakeholders/T-Shaped Innovators/Students Explain the ILL*
- Explanation of the I Living Lab concept and key players
- Additional storytelling material on what is happening in an ILL / what impact an ILL has
- Recap of previous ILL rounds (Showdown event)

For this year's specific round of Ills, the following materials and content are available:

- Overview of the upcoming I Living Lab challenges and their details
- Information on how to apply, including link to a form for application

In order to provide coherent information about the I Living Lab Challenges on the website, all EEs are asked to prepare the information for their I Living Lab by using the following guidelines:

- **Title of the I Living Lab**
  One sentence phrased as a question, "How might we..."
- **Challenge**
  Two sentences max.
- **Goal**
  Three sentences max.
- **Meeting Structure**
  Description of Meeting Schedule (as detailed as possible)
- **Link to additional files**
  Videos, slides, posters etc.
- **Picture representing the I Living Lab**

Phase 2

Onboarding

Onboarding

Most important goals for this phase

- Provide a more detailed overview of the Ills for thestudents
- Prepare the ILL infrastructure

Learner's Camp for all I Living Labs on E³UDRES² unicampus (see details on page 23)

This should provide infographics about:

- Basic time structure of an I Living Lab (incl. date & time of start and I Living Lab Showdown)
  - Overview of tasks and deadlines (i.e. be present and co-create the meetings, working in between the meetings alone and in small groups / the whole group without EE, Portfolio, Pitch for Showdown/Midterm-Pitch)
- Current topics/challenges of all I Living Labs

The Camp also provides videos with accompanying written information on what to focus on when watching and what are the next steps:

- Future Skills
- Design Thinking
- E-Portfolio in the **ILL**
  - Students choose one "reflection partner". Every two weeks, they meet and talk about the contents of their E-Portfolios. Person A is talking while Person B is listening. B is asking A: "What was your sparkling moment of the week related to the project?" (e. g. a moment where something worked out very well, where an innovative idea emerged). Afterwards, Person A and B switch roles. Transform results in the E-Portfolio.

- Information on self-assessment with questionary
- Assessment
- Reminder to the material of the phase of Onboarding

Other materials

- Short descriptions and links of helpful tools for group- / self-management (e.g., for creating Kanban, Canvas, (elements of) presentations ...)
- Impulse questions for E-Portfolio

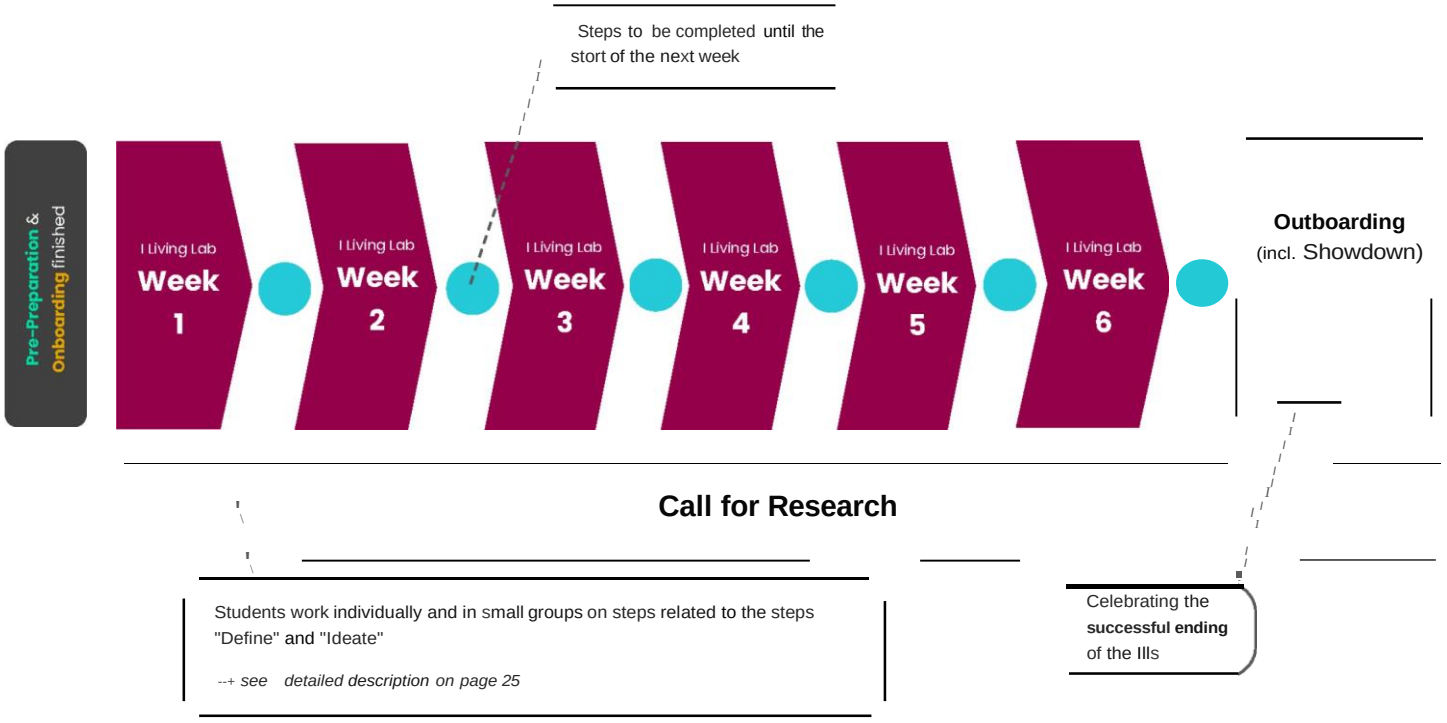
Announcements

- Welcome message with overview on the Learners Camp
- Students' questionnaire at the beginning of the ILL
- News from E³UDRES² (i.e. about events like upcoming E³UDRES² Hackathons)
- Students' questionnaire at the end of the ILL

Phase3

I Living Lab

Timeline of an I Living Lab[1]: Overview



[1] Everything shown in this timeline happens in one full-time week far the Latvian I Living Lab

Timeline of an I Living Lab: Details

Week 1

re:,, 1st Meeting
\... (more if needed)

- **Mutual introduction withe. g. sociodramatic methods**
- **First brainstorming activities on the challenge**
- **Outlook & co-creating activities to do for the next week**

Each student chooses a "reflection partner". Bi-weekly meeting reflect entries on portfolio. Exchange on "Sparkling moment **of** the two weeks related **to** the project" (e.g. something worked out very well, an innovative idea emerged).

Steps until week 2

Part ofJmpathize"

- *Students questionaire (start)*
- *Start £-Portfolio with more detailed personal introduction within first week and choosing one to three Future Skiffs student wants to develop*
- *Calf to research*
- *look on brainstorming and add ideas/ find and name clusters*

../

ftSfi

2nd Meeting
\... (moreifneeded)

Interactive Presentations of the students
Group discussion/ Feedback of EE
First Brainstorming and co creation activities on the way to *'Define'*

- **Outlook & co creating activities to do for the next week**

Steps until week 3

Part of 'Vefine"

working on £-Portfolio with the questions + giving Feedback to other entries
Calf to research
Add on to the brainstorming of 'Define"

3rd Meeting
(moreifneeded)

Interactive Presentations of the students
Group discussion/ Feedback of EE and Stakeholder(s}
First brainstorming activities and co-creation on *•1c1eate•*
Outlook & co-creating activities to do for the next week
Gather first feedback of stakeholder

Gathering feedback of the stakeholder can also be a part of the preparation of this / these meeting(s)!

Steps until week 4

Part of "Ideate"
Working on £-Portfolio with the questions AND giving feedback to other entries
Call to research
Ideation activities: Using various brainstorming methods alone, in tandems/ triads and visualize outcome
Giving access to ideas to stakeholder(s)

Week 4

4th Meeting
(more if needed)

Pitching ideas from ideation steps, combining and evaluating them(= Midterm Pitch}
- **Group discussion/ Feedback of EE and Stakeholder**
- **Outlook & co-creating activities to do for the next week with the focus of "Prototyping"**

Stakeholder(s) could have access to ideas before this/ these meeting(s)

Steps until week 5

Part of "Prototyping"
working on £-Portfolio with the questions AND giving Feedback to other logbook entries
Call to research
Working on Prototypes in small groups
(Stakeholder(s) could visit such meetings)
Giving access to prototypes to stakeholder{s)
EE conducts short interim meetings with each student giving individual feedback

5th Meeting
{more if needed)

Dialogue orientated presentations of prototypes
Group discussion/ Feedback of EE and Stakeholder(s}
Outlook & co-creating activities to do for the next week with the focus of preparing for the showdown

Stakeholder(s) should have access to prototypes before this/ these meeting(s)

Steps until week 6

Refining Prototypes
Call to research
Preparing stuff for "ILL - Showdown·
Working on portfolio with the questions AND giving
Feedback to other entries
Working on stuff for "lll showdown" in small groups

Week 6

d;, 6th Meeting
(moreifneeded)

Discussion on the stuff tor "ILL - Showdown" AND testing steps for this event
Looking back on the learning journey together with various creative methods
Finding ways to stay in touch with each other

Steps until Showdown

Finalizing preparations for Showdown
Final entries in the E-Portfolio and
Assessment report

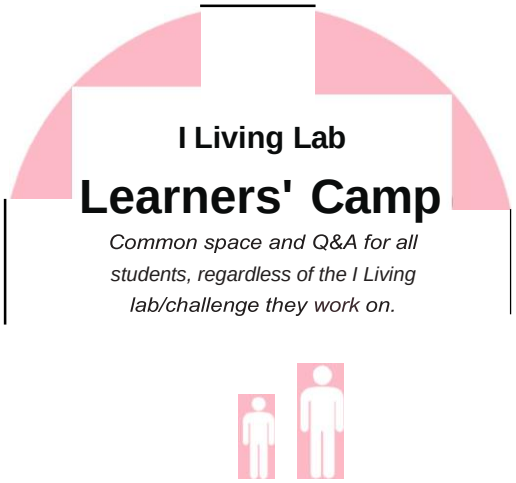
Outboarding

Outboarding Phase

- Celebrating the successful ending of the llls in the Showdown
- Educational Entrepreneurs conduct assessment talk meetings with each student including deciding together on the grade
- Team Feedback about the time in the ILL within the group

Infrastructure for working in an I Living Lab

Working with an international team in an I Living Lab requires tools that make this type of collaboration possible. For the basic infrastructure of the I Living Labs, different camps on the E'UDRES[2] uniCami::>us are used to get people together, organize their work and share news.



Learners' Camp

The Learners' Camp acts as the learning space for all people involved in the current I Living Lab edition, regardless of the ILL/challenge they work on.

Examples of the information shared in the Learner's Camp:

- General Timeline and deadlines of the current I Living Lab
- Useful documents & links, e. g. on Design Thinking, Future Skills, the Portfolio as well as the assessment at the end

I Living Lab Camp

The I Living Lab Camp contains information for the respective student team in the form of texts, pictures, videos and more. There's one individual course on E³UDRES² uniCampus set up for each I Living Lab (= each challenge and their respective team). It should be set up and ready one week before the I Living Lab starts. This space should also provide the following:

- Description of the Challenge as a reminder
- Easy to grasp overview: Background to the challenge (Text, Audio, Video ... - not too much material!)
- Overview of planned schedule
- Video or written introductions of the Educational Entrepreneurs & Stakeholders
- Schedule for team meetings with the whole group are entered in the schedule in E³UDRES² uniCampus course in advance

All results from every learning step of the teams as well as related activities are always accessible and can be evolved by every student. They can also be commented by Educational Entrepreneurs or the stakeholder(s) in the ILL camp.

Must-haves for every I Living Lab team meeting:

- Check-in and check-out
- Looking back to what happened last week (sparkling moments / challenges) also originating from entries into Portfolio
- Room for mutual Feedback
- Looking forward to next week AND reminding group about overall time schedule

Specific ILL Elements: The I Living Lab Kick off

The Kick off is the official start of the I Living Labs. All students receive basic information about the I Living Labs and the tasks for the onboarding phase together.

Specific ILL Elements: The starting event

The first meeting in the I Living Lab should meet the following criteria:

- Very interactive Check-in / different getting to know activities that include "Why have I enrolled to an ILL?"
- Shortly reminding students on the basic time schedule (opening possibility to ask questions)
- Co-creating session on Future Skills e.g. with Menti
- Which skills I want to focus on / want develop-> reference to Portfolio
- Interactive session on Design Thinking that builds upon the basic information with the aim of deepening the knowledge on Design Thinking and how it will be used in the ILL
- Starting together in the first week

Specific ILL Elements: Call to research

Each student individually looks to see if similar issues like their challenge are occurring elsewhere (scientific papers, newspaper articles, description of a thematically related project etc.) - ideally even related to their own sociospatial areas (work / different places of "home" / relations / hobbies etc.)

For every student in the team individually

- "Where do I come from" - questions from the impulses questions on Portfolio
- Each student researches for as current as possible background (scientific paper, newspaper, description of a thematic related project...) to the

challenge in the best case related to one's own socialspatial areas (work / different places of "home" / relations / hobbies ...) - the findings are collected in the ILL camp
    - Combine it with methods of socialspatial research
- Find and list "experts in the field of the challenge" and conduct with at least three of them an interview

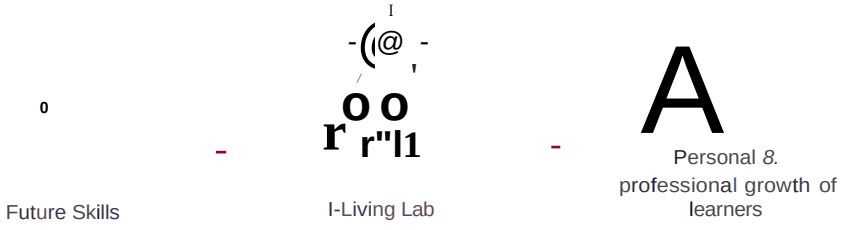
For tandems or triads of students

Students arrange an online meeting on their own to:

- share their findings
- sum them up together (consequences for the challenge of the ILL and its focus points)
- post them in the ILL camp together with a message to other students / groups on what they should focus / what they can add
- give Feedback / add ideas to findings of at least one other person / group (based on discussion in the small group)
- prepare short & crispy interactive presentation (for *Define* in the way of a pitch!)
- make a short protocol of the meeting and post it

Feedback and assessment in an I Living Lab

The I Living Lab is a safe working and learning space that allows learners to put ideas to test, succeed or fail and learn from these experiences. In doing so, they develop and sharpen their future skills and grow on a professional and personal level. Feedback and reflection play an essential role in supporting this process. Various assessment methods show the personal learning success of each student through the I Living Lab.



Learning outcomes of an I Living Lab

In an I Living Lab, students are encouraged to:

- Think independently, critically and creatively
- Learn various methods for analyzing and solving socially relevant problems
- Develop interdisciplinary cooperation skills, promoted through dialogue orientation and self-determined learning
- Develop future skills

After completing an I Living Lab, students are able to:

- Understand the functions and operation of a complex system
- Develop solutions for complex problems by using principles of Design Thinking
- Determine, design/choose the main elements for creating the desired system/ solution
- Present ideas in an adequate and creative form

	• Act as a member of a professional team • Be responsible as an individual professional

In detail, students are supported to reflect on or evolve their status to realize the following self-statements:

- I participate in design thinking process actively.
- I can experiment with my skills and competences in situations that are new to me. I can actively search for new solutions that meet my needs.
- I can experiment with different techniques to generate alternative solutions to problems, using available resources in an effective way.
- I can communicate imaginative design solutions to stakeholders from different backgrounds effectively.
- I can work with a range of individuals and teams and contribute to group decision-making constructively. I am open to the worth that others can bring to value-creating activities.
- I can overcome simple adverse circumstances.
- I can compare the different possibilities within my team.
- I can judge the control I have over my achievements (compared with any control from outside influences). I am comfortable in taking responsibility in shared activities.
- I can reflect on my individual and group needs, wants, interests and aspirations in relation to opportunities and future prospects.
- I can reflect on failures (mine and other people's), identify their causes and learn from them.
- I can actively look for, compare and contrast different sources of information that help me reduce ambiguity, uncertainty, and risks in making decisions.
- I am driven by honesty and integrity when taking decisions.

These Learning Outcomes are Level 2 of the E³UDRES² ILL Competency Framework.

Giving and Receiving Feedback

360-degreefeedback

360-degree feedback is a type of feedback process where not just superiors but also peers and even external participants (e.g., stakeholder) evaluate learners. Therefore, I Living Lab students will receive continuous feedback from Educational Entrepreneurs (EE), stakeholder, team members & peers in different forms. Thus, they can develop themselves from a learner receiving feedback to a responsible, self-reliant, independent, adaptable I Living Lab alumni.

When is feedback given in an I Living Lab?

In general, learners are asked to give feedback and talk about their feelings in different situations:

- When giving presentations: The criteria for presentation are provided for them as a guideline for giving feedback.
- After each presentation they make.

For each of these situations, there are two forms of guiding the feedback: 1) with or 2) without given feedback criteria.

Feedback of stakeholders can be integrated in various ways, e.g., through attending official presentations or also in regular ILL meetings. However, learners should always be introduced and engaged in giving feedback.

How to introduce giving and receiving feedback

At the beginning of the I Living Lab, the 360-degree feedback needs to be introduced briefly. Then learning by doing starts, that is, a moderator reflects on each presentation after it is given. The very first contact with feedback should be established after the first presentation learners perform. After the presentations of all groups, each group separately discusses the strengths and weaknesses of all presentations and names 3 strengths and 3 weaknesses that can be improved.

Criteria	Definition
Professional knowledge base	Team can use professional terminology consistently during pitching.
Information seeking	Team can use different kinds of information seeking methods: interviewing and research / hard data. Information is compiled together meaningfully. Data is appropriate to the project.
Professional skills and activity	Team can use innovative or alternative idea for the project. Pitching is clear, convincing, engaging, passionate, honest and likeable.
Target of activity (client/ user)	Team can define appropriate client /user. Pitching demonstrates clear connection in order to understand the user's point of view.
Group work skills and leadership	Pitching shows that the team has been working in a goal-orientated manner. Team can demonstrate the exploited interdisciplinary of the team.
Responsibility	Team can act according to the ethical principles of their professional field. Pitch demonstrates how to identify the opportunity and the sustainability of the project.
Current situation of the project	Short description of the current situation of the project now.

Table I: Example for Feedback Criteria used for giving feedback for team presentations (based on OAMK Labs, Finland & ilab, St. Po/ten VAS)

After a presentation, moderation should be started as follows:

1. The presenting group itself describes how they felt and assess their own presentation
2. Learners give them feedback
3. Feedback of Educational Entrepreneurs / stakeholder(s)

The moderator is expected to take responsibility for guiding the learners during feedback - e.g., no defending. It is about receiving feedback which means listening and asking questions for a better understanding. At this point, no discussion or argument develops about why presenters acted in the way they did.

Reflection

All reflection phases in the I Living Labs are based on Gibbs Reflective Cycle.

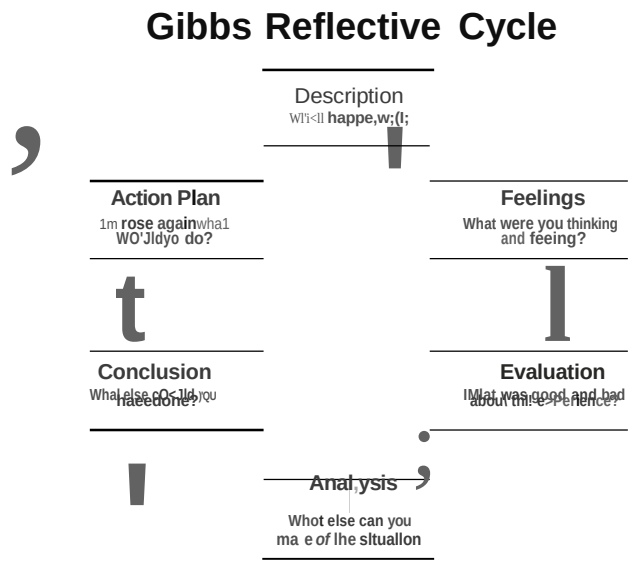


Figure B: gibbs-cycle.png https:llwww.crowe-associates.co.uklcoachin -tools((libbs-reflective-cycle((20.0B.2020]

These are the five stages in Cycle 2:

1) **Description:** First, ask the person you are coaching to describe the situation in detail. At this stage, you simply want to know what happened - you will draw conclusions later.
2) **Feelings:** Next, encourage them to talk about what they thought and felt during the experience. At this stage, avoid commenting on their emotions.
3) **Evaluation:** Now, you need to encourage the person you are coaching to look objectively at what approaches worked, and which ones did not.
4) **Conclusions:** Once the situation has been evaluated, you can help the person draw conclusions about what happened. Encourage them to think about the situation again using the information that have been collected so far.

[2] https//www.crowe-associates.co.uk/coaching-tools/gibbs-reflective-cycle/

5) **Action:** You should now list some possible actions that the person can take to deal with similar situations more effectively in the future. In this last stage, you need to come up with a plan to trigger the favourable changes. Once the areas they will work on have been identified, encourage them to commit to taking action, and agree on a date on which you will both review progress.

Feedback and reflection are a continuous process that accompanies students in the I Living Lab. Both methods lead to the assessment.

Assessment

Assessment in an I Living Lab is challenging because learners develop their skills individually, and therefore appropriate methods are needed that differ from traditional tests. The assessment method must take into account the development of the individual learner based on their personal goals and prior knowledge.

Personal Goals

Each learner defines their personal learning goals for personal development. It is important to define personal goals at the beginning of the I Living Lab. The learners need to set goals that they want to achieve for their future and therefore, develop their self-determination.

There are two key points for the personal development:

1) Reflective practice
2) Development of a learning community

Students need to start trusting one another and the Educational Entrepreneurs as coaches to find their real goals and development path.

Already in the first days, learners must be encouraged to reflect on their personal goals. Therefore, learners will set their personal goals related also to the Future Skills (only a few) at the beginning and deepen them within the context of creating their E-Portfolio. The goals are set together with the EE. This creates a clear plan for the student and for the responsible EE to follow and give feedback on.

The personal goals are defined as smart goals. During the process, it is useful to check if the goals are still appropriate or need to be adjusted or changed.

Topics of the Personal Goals

In principle, personal goals should be linked to learning outcomes of the I Living Lab. The alignment of personal goals includes the following topics:

- Life and professional skills
- Learning and innovation skills
- Information, media and technology skills
- Critical thinking and problem solving
- Communication
- Collaboration
- Creativity

Portfolio

During the course of the I Living Lab, all students will create their own E-Portfolio. In the Learners' Camp, students find basic information about keeping a portfolio. They are supported by a collection of reflection questions. In each week they make an entry to the portfolio, reflecting steps on Define, Ideate, Prototyping and the path to the Showdown. The first entry consists of a detailed personal introduction and the selection of three of the future skills they would like to develop during the ILL period. The entries can be combinations of text, drawing, audio and video. Additionally, the students are asked to give short Feedback to the entries of at least three other students in the ILL every week.

At the beginning of the ILL each student chooses a "reflection partner". Bi-weekly they meet and reflect their entries in the E-Portfolio. They also exchange on "Sparkling moment of the week related to the project" (e.g. something worked out very well, an innovative idea emerged). The main outcomes of these meetings are also documented as part of the E-Portfolio. One of the last entries is an **assessment report:** Skills or knowledge that the student has learned and how they achieved these skills and knowledge (they also integrate parts / outcomes of the project).

The basic way to maintain the E-Portfolio is an ongoing entry in the Basecamp and it is also possible, that students build up / use own spaces like a blog or something similar. Important is the possibility to give feedback there.

By keeping the E-Portfolio, learners evolve their ability to reflect and learn why this is important. This is crucial for their development as reflective practitioners.

Example of an entry in a portfolio in the ilab (st Po/ten UAS, Austria)

Elizaveta

[redacted] Last updated Aug 25, 2020

Hello everyone!

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$.-p,4, 2020 [redacted]

week 36.

Elisa wants to experience new challenges, different that her comfort zone.
She didn't do project like this before and she wants to improve herself.

This week, she find that the work with her group of 4 persons was perfect : good communication and good results !

She is very exited to be on Monday 7 because she will know more about the project and her colleague.

After talking about work, she explained her feelings.
So this week was stressful for her because she was out of her comfort zone. But she enjoyed to learn a new way of thinking, collect ideas and do multitasking.
She had the fear to talk in english (because she isn't have the habit) and make friends that have the same Center of interest.

Bud at the end of the three fist days she feel very comfortable, open and self confident!

Sep5, 2020 [redacted]

Gaelle, thank you very much!

I can say, that Ga8tle did a great job! She has perfectly understood my thoughts and feelings. It's always interesting to read or listen, how other people see and perceive you. The method of sharing thoughts is a good way to remember what you did and achteVed to analize that we can do such a challenges for us every day. I think I will use it in the future to follow personal goats and improve my results:)))

[redacted]

Edited Sep 11, 2020

Logbook Week 2:

Elfsa really liked the challenge and the partner she got on Monday. She told me that In the beginning of the project work, she had the feeling that she and her partner didn't make much progress, but now she thinks they are doing really great. She is really looking forward to working more on her challenge, because she is really interested in the topic of reducing food waste. She told me she is hoping to get some results out of her interviews until Monday, so that she and her partner can continue to work on the results. Elisa also told me that she thinks that she and her partner have quiet similar personalitles and that they have a good teamwork in their group. One thing she wishes to improve, is that they motivate each other more, to be even more productive.

Personally, Elisa feels great and she is really excited for the next few weeks. She did find the teambuilding on Thursday interesting and helpful, but she was also very tired at the end of the day. During the day she felt like she should bring in her own ideas more, but she didn't want to interrupt anyone while they were speaking. She thought that also may be the reason, why she didn't bring in her own opinion more. But the good thing was, that the teambuilding made her think about her own personality and what skills she wants to wor1c: on in the future.

Thank you very much Elisa for the nice chat! :)

Sep 12, 2020

[redacted]

Anna, thank you very much!))))
I enjoyed our chat yesterday! Anna understood my feelings very well! During the week I experienced a lot of different events and had a wide variety of emotions. I'm happy to work on the project and to see the progress. It's important for me to know what should I do to improve my skills. Now I think that the perception of other people is one big part ofit.

Phase 4

Outboarding

The Outboarding

The final phase of an I Living Lab includes the Showdown, where the successful ending of the I Living Labs is celebrated, and the Assessment Talks.

The I Living Lab Showdown

The I Living Lab Showdown wraps up the I Living Lab journey of the group and gives the students the chance to finally present their work. Students for example prepare a pitching video. They also produce a poster, that gives insights in the journey through the ILL

Must-have elements:

- In an interactive way: Looking back together on the learning journey with sociodramatic methods & tools like Menti
- At least I Educational Entrepreneur, I stakeholder and I student are here for interaction session with students
- Interactive way of getting to know results of the ILL and having possibility to give feedback based on the possibility to look and comment on the videos and the posters beforehand

Details on the Showdown will be announced while the I Living Lab takes place.

Tips for a Pitch-Video

Main Goal: To give a sparkling overview to the ILL Output in a story mode.

Suggestion for students to create this video:

- Present the team: All persons of the team should appear (show to potential investors, stakeholders and next ILL students)
- Present the challenge of the ILL
- Give insights in ideas, prototypes or solutions that emerged in the ILL
- End with the next steps of the project
- The video must contain thePUDRES^2 Logo; an e-mail contact to reach the group should be presented on the last image

Guiding questions for students to create a poster:

- What was the initial challenge of the ILL?
- Who was the ILL team (students, EE, stakeholder)?
- Based on the "Timeline of an I Living Lab: Overview", briefly provide insights in the process developed:
  - What was the concrete problem?
  - What ideas emerged?
  - Which idea was prototyped (if applicable)?
  - What is the added value of this idea/solution?
- In terms of learning:
  - What are the top 3 future skills that were most developed?
  - How did the design thinking framework support the learning?
- What are the next steps: What are the plans of the group after the showdown?

Assessment Report and Talk

In preparation for the assessment talk, learners are expected to prepare a written assessment report as part of the portfolio as described above. In this report, learners reflect on the defined learning goals. Based on their newly acquired competences, they suggest to the Educational Entrepreneurs the grade they deserve for their performance and argue why.

During the assessment talk, students present their portfolio and argue their proposed grade in front of the responsible EEs. The grade decision will be based on a joint reflective discussion between the learner, the Educational Entrepreneurs as well as external stakeholders and end users, if different.

Summary

The I Living Labs aim to be a safe and fun working and learning space for students with all kinds of different backgrounds. The skills they learn and evolve during the ILL enable them to create their very own tool belt to be well-equipped for future jobs and to engage in society. Students might also work with entrepreneurs, policymakers, citizens, researchers, and other groups of people, who may offer a different perspective on the challenge the students are facing. Finally, education professionals support the students in every step along the way. This mix of diverse actors holds the potential for creating innovative solutions for European regions.

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