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SEED HANDBOOK

for on-distance creative work-based education

May 2023

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1. The SEED Project: Innovation in Work-Based Learning

The Seed Project "School/Enterprise Experiences go Digital", is an Erasmus project in the field of Vocational education and training. The project started in May 2021 and lasts 24 months. The aim of the SEED project is to innovate the work-based learning experiences of European students and tutors using digital solutions and creativity-based methodologies. The project is managed by a consortium that includes 7 partners from Italy, Greece, Slovenia and Spain[1].

The project started during the first wave of the COVID-19 pandemic, when governments were forced to devote greater attention to an already existing and well-known problem for many European educational systems. Indeed, in 2019 the Center for European Policy Studies (CEPS) conducted an analysis of the readiness for digital learning of education systems across the EU and the picture that emerged was not very encouraging. As a response, when decision makers realized that the educational systems were unable to face the necessary shift from a fully traditional educational structure to a partly digital learning, efforts have been devoted to cope with the digitalization of the curricular educational activities, but less attention has been placed on "extracurricular activities", such as school-work cooperation.

Existing proposals about work-based learning are fragmented and not always satisfactory. As such, the SEED project proposes a creativity-based methodology and a set of digital tools adaptable to different educational systems. The SEED proposal aims at supporting EU students to learn how companies work and, in doing so, nurture their technical and soft skills.

SEED aims at adapting and leveraging existing creativity-based methodologies (such as, for example, Design Thinking tools and methods) to deliver ready-to-use innovative solutions, developed and tested at the European Level, for high schools and vocational schools in order to innovate their work-based learning and extra-curricular activities also from a distance.

Its specific objectives include:

1. To recognize the importance of creativity as a crucial transversal skill for students in order to face the increasing request of innovation across all sectors of the labor market and, in general, to improve their resilience;
2. To improve the use of "work-based learning" as a fundamental pillar for a faster and more profitable access of students to the labor market, with particular emphasis on the use of digitalized and creativity-based methodologies for work-based learning that can create advantages for both educational institutions and companies;
3. To equip vocational education schools and gymnasiums with the necessary digital skills and solutions to manage on-distance work-based learning experiences driven by creativity-based methods (creative thinking, design thinking, etc.);
4. To contribute to the empowerment of the EU educational policies by testing and delivering creativity-based and digital solutions, aligned with EPALE, in order to enable European educational institutions to keep offering "work-based learning" as well as maintaining the crucial relationships with companies.

[1] For more information visit https://seedforfuture.eu/

For these reasons, the project started from the analysis of the WBL framework and practices of the EU countries involved and of the digital solutions ready to be exploited to create a bespoke SEED methodology and online Platform for work-based learning.

2. Context: Work-based Learning Across Countries

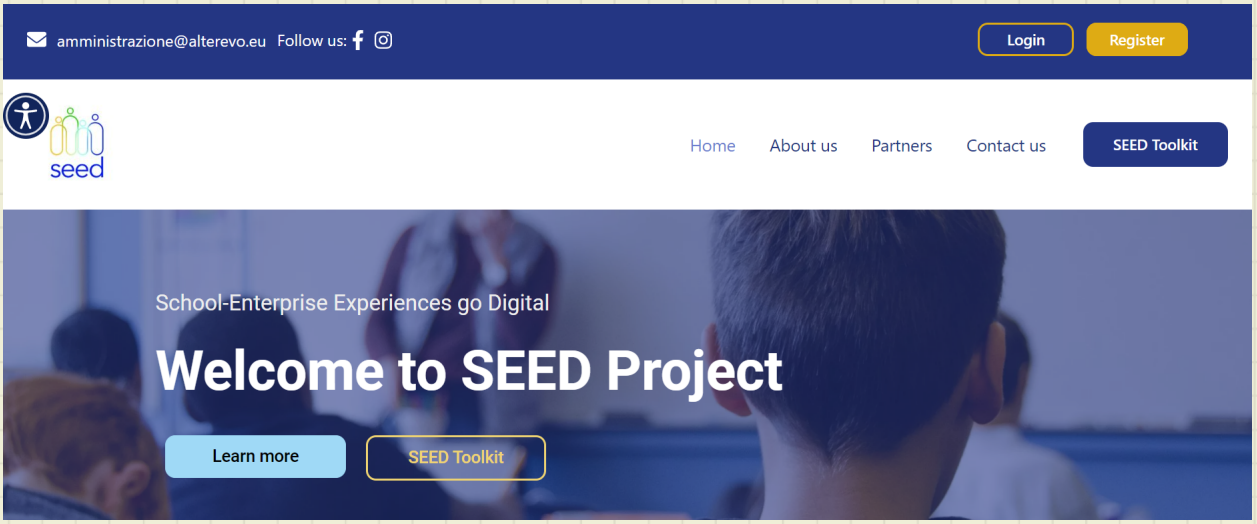
Work based learning (WBL) entails learning by working in a real work environment in order to develop technical, academic, and employability skills. WBL is an integral part of the education system in many industrialized countries. The COVID-19 pandemic has significantly disrupted and created challenges to work-based learning (WBL) activities, especially in contexts where these activities need to happen in person. As a result, many internships and WBL activities in real-work environments have been suspended. The framework of WBL across countries thus needs to integrate digital tools to ensure the continuity of distance learning.

In four countries, who are part of the 'School Enterprise Experiences Go Digital' (SEED) project: Italy, Slovenia, Spain, and Greece, internal (school) tutors are responsible for monitoring and certifying students' WBL activities and have a series of tasks which are regulated by national laws. Some countries (such as Italy and Slovenia) also have internal committees within schools dedicated to work-based learning. In some countries (e.g., Italy and Slovenia) it is also possible for students to carry out WBL activities within schools themselves who can serve as host institutions.

Considering the above-mentioned similarities and differences, WBL activities carried out through digital tools across countries pose distinctive challenges and need to be supported by a flexible methodology and Platform that can be adapted and used in different ways according to each country's needs and regulations. In the next section, we present the proposal of the SEED project with regards to the digital Platform aimed at supporting digital WBL activities as well as the methodology proposed by the SEED project. This toolkit (platform and methodology) is targeted at teachers, tutors, and mentors involved in work-based learning experiences. It is particularly well suited for WBL activities based on creativity-based methods. **Although the toolkit has been designed to fit a fully online digital WBL environment, the activities can also be fully carried out in person as well as by using a mix of digital and in-person activities.**

3. SEED Digital Platform

The SEED Digital Platform is a digital tool that connects and enables joint work between the three main stakeholders of the SEED project: 1) companies that want to have students perform WBL activities with them; 2) schools that have to offer WBL activities as part of students' curriculum; 3) students that can complete WBL activities remotely and through digital tools and methods. In this section, we explain the main objectives and characteristics of the Platform and explain how it can support WBL activities for different stakeholders. The SEED Digital Platform can be accessed at the following link: https://seedforfuture.eu/



3.1 Objectives and functionalities

The SEED methodology and supporting digital Platform have been developed to include learning by doing and to have a collaborative as well as educational component. The main objectives of the Platform include:

1. To provide a connection between the different stakeholders involved.
2. To offer learning content and methods of different types: both discipline-specific as well as problem-solving and teamwork-related skills.
3. To enable companies to post, review, and assign challenges to students and review their work.
4. To enable teachers to monitor, coordinate, and assess students' work.
5. To enable Project work between students from the same class or school, students from different schools in the same territory, and students from different schools in different geographical locations.
6. To enable monitoring, evaluation, and certification of activities from different stakeholders (schools, companies, students).

Each user of the Platform has a personalized dashboard (or interface) according to the stakeholder group. Users can **create a profile** and **access the Platform through a dedicated login page**.

Companies work with students and their schools by creating and posting a project, which will be referred to as a "**Challenge**". By "Challenge" we mean a (creative or technical) project a company would like students to work on within a defined time period. The inspiration for a "Challenge" can be a problem or an opportunity the company is currently facing or would like to explore. Each Challenge includes 6 different stages inspired by the Design Thinking methodology (Brown, 2008)[2]. The stages are:

- **Introduction**
- **Empathize**
- **Ideate**
- **Implement**
- **Evaluate**
- **Finalize**

In order for a challenge to be solved, all the stages should be completed. The final solution of the challenge will be evaluated from the companies and their mentors.

3.2 Platform users

The three main users of the SEED Project are:

- **Companies:** Companies with their mentors are responsible to create real-life challenges, that need to be solved by the students assisted by their Tutors.
- **Schools:** Schools with their tutors, show interest in challenges - focused on creating ready-to-use innovative solutions - to solve them together with their students. After that, they assign the challenge to their students.
- **Students:** They enroll in challenges, and they have to solve them by using creativitiy-based methods. If they need help, School Tutors will assist them by using the ICT Tools, provided by the platform.

The SEED co-working platform is dedicated to enhancing vocational education and gymnasium/middle/high school with the necessary digital skills and solutions to manage distance work-based training experiences based on creative-led methodologies. Through a large variety of different challenges, the students will obtain faster and more profitable access to the labour market, especially by providing innovative solutions for educational institutions and methodologies. Thanks to this co-working platform, the skills that students will acquire form different challenges will help them improve their performance in their next professional life.

Through the project learning environment, the students will recognize the importance of creativity as a crucial transversal skill, that will help them to face better the increasing request of innovation in all sector of the labour market. In general, they will understand and learn better how to use digital

[2]Brown, T. (2008). Design thinking. *Harvard business review*, 86(6), 84. Please also visit: https://www.ideou.com/blogs/inspiration/what-is-design-thinking

tools and creative-based methodologies and how they could improve resilience, since OECD stated that “creativity and critical thinking are key skills for complex, globalized and increasingly digitized economies and societies”.

The platform is based upon three pillars that span across companies, schools, and students:

- **Community:** through accessing this module, stakeholders have a chance to browse projects (challenges proposed by companies), select projects they are interested in and connect with schools or companies that could work on those projects.
- **Toolkit:** stakeholders have access to a library of learning content related to creativity-based methods to be used during WBL. This includes for example information sheets and video-based content about methods and guidelines about how and when to use each method.
- **Digital learning environment:** through this module, stakeholders can work together and make the most of the digital WBL experience. This module enables them to kick-off projects and develop them using the SEED methodology. Each subsection is a step of the methodology and students can indicate when each step is complete, when relevant materials have been uploaded on the Platform and when they are ready to move to the next step.

After completing each challenge, all the protagonists will receive a certification for their participation. All stakeholders have to cooperate and work together in order to achieve the goals of the project. The creative innovative solutions developed as a result of this cooperation will represent a great starting point for students to connect with the professional world and will serve as concrete projects companies can decide to implement at a later stage.

3.3 Navigating the SEED Platform for companies

3.3.1 Company Registration

Company can register to the platform through this link: **https://seedforfuture.eu/registration/**

The required details that a company has to enter are:

- Company Name
- Sector
- Website
- User email
- Username
- Password (with confirmation)

3.3.2 Creating a challenge

After successfully registering, companies are responsible to set/create challenges. From the top bar menu, companies select the "Submit a challenge" option. When a company enters the **challenge submission page** the user will find a submission form in 2 different formats (pdf & doc). Companies are able to download the form, work on the challenge and then transfer it into the submission form

of the platform. When a company submits a challenge, the challenge goes into pending status and will be approved from the SEED project admins only if the challenge meets the general challenge criteria. When a challenge is approved, it will be published on the SEED website "**Challenges Wall**" (accessible to registered users). When a school shows interest for a challenge, an email will inform the company about the interest and then the admins will make the matching between the Company Mentor and the School Tutor.

After successfully registering, companies have the opportunity to **follow the enrollment process related to their challenge**. From the top bar menu companies select the "All challenges" option. Then they will select the challenge they created and enroll. When they select the challenge, the challenge learning environment will open, and in the right side students will be able to press the **"Enroll"** button.

3.3.3 Accessing and navigating the learning environment for companies

When the companies enroll to a challenge, they will be automatically redirected to the **digital learning environment.** When companies enter the learning environment, they can find:

- On the left side, the curriculum with the sections of the challenge
- In the middle, the main learning space which contains texts, videos, quizzes, infographics, images etc.

The first step for a company is to complete evaluation forms. There is a **pre-evaluation form** and a **post-evaluation form** at the end of the challenge (both mandatory). Each challenge includes 6 different stages to be completed. The stages are:

- Introduction
- Empathize
- Ideate
- Implement
- Evaluate
- Finalize

Each section includes a sidebar with the collaborative tools that students are encouraged to use in order to give solutions to the challenge. At the **end of the 4 middle-stages** (Empathize, Ideate, Implement, Evaluate) there is a **mandatory assignment** to be completed.

3.4 Navigating the SEED Platform for tutors

3.4.1 Tutor Registration

Tutors (or instructors) register to the platform through this link:
https://seedforfuture.eu/registration/

The required details that a school tutor has to enter include:

- First Name
- Last Name
- Teaching area / Subjects
- School
- User email
- Username
- Password (with confirmation)

3.4.2 Enrolling in a challenge

After successfully registering, tutors can show interest for a challenge. From the top bar menu, tutors select the "**Find a challenge**" option.

When a tutor enters a challenge, s/he will find an "**Interest for the challenge**" form, s/he should fill in to show interest in a challenge. When the form is submitted, the admins of the platform will make the matching between the Companies and the Schools, that subsequently will be informed via emails. After the submission of the interest form, the admins of the project platform activate the learning environment.

After showing interest in a challenge, tutors can edit the challenge details according to the creativity-based methods that they have selected. When the Tutors have Co-Instructor permissions for a challenge, they will be able to modify it with the Frontend Editor. The Frontend Editor is under the "My challenge" Option on the Top Bar Menu.

By selecting the **"Frontend Editor"** the Tutor has the possibility to see only the challenges in which s/he is assigned as Co-Instructor. After a challenge to edit has been selected, the "Frontend panel" opens to edit the challenge. The frontend panel includes:

- The panel menu with 3 options: General, Curriculum and Settings
- The Challenge Layout (Curriculum) on the left-side, where the instructor selects the sections of the challenge in order to modify them.
- The "edit panel", where the instructor can edit/modify the main content of the challenge in each section and module.

When the content is ready, the instructor just presses the "update" button.

Tutors that know how to manage a WordPress website can edit a challenge by accessing the WordPress Dashboard in order to edit the challenge as co-instructor. From the dashboard, the instructor selects the challenge and scrolls down to check the Curriculum. In the curriculum, the instructor clicks the edit option (pencil icon) to edit the section with Elementor. After that, the instructors have the possibility to hide and unhide the sections they want to keep and edit them. The steps that instructors should follow include:

- Click the dots in the section **"edit section"**:
- From the left **Elementor** menu click the **"advanced"** tab.

- From the **"advanced"** tab select **"Responsive"** and from **visibility** click the switcher from **"show"** to **"hide"**.

When instructors finalize the **challenge**, they should keep in mind to save (**update**) **every change** they made for the sections. Last but not least, the instructors send the final link of the challenge to their students in order to enroll.

3.4.3 Accessing and navigating the learning environment for tutors

When the tutors enter the learning environment, they can find:

- On the left side, the curriculum with the sections of the challenge
- In the middle, the main learning space which contains texts, videos, quizzes, infographics, images etc.

The first step for a tutor is to complete the evaluation forms. There is a **pre-evaluation form** and a **post-evaluation form** at the end of the challenge (both mandatory). As mentioned above, each challenge includes stages to be completed. The stages are:

- Introduction
- Empathize
- Ideate
- Implement
- Evaluate
- Finalize

At the end of the 4 middle stages (Empathize, Ideate, Implement, Evaluate) there is a mandatory assignment to be completed. Each section includes also a sidebar with the collaborative tools that students are encouraged to use in order to give solutions to the challenge.

3.5 Navigating the SEED Platform for students

3.5.1 Student Registration

Students have to register before they can navigate the SEED Platform. As a student you have to register to the platform through this link: https://seedforfuture.eu/registration/

The required details that a student has to enter are:

- First Name
- Last Name
- School
- User email
- Username
- Password (with confirmation)

3.5.2 Enrolling in a challenge

After successfully registering, students will receive from their tutors the link to the challenge that they have to enroll in. Otherwise, students can enroll in the challenge on their own, by selecting from the top bar menu the "All challenge" option. Then they will select the challenge that their tutor had created and enroll. By selecting the challenge, the challenge learning environment will open, and in the right-side students will be able to press the **"Enroll"** button.

When the student enrolls in a challenge, s/he will be automatically redirected to the **digital learning environment.**

3.5.3 Accessing and navigating the learning environment for students

When students enter the learning environment, they can find:

- On the left side the curriculum with the sections of the challenge
- In the middle the main learning space which contains texts, videos, quizzes, infographics, images etc.

When students finalize a section, they press "Next" - to be found in the bottom-right side. On the top-right side there is an "X" escape button students can use to exit the process.

The first step for a student is to complete the evaluation forms. There is a **pre-evaluation form** and a **post-evaluation form** at the end of the challenge (both mandatory). As mentioned above, each challenge includes stages to be completed. The stages are:

- Introduction
- Empathize
- Ideate
- Implement
- Evaluate
- Finalize

At the end of the 4 middle stages (Empathize, Ideate, Implement, Evaluate) there is a mandatory assignment to be completed. Each section also includes a sidebar with the collaborative tools that students are encouraged to use in order to give solutions to the challenge.

After the end of the challenge, the provided solutions of the challenge will be under evaluation from companies and their mentors. Also, when students complete all the stages of a challenge, they will receive a certification of completion.

The **SEED Platform user guide** for companies, teachers and students is attached to this document (please see **Attachment II**).

4 SEED Methodology

In this section, we present a series of methods and tools that serve as a basis for the SEED Methodology, which was born to foster learning during WBL as well as completing digital-enabled activities that can serve as part of their WBL experience. The methodology is based on design thinking (Brown, 2008) and other creative methods and has been developed starting from the methods used in the Contamination Labs developed at Ca' Foscari University of Venice. **The SEED proposal has been designed to fit into work-based learning EU systems, or for schools to use as a special project in contexts where this would not be possible.**

4.1 Rationale and characteristics of the methodology

Because there are differences in how WBL works in different countries, the methodology needs to be adaptable across institutional contexts. The main aspects that have been considered when developing the methodology are:

- The methods should be supported by a digital Platform and entail activities that can be performed (also) on a digital environment.
- Students should work in groups and according to a challenge proposed by a company.
- The learning modules, methods and activities should be flexible and applicable to different contexts and sectors.
- All the training activities that include the use of the tools and methods should take place on the SEED digital Platform.
- For each stage of the process, the Platform should suggest the appropriate methods to be used and provide guidelines on how to use such methods.

As mentioned above, the three main stakeholders of the methodology are **students**, school **tutors** (also referred to as teachers/instructors), and **companies**. Each has different needs that have to be considered both in the proposed methods and in the digital Platform supporting those methods. The methodology supports companies proposing projects for WBL, teachers revise and assign projects and evaluate students' progress, and students learn different methods.

4.2 Methodology steps and activities

The SEED methodology develops along four main stages and is based on design thinking methods.
The stages are:

1. Preparation work and project launch (*Introduction*)
2. Knowledge of the company and project proposed (*Empathize*)
3. Generate ideas to address the project proposed (*Ideate*)
4. Select and implement ideas (*Implement*)
5. Evaluate project and learning outcomes (*Evaluate* and *Finalize*)

In the **Introduction** stage companies create challenges (i.e., projects for students to work on as part of their WBL activities) through the SEED platform and connect with schools and students that want to work on their proposed challenge. Companies are critical partners to engage in the design and implementation of WBL activities. In the context of the SEED project, companies design

opportunities for students to learn and apply skills and provide mentors to supervise students' work. Furthermore, they can also give inputs on the critical skills needed in labor markets for curriculum development. Teachers can edit challenges and select the creative methods students will use as they work on the challenge throughout the different stages.

In the **Empathize** stage, students use creative methods to start engaging in team building activities and familiarize with the company they are working with. In the **Ideation** stage, students learn how to use brainstorming techniques to analyze challenges and propose possible solutions. In the **Implement** stage, students learn how to select ideas and create (virtual or physical) prototypes of their proposed solution. In the **Evaluate** stage, students collect feedback from the stakeholders that can evaluate their work, and their own evaluation of the output they have created and what they have learned along the way. The output of students' work can be submitted through the SEED Platform at the end of each stage.

Each stage has different goals and expected outcomes and, as such, features different methods. However, the Empathize, Ideate, and Implement stages all follow the same path:

- Students get introduced to the objectives of each stage and to the methods that will be used.
- Students get access to guidelines about how and when to use the creative methods proposed.
- At the end of each stage, students can upload the results of their work on the Platform.
- When all activities are marked as completed and the outcomes have been uploaded, students can move on to the next stage.
- At the end of the full set of activities and when all outcomes have been uploaded, students can terminate the project and provide their evaluation of the learning experience, and tutors can proceed with the evaluation.

At each stage of the process, students' progress through the activity while developing artifacts that would ultimately be collected into a portfolio of digital outcomes stored on the Platform. As a result, student portfolios reflect the activities they have completed through the Platform and serve as means to verify their learning. In addition to the templates and guidelines integrated into the Platform, IDEO's Design Kit (https://www.designkit.org/methods#filter) also provides hands-on tools and explanations about different methods and tools that can be used at each stage of the process, some of which have been integrated into the methodology proposed by SEED.

4.3 Stage 1: Introduction

4.3.1 Defining the challenge and uploading it to the SEED Platform

The main goal of this stage is for companies to be able to propose projects on which they would like students to work through the Platform, and for school tutors to be able to browse through projects and select those they would like their students to work on. The process starts when companies register to the Platform and start creating a project challenge. A challenge is a (creative or technical)

project a company would like students to work on within a defined time-period. Articulating a challenge helps both the company and the students define a scope for the project[3].

Challenges can be broad or specific, and focus on several different aspects including (but not limited to):

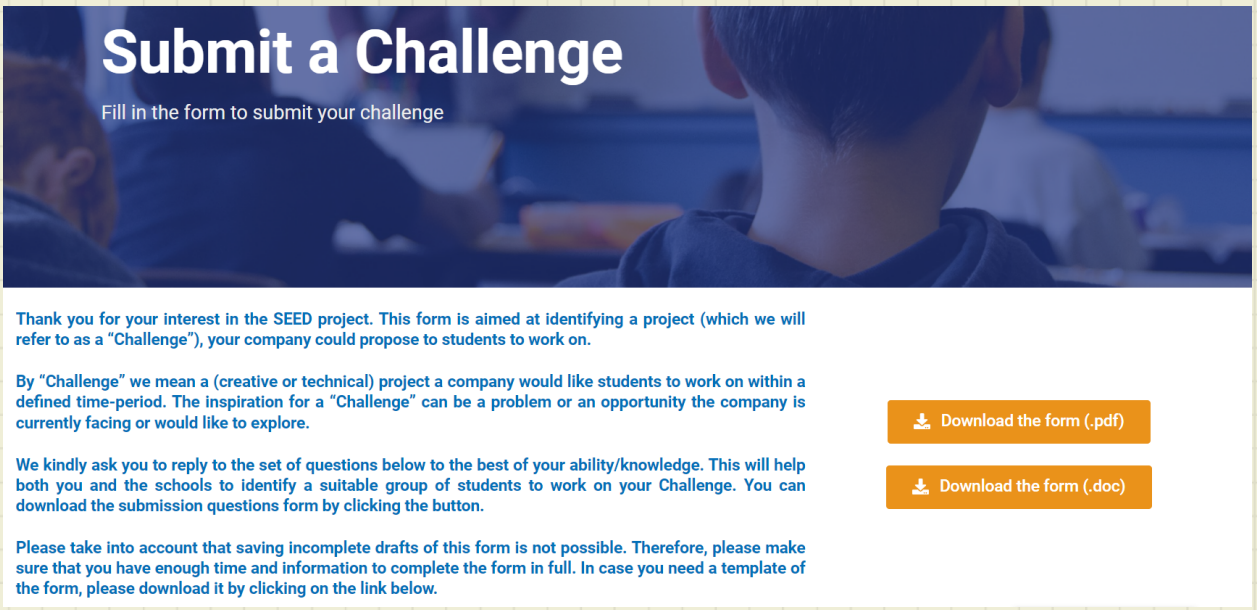
- Finding innovative solutions to a problem or issue the company is facing or could face.
- Developing a new proposition on a defined theme (e.g., sustainability, digital innovation, etc.).
- Developing a specific product or service.
- Improving existing products or services.

Challenges can be proposed by different types of companies. However, when thinking of the Challenge a company would like to propose, several aspects should be considered, including:

- The expected outcomes: projects should be doable for students considering the amount of time and resources available and the scope of their skills.
- The time period within which the company expects students to develop the project (more complex challenges can take more time to be developed, which might not be consistent with WBL regulations in some countries or for some types of schools)
- The type of competencies that would be needed to develop the project: in order to keep students motivated and maximize learning, coherence between the proposed project and the competences that students can bring is important and needs to be considered.
- The level of support each company would be able to provide to students (e.g., in terms of number of mentors or hours of support)

In order to define a challenge, companies can use a step by step guide adapted from IDEO's Design Kit. The process can be completed without help from an external facilitator, but we recommend that school tutors and company mentors work together on the challenge definition process to ensure that the final project will be a good fit for students. The following page provides an introduction for companies to submit a challenge.

[3] https://www.designkit.org/methods/frame-your-design-challenge



The guiding questions in the application are divided into three main groups: 1) anagraphic details; 2) scope of the project; 3) expectations and constraints on the development of the project. The specific questions in the application form include:

1. Challenge Title: Add a title for your challenge
2. Company Name: Add your company name
3. Country: Greece | Italy | Spain | Slovenia| Other EU Country
4. Economic Sector (Select from among the following options):
    - Agriculture and other primary sectors
    - Industry and construction
    - Cultural and Creative Sector
    - Digital Technology
    - Transportation and Distribution
    - Tourism, restaurants, hospitality
    - Insurance and banking, retail
    - Healthcare services
    - Legal services
    - Education
    - Public administration
    - Other
5. Contact Person: Name and Surname
6. Email address: Add your e-mail address
7. Choose the sector of the challenge: Select any applicable option(s):
    - Agriculture and other primary sectors
    - Industry and construction
    - Cultural and Creative Sector
    - Digital Technology
    - Transportation and Distribution
    - Tourism, restaurants, hospitality

- Insurance and banking, retail
- Healthcare services
- Legal services
- Education
- Public administration
- Other

8. Think about your current job and your company. What problem or challenge are you trying to solve? Try to identify a problem or a challenge that your company is facing, on which you would like to gather ideas and insights from students. Summarize it in up to 3 sentences. It can be a specific challenge, or a theme that you would like to explore and that you consider relevant to your strategy.
9. What do you think is causing the problem or stimulating the challenge? Please try to identify at least 3 reasons.
10. Information to support the existence of this problem / challenge (including relevant data / facts / experiences)
11. What skills and competencies do you think you need to solve the problem/challenge you have identified? Select any applicable option(s):

    - Information and data literacy (Browsing, searching, filtering, evaluating, and managing data and digital content.)
    - Communication and collaboration (Interacting, sharing, and collaborating through digital technologies.)
    - Digital content creation (developing digital content)
    - Problem-solving (Solving technical problems and creatively using DT)
    - Empathy (The understanding of another person's emotions, experiences, and values, and the provision of appropriate responses)
    - Communication (Use of relevant communication strategies, domain-specific codes, and tools, depending on the context and the content)
    - Collaboration (Engagement in group activity and teamwork acknowledging and respecting others)
    - Critical Thinking (Assessment of information and arguments to support reasoned conclusions and develop innovative solutions)
    - Spotting opportunities (Use your imagination and abilities to identify opportunities for creating value)
    - Creativity (Develop creative and purposeful ideas)
    - Valuing ideas (Make the most of ideas and opportunities)
    - Ethical and sustainable thinking (Assess the consequences and impact of ideas, opportunities, and actions)
    - Motivation and perseverance (Stay focused and don't give up)
    - Mobilizing others (Inspire, enthuse, and get others on board)
    - Planning and management (Prioritize, organize, and follow-up)
    - Other (specific work-related knowledge and skills):

12. What result(s) or impact would you expect to see from this project? Please identify at least one goal for this project that you would like to see realized.
13. Company availability: Please share when your company mentor is available to assist the

project development.

14. Would you like to involve international schools/students in the development of the project?

- Yes, I would like to make this an international project.
- No, I would like to keep this a local project.

15. Challenge overview: Please add a challenge brief /overview
16. Featured image: Upload a featured image for your challenge (Max size: 1MB)
17. Maximum number of students: How many groups of students can you manage to support for this challenge?

    - 1
    - 2
    - 3
    - More than 3

18. Deadline for expression of interest: Application from schools will be open until
19. GDPR consent: I hereby consent to the processing of the personal data that I have provided and declare my agreement with the data protection regulations in the data privacy statement.

The form ends with a 'challenge status' field that indicates if the challenge has been approved or is under review by the SEED project administrators.

An example of how to apply this method to the development of a challenge could be that of a transportation company whose main business is to bring people to events and trips at the regional, national, and international level. The company would like to get fresh ideas from students about ways they can grow their business and topics they should be considering when designing their strategy for the next 5 years. They might then involve students into developing some of these ideas through project work.

The company could start by thinking about a problem they are facing, such as the fact that younger customers ask for quotes to bring them to parties but very often don't confirm the service. They might then identify three possible reasons for this: 1) Young adults have limited expenditure possibilities; 2) They change their mind very often; 3) They don't value the service as they should. They could then think of data they've been collecting that would support these statements. For example, they might have noticed that these customers often ask them changes to the service and don't know the exact number of participants so they ask for flexible offers, and that they often compare the cost of a private bus with trains or other public means of transportation, which would result in them choosing cheaper or more flexible travel alternatives. If this company had to try and frame this problem in abstract terms, the overarching question could be: 'How might we make our transportation service more flexible and attractive for young people that have limited expense possibilities, so that they value our offer and become loyal customers for our company?'

The ultimate aim of this stage is to get companies to propose different types of projects (challenges) as long as they are feasible within pre-defined times that vary according to the requisites of each school or country. At the end of this phase, the projects become visible to teachers that can express interest and edit them as detailed in the previous section.

The challenge definition stage is followed by a second step where projects are visible to students and teachers and they can both browse, visualize, and select projects they would like to work on. At this stage, school tutors can select and edit challenges to be completed at their school and form groups of students to assign to projects, and companies receive expression of interest from schools.

At this stage, ideally, school tutors and companies should meet to define the expected results and timing and to create a learning agreement for students who will participate in the project. As a result of this stage, the activity is formalized through dedicated documentation (consistent with each country's regulations and requirements) and students are assigned to projects they will be working on as part of their WBL activities. Although the platform does not restrict the number of students that can work on a challenge at any given time, we recommend that teachers form groups of 6 students maximum and that they identify one student who will act as coordinator and contact point for the group.

4.3.2 Project kick-off

After students have been officially assigned to projects, activities start can start. Companies, teachers and students can arrange a kick-off meeting to meet and familiarize themselves with the project. At this stage, stakeholders should define the timing and activities related to the project, as well as how the final outcomes will be assessed and evaluated. It is also recommended that:

- Companies send students introductory materials for them to familiarize with the company and the challenge they will have to work on.
- Teachers identify one or more students in each group who would serve as coordinator and contact person for the project, and make sure that activities will be completed on time.

4.4 Stage 2: Project work

4.4.1 Empathize

This is the first stage of project work. The goal of this stage is for students to engage in team building and acquire a basic knowledge of the proposed company and project. The duration of this stage can vary, but we suggest this stage to last between one and two weeks depending on whether students also attend classes during those weeks or not. As the other project work stages, the Empathize phase includes elements of synchronous and asynchronous learning. At this stage, students engage in two main activities:

1. Familiarizing themselves with the company through a preferred activity or multiple activities – for example, by doing research about the company, analyzing the company's business model and/or interviewing company's representatives.
2. Analyzing the challenge, they are trying to solve. It is strongly advised that students first do research about the challenge and then reflect on the challenge to understand it better. To do research about the problem, it is suggested that students gather objective data about the problem/opportunity the challenge is focusing on, and research the target audience of the challenge by creating user personas. When they have gathered all this data and information, it is strongly suggested that students reflect on the challenge to understand it better and analyze the insights they have gathered through research.

Asynchronous learning tools to be used at the stage can include:

- A pre-recorded video or text description of the goals of this stage and the expected results of the activity (in this case, the expected result would be that of familiarizing with the company and the challenge this company is facing).
- Learning materials about the creativity-based methods to use in this phase and templates for students to complete the required activities.

Synchronous learning activities that students could work on during this stage can include:

- Doing research online about the company and the problem the company has asked them to solve, also extending the research to similar realities.
- Representing the company's business model through a Business Model Canvas (or Mission Model Canvas) template which can be found online and integrated into the SEED Platform.
- Conducting three to five interviews with representatives from the company in order to get a better understanding of the business and the challenge.
- Use other creativity-based methods (such as PNI method and/or Productive Thinking Model) as detailed in the SEED Toolkit of creative methods to analyze the challenge.
- Create one or more 'user personas' which would serve as representation of the person who would interact with their solution using digital templates.
- Organize the insights they have collected through a Mind Map using a digital template.

The SEED digital Platform ('SEED Toolkit') integrates guidelines about how to use each of those methods, including the equipment needed as well as the suggested time for each activity and method.

At the end of the Empathize stage, students can complete this step by completing an '**Empathize-Assignment**' on the platform, which includes a text box for them to report their insights and a file upload box to upload any relevant additional documents (combined into a single file). For example, they can upload the Business Model Canvas template they have created and/or a digitally written paper about their analysis of the company and problem. At the end of this stage, students can also have a quick review with company mentors to present progress and make sure that they are on the right track.

4.4.2 Ideate

The goal of the Ideate stage is for students to brainstorm about possible solutions to the challenge they have been presented with by the company. In this phase, students would start from their analysis of the challenge completed in the previous stage, learn brainstorming techniques, and propose possible solutions. The outcome of this stage could include many different solutions, which will then be filtered down until students identify one solution they would like to move forward to the next stage (implementation). As the other project work stages, ideate too includes elements of synchronous and asynchronous learning. The duration of this stage can vary from a few hours to a few days or weeks depending on the type of project (challenge) students are developing. The suggested time is between one and two weeks with sprints during which students experiment with different creative methods to generate more ideas.

Asynchronous learning tools can include:

- A pre-recorded video of the goals of this stage and the expected results of the activity (in this case, brainstorm on possible solutions and choose the solution they would like to move forward to the next stage).
- Learning materials about the creativity-based methods to use in this phase and templates for students to complete the required activities.

Synchronous learning activities that students could work on during this stage can include:

- Use creativity-based methods such as the SCAMPER method or the 4X4X4 idea generation method to generate and filter down ideas using digital templates available on the platform. Specifically, If the challenge entails working on an existing product/service, it is recommended that students use the SCAMPER method; if your challenge doesn't rely on an existing product/service, but rather needs completely new solution, students can use activities such as brainwriting and/or 4x4x4.
- Gather some inspiration to start producing the best ideas through the use of mood boards and/or sketching techniques.
- After the generation process, students can gather potential idea(s) through the '6 thinking hats method' and 'productive thinking model', or the 'PNI' method.
- Lastly, if they still have several potential ideas of the solution and face difficulties choosing the best one, they can pick the best solution by using 1x1x1 and/or dot voting.

The SEED digital Platform integrates guidelines about how to use each of those methods, including the equipment needed as well as the suggested time for each activity and method. Students can mark the activities they have completed as soon as they are finished, and they are ready to upload the outcome of their activity on the Platform.

At for the previous stage, students can complete this step by completing an '**Ideate-Assignment**' on the platform, which includes a text box for them to report their insights and a file upload box to upload any relevant additional documents (combined into a single file). For example, they can upload the results of their brainstorming activity or the user personas they have created on the Platform for the external tutor to review. Students could have a quick review with company mentors at the end of this stage to present their progress and make sure that they are on the right track. At the end of this stage, students should have selected one solution that they want to move forward to the implementation stage.

Appendix 1 provides an example of how to design a brainstorming activity for generating ideas.

4.4.3 Implement

The goal of this stage is to create a physical or virtual prototype of the chosen solution. In this phase, students start from the solution they have chosen in the previous stage, learn prototyping techniques, and learn how to pitch their final solution to the company. The outcome of this stage will be a presentation of the final solution, which, together with the other artifacts developed in the previous stages, can serve as a basis for the evaluation of students' work and learning outcomes. As the other project work stages, implementation too includes elements of synchronous and asynchronous learning. The duration of this stage can vary from a few hours to a few days or weeks or even months depending on the type of project (challenge) students are developing. The

suggested time is two weeks but there might be projects with a higher level of complexity that can take several weeks before a prototype of the solution would be ready.

Asynchronous learning tools can include:

- A pre-recorded video or text description of the goals of this stage and the expected results of the activity (in this case, create a prototype and a pitch of the chosen solution).
- Learning materials about the creativity-based methods to use in this phase and templates for students to complete the required activities.

Synchronous learning activities that students could work on during this stage can include:

- Using idea development methods including the 6 thinking hats, lotus blossom, the business model canvas, and the mission model canvas.
- Create a visual representation or working prototype of their idea by using creativity-based methods such as mood boards, visual sketches, diagrams, drawings, animations, business/mission model canvas, storyboard and/or wireframes combined with methods such as the six thinking hats to visualize the solution students have chosen and consider different aspects linked to its development.
- Create a presentation of their idea – that is, a story about the essence of the idea, how it works, and who it benefits. Creating a pitch is useful to present the idea to others, but it can also help clarify the key elements of the idea. The pitch will be used at the end of this stage to present the results of the project. In addition to this pitch, students can also create and present a short guide of the prototype.

The SEED digital Platform integrates guidelines about how to use each of those methods, including the equipment needed as well as the suggested time for each activity and method. Students can mark the activities they have completed as soon as they are finished, and they are ready to upload the outcome of their activity on the Platform.

At for the previous stages, students can complete this step by completing an '**Implement-Assignment**' on the platform, which includes a text box for them to report their insights and a file upload box to upload any relevant additional documents (combined into a single file). They can for example upload their mood board and sketches, the project plan they have developed, and their pitch presentation. Students could have quick recurring reviews with company mentors to present progress and make sure that they are on the right track. At the end of this stage, students should be ready to present the outcome of their activity to their company tutors as well as their school tutors.

Appendix 2 provides an example of how to create a sketching exercise for small groups.

4.5 Stage 3: Final review and evaluation

At the end of the process, students are ready to present the outcome of their work to external (company) tutors as well as internal (school) tutors. The goal of this stage for all stakeholders is to present, review, and evaluate the WBL activity, and ultimately certify students' learning goals as well as the hours of WBL they have been spending on the project. This stage could start with a meeting between students and tutors (both internal and external) where students present the results of their

work. During this meeting, students would present their proposed solution using the pitch presentation developed during the last stage, as well as any project plan or working prototype they have developed (if any). At the end of the meeting, the external (company) tutors can submit their evaluation (see the next paragraph 4.5.1 titled 'Evaluate'). Internal (school) tutors can review the activities marked as completed by students and the portfolio of artifacts they have uploaded at each stage through the Platform and provide an evaluation of the activity by filling a form on the Platform. Finally, students can also evaluate the activity using an evaluation form available on the Platform. When all evaluations are completed, the activity is finished, and students can receive a certification of the hours of WBL they have completed.

4.5.1 Evaluate

At the end of the project, students can create a feedback collection questionnaire or an interview guide to gather feedback from the audience they presented their prototype to and create a summary of the received evaluation. It is suggested that each group of students gather at least one feedback about their presented solution, and that feedback is collected shortly after presenting the output to the audience.

Collecting feedback from external stakeholders and reflecting on it both individually and as a group is an important way for students to further develop their competences, as this allows them to validate the elements of their proposed solution that external stakeholders appreciated and those that did not work. Furthermore, gathering feedback is also a great way for students to reflect upon their own learning experience and identify what worked well and what could be improved.

There are different ways to collect feedback from external stakeholders, including:

- Individual interviews with different members of the target audience for the project
- Group interviews with different members of the target audience for the project
- Online (anonymous) questionnaires (for example, through Google form or SurveyMonkey or similar free tools).

The suggested duration of this stage can vary from a few hours to a few days depending on the mode of feedback gathering chosen by students. Interviews allow for in-depth feedback but will take longer to plan and complete, while online questionnaire can be distributed easily and filled out in a few minutes.

Questions that can be included in a feedback form include both open-ended questions that require narrative answers from respondents, as well as close-ended, multiple choice of scale-based questions that require respondents to either select one or more option from a list of pre-compiled answers or indicate their answer on a scale from a minimum of one to a maximum of either 3, 5, or 7. Appendix 3 provides an example of survey-based feedback from including multiple choice and scale-based questions. It is suggested to include the most important questions midway through the survey. It is usually good to start with easy questions that do not require huge cognitive effort from the respondent (for example, demographic questions), then include the most cognitively demanding questions, and finish off the survey with another set of 'easier' questions. If feedback is collected through an interview, it is suggested that students prepare an interview guide with about 5 key questions they want to ask to the interviewee.

An example of themes that can be covered in an evaluation survey or interview include:

- Respondent's demographics (e.g., type of organization, type of job, age, etc.).
- Overall satisfaction with the SEED project.
- Overall satisfaction with the output proposed by students.
- Specific questions about satisfaction with the output delivered at each stage or at one specific stage of the project.
- Suggestions or recommendations for the future of the project.

Other questions can include, for example:

- **General opinion questions**, such as: What do you think about this concept? On a scale of one to ten, how much do you like this solution? Why? What do you remember most about it?
- **Perceived benefits and shortcomings questions**, such as: What do you think is the key benefit/advantage of this concept? What do you think is missing or is superfluous? What would you change or never change about it?
- **Intention of use questions**, such as: On a scale of one to ten, how much would you be willing to use this product/service once it has been launched? Why? What current features would make you use it? Which features did you miss that would make you want to use it?
- **Emotional reaction questions**, such as: How does this product/service make you feel? On a scale of one to five, how excited, bored, frustrated etc. do you feel by this concept? Why?

Appendix 3 provides an example of evaluation form for external stakeholders. The guidelines attached to this toolkit also provide additional information about this step (see **Attachment II**).

A further step after feedback has been collected is to analyze it to identify common themes or possible areas of improvement. Students can, for example, group similar answers and count the most frequent ones, calculate the average or most common answers to single- or -multiple choice questions, and represent those answers visually using graphs or other data visualization tools. The goal of the analysis is to identify trends in stakeholders' answers and create a short summary of students' most important discoveries and learnings.

4.5.2 Finalize

After completing the challenge, all stakeholders are asked to complete an evaluation form on the digital platform. The content of this form is different according to the role in the project (student, school tutor, or company mentor).

Students are asked to evaluate the extent to which working on the challenge helped them develop:

- Digital competences
- Entrepreneurial competences
- Life-long learning competences
- Their skills and knowledge related to their field of study, related to the type of work they are training for

Teachers are asked to evaluate:

- The extent to which their experience with the SEED project motivated them to include entrepreneurship education in their work more regularly.
- The degree to which they would like to incorporate different entrepreneurship-related methods, assignments, and projects in their teaching activities.
- The degree to which they would like to incorporate more creativity-based and active learning methods (such as project work and autonomous learning) in their teaching.
- The extent to which they consider entrepreneurship and teaching entrepreneurial competences important for high schools.
- The extent to which they are aware/have tried implementing learning activities that incorporate competences such as information and data literacy, communication and collaboration, content creation, safety and wellbeing, responsible use, and problem solving, and if the SEED project experience motivated them to create more learning opportunities for their students to develop these competences.
- The extent to which they are aware/have tried implementing learning activities that incorporate competences such as collaborative learning, self-regulated learning, emerging technologies, actively engaging learners, and blended learning, and if the SEED project experience motivated them to create more learning opportunities for their students to develop these competences.

The evaluation form for students and teachers ends with a set of questions about the user experience with the SEED Platform and methodology, tailored to each type of user.

Company mentors are asked to evaluate the extent to which the SEED project motivated them to encourage more networking activities with schools, as well as a set of questions related to their assessment of the importance of different competences for current and future learners.

5 SEED in Practice

5.1 Testing the SEED Toolkit

To assess the usability and effectiveness of the SEED Toolkit, both the online platform and the methodology were tested in concrete work-based learning environments across four countries: Italy, Greece, Spain, and Slovenia. This phase involved engaging local educational operators, such as teachers, trainers, and company mentors, from partner countries to participate in testing the co-designed Toolkit, including the online platform and methodology. These stakeholders implemented the SEED Toolkit within real work-based learning experiences.

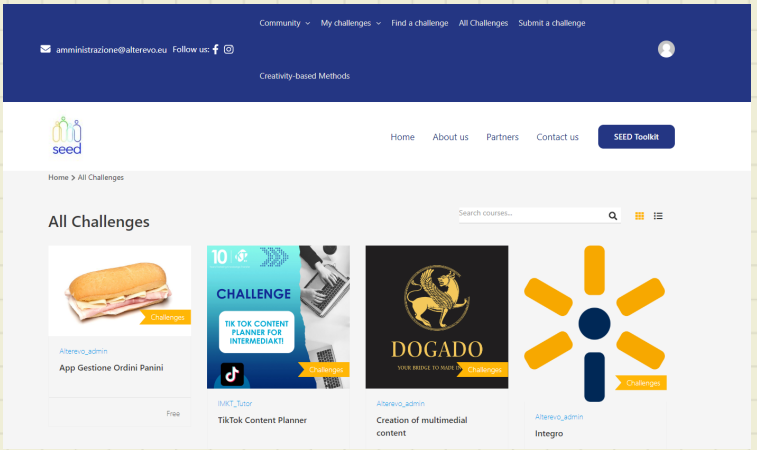
During the preparatory phase, school tutors and companies collaborated to develop and propose "project challenges" to the students. Through intensive group work, the students learned to empathize with the challenges, conducted research, generated potential solutions, and implemented those solutions using fast prototyping techniques. Schools and companies then received the outcome of this work and assess students' competences at the end of the process.

The methodology draws inspiration from popular design thinking frameworks but incorporates various creativity-based methods to help students learn how to generate, select, and implement ideas for new projects. This approach is facilitated by a digital platform that guides students, companies, and school tutors through the different activities and steps of the process, integrated with the SEED Toolkit and digital tools. The platform includes guidelines on utilizing different creative methods, specifying the required equipment, suggested timeframes, and activities. Additionally, students had the ability to mark completed activities and upload their results for further evaluation.

Overall, a total of 9 school tutors, 9 company mentors, and 75 students (out of 102 registered to the platform) actively participated in solving 9 company challenges (55 completed the challenge in 100%). Some of these challenges are presented in the Appendix 4.

5.2 Solved challenges

During the introduction stage of the SEED project, companies actively participated by creating engaging challenges for students to undertake as part of their Work-Based Learning (WBL) activities. Overall, the companies submitted the total of 24 challenges, most of them related to the digital technology sector, cultural and creative sector and education, but also agriculture and other primary sectors, industry and construction, food and catering, and others. The SEED platform proudly showcases a diverse range of 17 challenges, each representing unique opportunities for participants to engage and contribute their skills. Among these challenges, some still await resolution by participants who are not currently involved in the project.



The SEED platform facilitated the connections between companies, schools, and enthusiastic students who expressed their interest in tackling the proposed challenges. This dynamic collaboration resulted in the successful execution of **nine impactful challenges**. Companies played a crucial role as vital partners in designing and implementing WBL activities, offering valuable opportunities for students to learn and apply their skills. Additionally, they provided mentorship and supervision to guide students throughout their work.

Moreover, companies had the opportunity to contribute their insights regarding the critical skills required in the labor market, contributing to the development of relevant curricula. Teachers were

granted editing privileges to customize the challenges and select the creative methods that students employed during different stages of the project.

In the Empathize stage, students engaged in team-building activities and familiarized themselves with the companies they were partnered with, utilizing creative methods to foster collaboration. Moving on to the Ideation stage, students learned and applied brainstorming techniques to analyze the challenges presented and propose potential solutions. During the Implement stage, students gained valuable experience in selecting ideas and transforming them into tangible prototypes, whether virtual or physical, to showcase their proposed solutions. As the project progressed to the Evaluate stage, students actively sought feedback from stakeholders who evaluated their work. Students also conducted their own evaluations, reflecting on the output they created and the lessons they learned throughout the process. At the end of each stage, students submitted their work through the SEED platform, showcasing their progress and achievements. Due to the varying levels of difficulty and complexity, the resolution of the challenges within the SEED project spanned a timeframe of 3 to 6 months. Each challenge presented its unique set of intricacies, requiring participants to invest substantial time and effort to develop comprehensive and effective solutions.

While most challenges within the SEED project focused on local connections between companies and schools, there was also an exciting **international challenge** piloted to broaden the scope of collaboration. This international challenge, “Give metal a second chance” published by Metalmont company, brought together a company and two schools from different countries, namely Italy and Slovenia. It served as a remarkable opportunity for cross-cultural exchange and collaboration and showcased the project's commitment to fostering international partnerships and promoting global perspectives in work-based learning initiatives. By bridging the geographical boundaries, this challenge offered unique experiences and insights to both the participating company and the schools involved.

Through the Metalmont challenge, participants from Italy and Slovenia were able to engage in a shared problem-solving process, leveraging their diverse backgrounds, skills, and expertise. The collaboration between the company and the schools provided a rich learning environment, where cultural differences were celebrated, and innovative solutions were born. The challenge exemplified the SEED project's commitment to promoting both local and international partnerships, further enriching the work-based learning experiences for all participants involved.

Below, In Appendix 4, you will find examples of “challenge ID cards” that provide a succinct overview of each challenge, the participating entities, the creative methods employed, and a glimpse of the innovative solutions developed by the students and companies involved.

5.3 Participants experience

Working within a fully online digital work-based learning environment provided diverse experiences for the different target groups involved: students, tutors, and mentors. To assess their experiences and the development of competencies related to this learning method, self-assessment questionnaires and the collection of opinions were utilized as primary evaluation tools.

When determining the competencies to be evaluated, the main focus was on entrepreneurial, digital, and life competencies, as these form the foundation of lifelong learning and 21st-century

skills. To ensure a comprehensive assessment, specific competencies were selected based on established EU frameworks such as EntreComp, DigComp 2.2, and LifeComp.

To evaluate students' progress in competence development and gauge the impact on teaching practices to promote entrepreneurial and digital skills, online pre- and post-assessment questionnaires were employed. This methodology enabled the measurement of growth and change, providing valuable insights into students' competency development and the effectiveness of teaching approaches.

The same evaluation methodology was applied to mentors, with a specific focus on assessing their cooperation with schools and the level of involvement in work-based learning activities. This assessment allowed mentors to reflect on their contributions and identify areas for improvement, ultimately enhancing the effectiveness of their guidance and support for students.

By actively seeking feedback from the participants, we aimed to gather valuable insights into their interactions, engagement, and overall satisfaction with the digital work-based learning environment. Their feedback served as a foundation for continuous improvement, enabling us to refine the digital platform, instructional methods, and support systems to better meet the needs and expectations of the participants. By embracing their feedback, we could shape a more effective and engaging environment that maximizes the benefits of WBL in a digital setting.

5.3.1 Development of competencies

Development of students' competences

The self-assessment questionnaire provided **students** with a valuable opportunity to evaluate their digital, entrepreneurial, and life competencies both before and after engaging in the challenge-solving activities. Through a careful analysis of the questionnaire results, we were able to gain insights into their strengths, areas where they perceived deficiencies, and the specific competencies they acquired throughout the process.

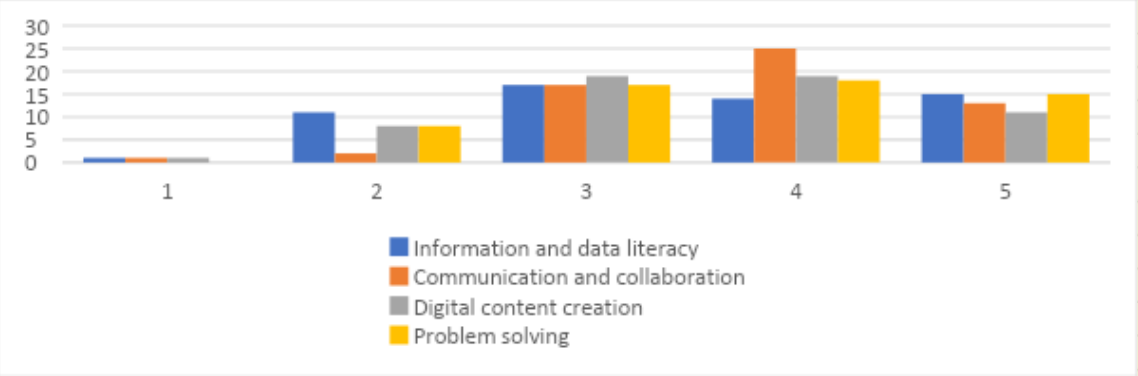
By comparing the pre- and post-assessment responses, we could identify significant areas of growth and development. This comprehensive assessment allowed us to understand the students' progress, highlight their accomplishments, and determine the specific competencies they had enhanced.

Moreover, the self-assessment questionnaire provided valuable feedback that helped us tailor future learning experiences to address areas where students felt deficient. This data-driven approach allowed us to identify opportunities for further growth and provide targeted support to enhance their overall skill set.

At the very beginning of their work on challenges, students assessed their competences with the online questionnaire at the SEED platform, using the rate scale from 1 – 5 *(1 - I don't know what that is; 2 - I can do it with the help of a teacher or a classmate; 3 - I have minor problems, but I can find a solution to the challenges on my own; 4 - I solve challenges in this area without any problems, independently and confidently; 5 - I can help others solve challenges in this area).* 58 questionnaires from students were collected in the pre-phase. According to their self-assessment, the students have well developed their **digital competencies**. Especially, communication and collaboration skills (covering interaction, sharing and collaboration through digital technologies) were assessed good (average: 3,8), as the biggest % (66) of students can solve challenges without problems, independently and confidently or even help others to solve challenges in this area. This is followed

by problem solving skills (average: 3,7), covering solving technical problems and creatively using digital technologies, where 57 % of students can independently and confidently solve challenges or help others to do so. More than half of students similarly also assessed their digital content creation skills (52 %) and information and data literacy (50%), covering browsing, searching, filtering, evaluation and managing data and digital content.

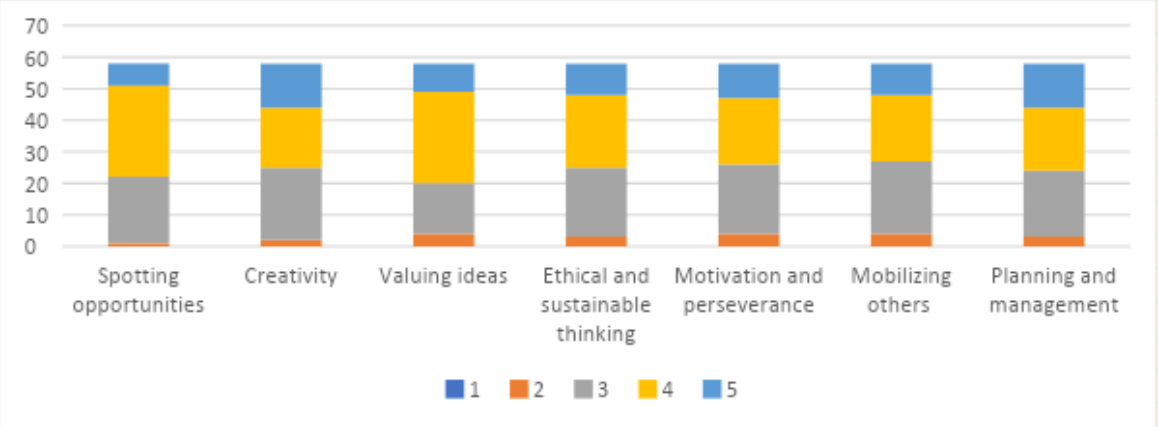
Graph 1: Digital competences prior working on the challenge – students' self-assessment



Rating scale: *1 - I don't know what that is; 2 - I can do it with the help of a teacher or a classmate; 3 - I have minor problems, but I can find a solution to the challenges on my own; 4 - I solve challenges in this area without any problems, independently and confidently; 5 - I can help others solve challenges in this area.*

Looking at the **entrepreneurial competences** we can see that the students self-assessed as being most confident (average rate 3,8) in creativity (developing creative and purposeful ideas) and planning and management (prioritizing, organizing and follow-up), where a quarter of students always feel confident. Rated at 3,7 are skills related to spotting opportunities (using imagination and abilities to identify opportunities for creating value), valuing ideas (making the most of ideas and opportunities), ethical and sustainable thinking (assessing the consequences and impact of ideas, opportunities and actions), motivation and perseverance (I can stay focused and don't give up). Mobilizing others (I can inspire, enthuse, and get others on board) follows with negligible lag (3,6).

Graph 2: Entrepreneurial competences prior working on the challenge – students' self-assessment

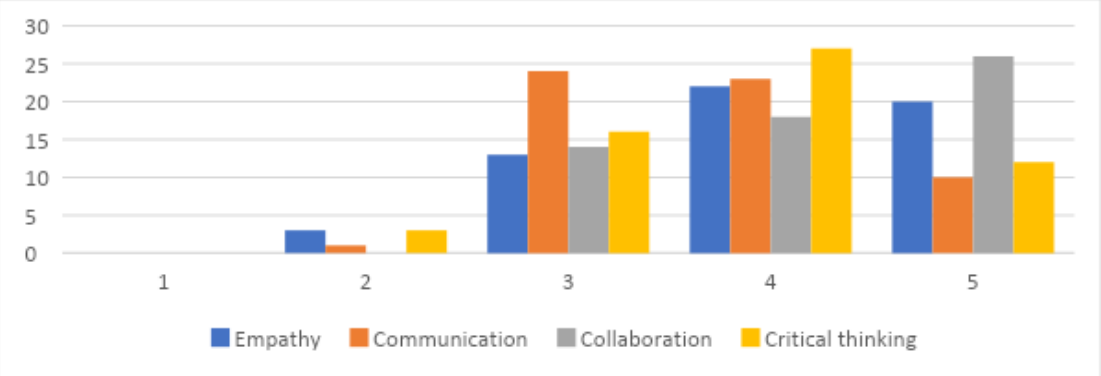


Rating scale: *1 - Never; 2 - Rarely; 3 - Usually; 4 - Most of the time; 5 - Always.*

Regarding **life-long learning competencies**, students believe that they are almost always able to engage in group activity and teamwork acknowledging and respecting others (collaboration skills) - 4,2 and understand another person's emotions, experiences and values, and the provision of

appropriate responses (empathy) - 4,0, followed by being able to assess information and arguments to support reasoned conclusions and develop innovative solutions (critical thinking) most of the time - 3,8 and useing relevant communication strategies, domain-specific codes and tools, depending on the context and the content (communication) - 3,7 usually or most of the time.

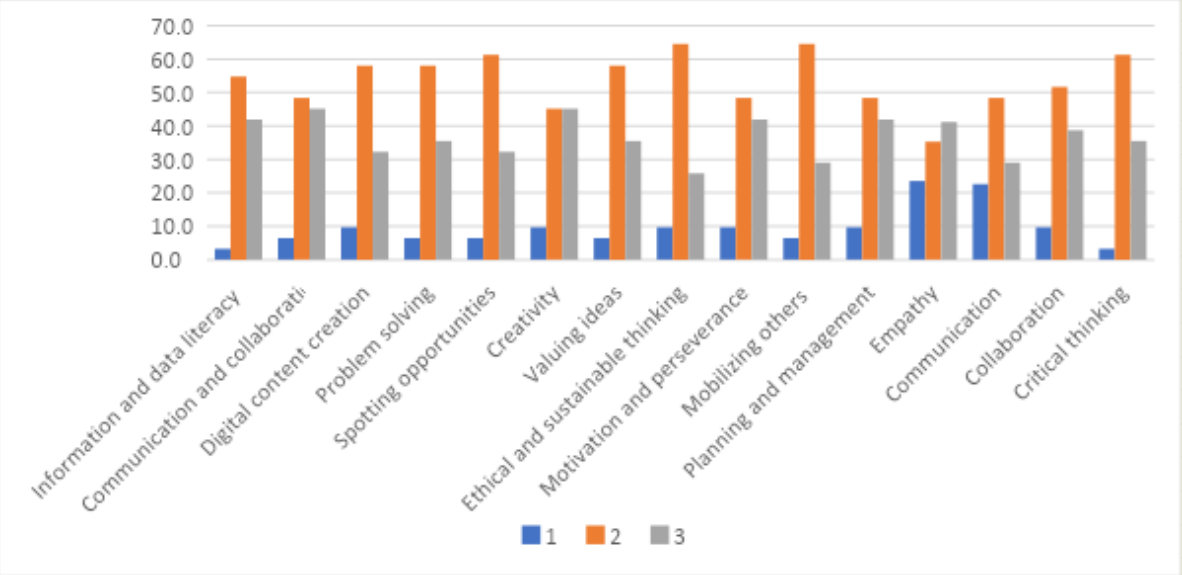
Graph 3: Life-long learning competences prior working on the challenge – students' self-assessment



Rating scale: *1 - Never; 2 - Rarely; 3 - Usually; 4 - Most of the time; 5 - Always.*

After the completion of working on the challenge, 31 answers from students were collected, where they assessed the extent to which working on the challenge helped them develop the same competencies, using the rate scale from 1 to 3 *(1- I don't see any changes, 2 – I gained some skills and confidence in this area, 3 – I'm much more confident and adept in this area)*. Regarding **digital competencies**, they stated that they gained some skills and are more confident in all areas, as the average rate was 2,3 (ranging from 2,2 – 2,4). Very similar were the results for the **entrepreneurial competencies**, which amounted to 2,3 (ranging from 2,2 – 2,4), and the ones for **life-long learning competencies**, with the average rate of 2,2 (ranging from 2,1 – 2,3).

Graph 4: The extent to which working on challenge helped students develop digital, entrepreneurial and life -long learning competencies – students' self-assessment



Rating scale: *1- I don't see any changes, 2 – I gained some skills and confidence in this area, 3 – I'm much more confident and adept in this area*

The majority of students also stated that they gained skills and confidence in their field of study, related to the work for which they are trained (average 2,4 on the scale 1-3).

To summarize, we can conclude that the students significantly improved their digital, entrepreneurial and life competences by working on SEED challenges.

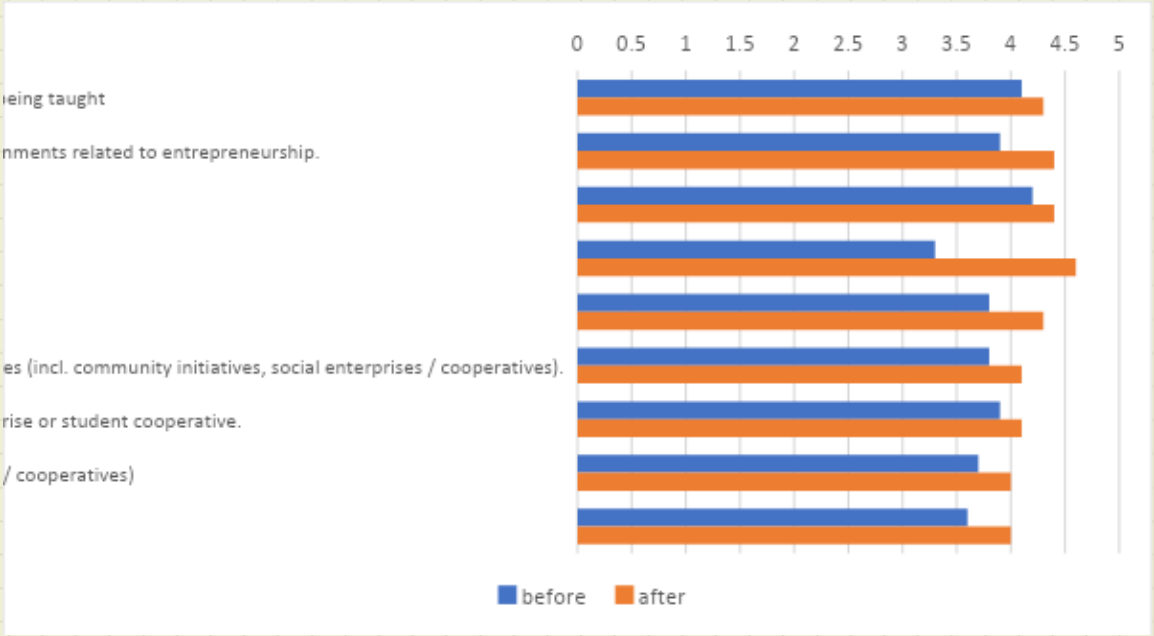
Development of tutors' competences

In addition to the students' self-assessment, **tutors/teachers** from schools themselves also engaged in a comprehensive evaluation of various elements connected to promoting the development of students' entrepreneurial and digital competencies. The provided answers in 13 questionnaires prior and 7 after the completion of challenges.

As far as the entrepreneurship in their schools is concerned, the tutors/teacher stated, on the scale from 1 to 5, that it is quite important for their schools (4,2) and that teachers are encouraged to network with companies (4,1). Somewhat lower was assessed the statement, that the teachers have an opportunity to participate in entrepreneurship education-related training (3,8) and the frequency of including entrepreneurship education in their work (3,8). After the SEED experiences, they will definitely plan how to include entrepreneurship education in their work more regularly (4,1) and more often discuss with learners how entrepreneurship is related to the subject being taught (4,3).

Regarding the methods for entrepreneurial education, the teachers rated different methods of their entrepreneurial education practice they already use and how the SEED experience influenced those practices. From the results it is evident that even when teachers are often using those methods, the SEED experience strengthened their desire to use the methods even more often.

Graph 5: The use of methods for entrepreneurial education in their teaching practice before and after the SEED experience - tutors/teachers self-assessment



Average rates from the scale 1 – 5 (1 – completely disagree, 2 – disagree, 3 – not agree or disagree, 4 – agree, 5 – completely agree).

Similarly, the elements of guiding of the learners were rated, where despite the practice that already took place, tutors/teachers are planning to do these activities even more often.

Table 1: Guiding of the learners in their teaching practice before and after the SEED experience - tutors/teachers self-assessment

	before	after
Encouraging learners to identify and analyze different needs for actions.	3,8	4,1
Encouraging learners to assess ideas and to make choices between them.	4,0	4,1
Encouraging learners to find the necessary resources to put their idea into action.	3,8	3,9
Encouraging learners to work in teams to achieve common goals.	4,1	4,4
Encourage learners to believe in their own competences.	4,1	4,4
Encouraging learners to take the initiative.	4,0	4,4
Creating learning situations where learners must practice how to tolerate insecurity.	3,5	3,9
Organizing teaching lessons so that learners are inspired to engage in creative activity.	3,9	4,4

Average rates from the scale 1 – 5 (1 – completely disagree, 2 – disagree, 3 – not agree or disagree, 4 – agree, 5 – completely agree).

When assessing the importance of entrepreneurship, all the elements were rated by tutors/teachers higher after the SEED experience.

Table 2: The importance of entrepreneurship before and after the SEED experience - tutors/teachers assessment

Importance of entrepreneurship	**before**	**after**
The learners' active role is important in planning the entrepreneurship activities.	4,2	4,4
It is important that learners get authentic experiences of entrepreneurship.	4,2	4,6
The opportunity for learners to try out, succeed and fail is important.	4,0	4,0
Learning entrepreneurial skills and competences is important.	4,2	4,6
Entrepreneurship should be promoted to a greater extent in schools.	3,8	4,4

Average rates from the scale 1 – 5 (1 – completely disagree, 2 – disagree, 3 – not agree or disagree, 4 – agree, 5 – completely agree).

When assessing how they are facilitating learners' digital competencies (information and data literacy, communication and collaboration, content creation, safety and wellbeing, responsible use and problem solving), tutors/teachers mainly tried them with their students or implemented various learning activities, so the students were able to develop this competence. They rarely led project-based initiatives for developing those competences or even contributed with students to the creation of strategies that promote developing those competences in their school and environment. Almost all tutors/teachers (86 %) that answered the questionnaire, stated that they intend to create more learning opportunities after their SEED experience.

Almost half of the tutors/teachers (46 %) uses various digital technologies to support and enhance students' collaborative learning, in face-to-face and/or online settings and select and use digital technologies in their learning designs based on their features, to enhance and support students'

collaborative learning. Although 57 % of tutors/teachers that answered the questionnaire stated that they already design learning activities to support this competence, some intend to create more learning opportunities after the SEED experience.

The majority of tutors/teacher (62 %) reported to select and use digital technologies in their learning designs based on their features, so as to facilitate students' self-regulated learning skills and learner autonomy or even reflect on and support them to (re)design their learning, through and on using digital technologies, promoting their self-regulated learning and learner autonomy, together with their students.

69% of tutors/teacher reported to use various emerging technologies to provide their students with novel learning experiences and new kinds of learning, fostering the development of transversal skills or are at least aware of it. They mostly already design learning activities to support this competence or plan to create more learning opportunities in the future.

31 % of tutors/teachers selects and employs digital technologies in their learning designs to foster students' active engagement in individual and collaborative learning, while others either try to use or use it, or even (re)design learning activities based on students' feedback, co-creating new ways for them to interact and actively engage with digital technologies and initiate and promote digitally-enhanced learning spaces within school and its wider community, where students are actively engaged in learning activities.

The tutors/teacher mainly use various digital tools and platforms to support distance and blended learning approaches, enhancing students' learning processes and outcomes, with some analysing and employing them in learning designs or even reflecting on and redesign teaching and learning contributing to the design of a distance and blended learning strategy. But at the same time, 23 % of those who answered the survey are not aware of this competence. More than half (57 %) also stated to create more learning opportunities for their students after the SEED experience.

Through this process of self-assessment, the tutors/teachers were able to identify areas of strength and areas that required improvement in their efforts to promote students' entrepreneurial and digital competencies. This self-reflection allowed them to refine their approaches, adapt instructional techniques, and introduce new resources or interventions where necessary.

By actively self-assessing their own contributions, the tutors/teachers demonstrated their commitment to continuous improvement and ensured a student-centered learning environment. This self-evaluation process served as a valuable tool for enhancing the tutors' teaching practices, resulting in more effective support and guidance for the development of students' competencies.

Development of mentors' competences

The self-assessment activity also involved the third group of participants, namely the **mentors** from companies, who answered the questionnaire, before (12 answers) and after (5 answers) collaboration with students and their tutors/teachers and identified the changes the participation in SEED project brought.

The mentors assessed some of the collaboration practices with students and schools in present and in the future from which it is evident that the cooperation in the SEED project encouraged them to cooperate even more.

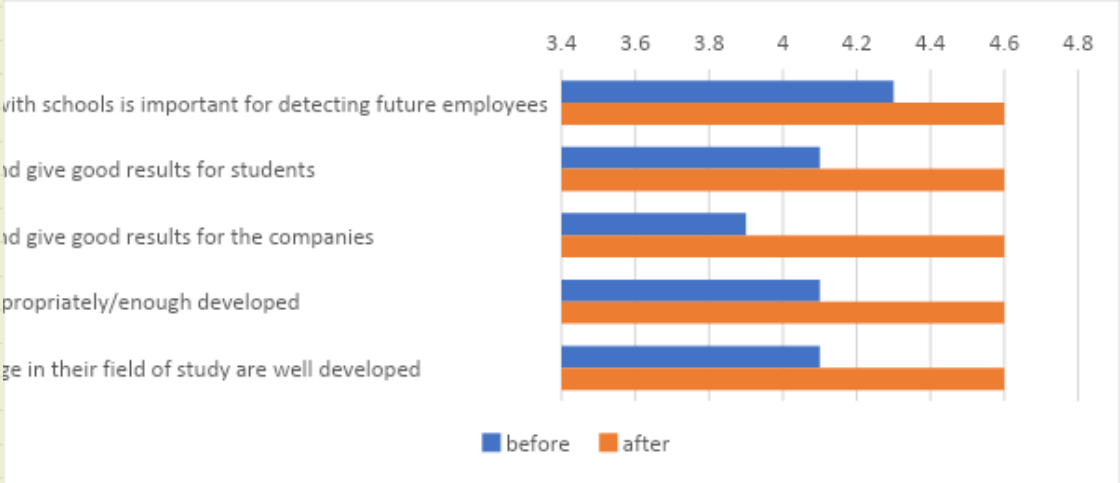
Table 3: Present and future practice of collaboration with students and schools - mentors assessment

In our company…	we are	will be more
…encouraged to network with schools	4,4	4,6
…supporting learners to develop their own mini-company, practice enterprise or student cooperative	4,5	4,6
…encouraged to host students from different schools and talk to them about our work	4,5	4,6
…encouraged to visit different educational organisations	4,4	4,6

Average rates from the scale 1 – 5 (1 – completely disagree, 2 – disagree, 3 – not agree or disagree, 4 – agree, 5 – completely agree).

Mentors also stated that it is important for students to have the opportunity to try out, succeed and fail (4,7), to learn entrepreneurial skills and competencies (4,4) to get authentic experiences of entrepreneurship (4,3), and to have an active role in planning the entrepreneurship activities (4,2). After the SEED experience they even strengthen their opinion on this by rating all elements with 4,6. They also reinforced their opinion about entrepreneurship to be promoted to a greater extent in schools from 4,2 to 4,6.

Graph 6: Beliefs and thoughts of mentors related to the cooperation with schools, work-based learning and specific students skills



Average rates from the scale 1 – 5 (1 – completely disagree, 2 – disagree, 3 – not agree or disagree, 4 – agree, 5 – completely agree).

Also, beliefs and thoughts of mentors related to the cooperation with schools, work-based learning and specific students' skills changed so that they are even more convinced that these matters are important (see the graph above). The participation in SEED project in general strengthened their willingness to participate in entrepreneurship education-related training and be more active in cooperation with schools (rate changed from 4,3 to 4,6).

Through the assessment process, the mentors evaluated the extent of their company's engagement in supporting and collaborating with schools for work-based learning initiatives. By actively participating in the self-assessment, the mentors gained valuable insights into the strengths and areas for improvement in their company's engagement with schools and work-based learning activities. It allowed them to identify strategies for enhancing their company's support, optimizing

the learning outcomes for the students, and fostering a mutually beneficial partnership between the company and the educational institutions.

Through the collective self-assessment activities, involving students, tutors, and mentors, the SEED project fostered a culture of continuous improvement, promoting the development of entrepreneurial and digital competencies and enhancing the overall success of work-based learning initiatives.

5.3.2 User experience in SEED digital environment

Given that incorporating work-based learning (WBL) within a digital environment is not yet a widespread practice in schools and companies, it presented a unique challenge for the participants. Consequently, we were particularly interested in gathering their feedback and insights regarding their user experience.

The main challenges encountered were primarily related to the digital environment and the digital skills required to effectively utilize the platform.

Students experience

Students stated that the SEED platform was somehow easy to use (3,0 on the scale 1-5), quite similar was rated also difficulty to collaborate with other students, teachers and company mentors through the platform (3,1) and the communication feature (2,9). Besides the SEED platform, students used for collaboration and communication mainly their mobile phones, in some cases also storage services like Dropbox and Google Drive, and other web/app services (Miro, Canva, etc.). Nevertheless, the possibility to collaborate with other students and teachers and company mentors was the one most liked by the students. Least liked were on the other hand the issues with log in and that it was sometimes not so simple to understand and difficult to use.

The overall experience with the Platform was good, rated as 3,4 (on the 1-5 scale). Also, the SEED methodology experience was rated as interesting and engaging (3,6) and pretty easy to understand (3,3) and find on the Platform (3,2). The majority of students (77 %) managed to effectively use one or more of creativity-based methods proposed by SEED (Business model canvas, Scamper, Brainwriting,…), which they already knew (3,3) and found them useful (3,5).

Regarding the collaboration with other students, they stated that this was interesting and engaging (3,9) and brought added value for the development of their challenge solution (3,9). Although, related to collaboration they encountered some online relationship shyness and difficulties in establishing the cohesive online working groups.

Students very much agreed that the participation in SEED will benefit their professional or academic growth (4,1). Also, the collaboration with the company was pretty engaging (3,8). In short, the results(s) of their work were quite satisfactory (3,9). Therefore, the students would recommend the SEED experience to their friends (3,6) and would probably use the SEED methodology again. Students enjoyed the project and were grateful for the experience.

Tutors/teachers experience

After using the SEED platform and methodology for solving the companies' challenges, the tutors/teacher who completed the questionnaire ranked on the scale form 1 -5 that it was somehow easy to use the platform (3,3), its communication features (3,5) and collaboration features (3,5).

Nevertheless, they would most probably recommend the SEED platform to a friend or colleague (3,8).

Mentors experience

The experience with the SEED platform was closely related to the digital skills of mentors and their ability to use similar digital tools. While encountering challenges, the mentors embraced them as valuable learning opportunities. They viewed these challenges as chances to enhance their problem-solving skills and foster creativity.

To sum up, due to its user-friendly design, participants quickly familiarized themselves with the SEED platform, minimizing the time spent on navigating its technical aspects. However, it is worth noting that, overall, the students demonstrated a greater level of empathy and comfort in using the digital platform. They appeared more adaptable to the online environment and displayed a willingness to explore and engage with the platform's features. Their openness to digital experiences facilitated a smoother transition and greater proficiency in utilizing the platform for work-based learning activities. This is best supported by the statement of one of the mentors:

"Even if I don't have great technological skills, it was exciting to see the students discuss and create ideas for our company through the SEED platform. The final result is truly amazing."
(Tommaso Testi, Dolciaria Artigianale Testi C. & Figli Snc)

These challenges highlight the importance of providing adequate support, training and resources to empower participants with the necessary digital skills and confidence to effectively navigate the digital work-based learning environment. By addressing these challenges, participants can fully leverage the potential of the platform and benefit from the opportunities it offers for collaboration, learning, and skill development.

In some cases, participating mentors and tutors encountered challenges in effectively communicating with each other. It seemed that due to time constraints, they lacked the necessary motivation to fully implement the lesson plans and provide adequate support to the students. Despite these challenges, the students still managed to produce commendable work. They were especially excited to tackle international challenges. Their eagerness to complete the tasks and deliver good quality outcomes was evident. Engaging with the SEED methodology provided them with a refreshing change in their problem-solving approach, offering a valuable hands-on experience.

Overall, the SEED project recognizes the significance of overcoming digital challenges and remains committed to enhancing the user experience, ensuring that all participants can confidently and effectively utilize the digital platform for successful work-based learning outcomes.

5.4 Future perspective

The SEED Toolkit was tested by various educational organizations in different school environments, providing them with valuable insights into the potential integration of this online work-based learning (WBL) method into the school curriculum, tailored to the specific educational system of each country.

In various educational frameworks, participants recognized numerous possibilities for the future implementation of the SEED methodology and toolkit. In the case of Italy, one promising avenue for implementation is through the mandatory learning units known as Unità di Apprendimento (UDA), which are organized and scheduled by every high school. UDAs encompass multidisciplinary topics that impact various subjects, and teachers often struggle to generate innovative ideas for them. By incorporating the SEED methodology and challenges, it could be proposed as a compelling option for UDAs during the fourth and fifth year of high school. This approach would motivate students to engage with a challenging real-life scenario that aligns with the curriculum.

Similar opportunities have been identified in Slovenia, where every secondary school includes an obligatory learning activity on Active Citizenship during the third year. Within this framework, students could tackle challenges presented by NGOs, government institutions, or municipalities. Furthermore, the flexible nature of open curricula in Slovenia allows for the integration of the SEED Toolkit and challenges. It could be designated as a separate subject, that as such becomes compulsory for all students. Additionally, the methodology could be incorporated into existing vocational modules, enabling authentic and practical learning experiences.

During the testing phase, education operators were able to identify activities that could incentivize schools and companies to utilize the SEED platform and methodology. Their ideas for sustainable use of SEED methodology and toolbox cover:

- Free training and facilitation sessions for school tutors, with the aim to deepen creativity-based methods and processes and the use of digital support tools.
- Active citizenship projects, where starting from the schools already involved, international challenges could be developed linked to civic education topics that are by their very nature interdisciplinary and flexible.
- SDG related challenges, which aim to address the sustainable development goals,
- Study visits to the companies whose challenges the students solved in order to get a live impression and contacts,
- SPROUT Online Festival, where the "seed" of the project could "sprout" in an online festival promoted by project partners in which - through the hackathon modality - new companies, tutors and students can be involved in order to experiment the SEED platform and generate new creative ideas with a student empowerment approach.
- Connection with Erasmus+ KA1 mobility projects, where support to apprenticeship experiences abroad is provided by integrating the use of the SEED platform to link short apprenticeships to a real and concrete business challenge.
- International exchange of participating students to enrich their educational journey, providing them with valuable skills, knowledge, and global perspectives and preparing them to be global citizens who can contribute meaningfully to the challenges and opportunities of our interconnected world.

Overall, the SEED Toolkit presents a promising solution for educational institutions seeking to enhance their curricula by incorporating dynamic and relevant learning methods, fostering student engagement and preparing them for real-world challenges. To ensure successful implementation, several steps are crucial.

Firstly, it is essential to provide comprehensive training for teachers to effectively utilize the SEED Toolkit. Developing a dedicated learning module that can be included in the catalogue of programs for teachers is highly recommended. In many countries, participating in such programs allows

teachers to acquire credits or professional development points, increasing their motivation to engage with the SEED methodology. By offering a structured training program, teachers can develop the necessary skills and understanding to maximize the benefits of the SEED Toolkit in their classrooms.

Moreover, engaging educational bodies that hold influence and decision-making power over educational content is vital. Collaborating with these entities will help integrate the SEED methodology into official educational programs and curricula. By aligning with established educational frameworks, the SEED Toolkit can gain broader acceptance and recognition within the education system. Involving these influential bodies in the program ensures that the SEED methodology becomes an integral part of the educational landscape, empowering more schools and teachers to adopt it.

Additionally, showcasing successful case studies and testimonials from schools and companies that have already implemented the SEED platform can be highly influential. By highlighting the positive outcomes and impact of the SEED methodology, education operators can generate interest and motivation among other schools and companies to embrace this innovative approach.

By combining teacher training, engagement with educational bodies, and showcasing successful implementations, education operators can create a supportive ecosystem that encourages the widespread adoption of the SEED platform and methodology, ultimately leading to improved educational outcomes for students and enhanced collaboration between schools and industry partners.

To maximize the impact of the SEED Toolkit, it is essential to leverage the numerous opportunities for meetings and events where schools can exchange ideas and best practices with scientific school committees, national authorities, companies, and other relevant stakeholders. These gatherings serve as valuable platforms to showcase the strengths and opportunities associated with utilizing the SEED Toolkit. By actively participating in these events, educational organizations can effectively present the advantages and possibilities that arise from implementing the SEED Toolkit in their respective settings. They can highlight how the toolkit promotes innovative teaching methods, fosters collaboration between schools and external partners, and enhances students' practical skills and real-world problem-solving abilities. Furthermore, showcasing the toolkit to companies and industry representatives can highlight the relevance of the skills and competencies developed through the SEED methodology. This can foster partnerships and collaborations between schools and the private sector, enabling students to gain exposure to real-world challenges and career pathways.

By seizing these opportunities for networking and knowledge exchange, schools can effectively communicate the benefits and opportunities associated with adopting the SEED Toolkit, fostering its widespread adoption and long-term sustainability in educational environments.

The successful piloting of the international challenge highlighted also the potential for future cross-border collaborations within the SEED project. It demonstrated the project's capacity to connect participants from different countries, fostering mutual understanding, cultural exchange, and the development of entrepreneurial and digital competencies on an international scale.

6 Methodological References

- Brown, T. (2008). Design thinking. *Harvard business review*, *86*(6), 84.
- IDEO Blog. “What is Design Thinking?” available at:
- https://www.ideou.com/blogs/inspiration/what-is-design-thinking
- IDEO Design Kit, available at: https://www.designkit.org/

Appendix 1. Example of brainstorming activity for idea generation in groups

General instructions

1. Grab a piece of paper to write down your ideas individually

2. Choose one person in your group who's going to keep track of time and write i jamboard's pre-created post-its

3. Do the activity in 4 rounds:
- Round 1: everyone writes their first idea on paper (2 mins) and then shares with the group (1 min), writer reports ideas on the jamboard
- Round 2: everyone writes their second idea on paper (2 mins) and then shares with the group (1 min), writer reports ideas on the jamboard
- Round 3: everyone writes their third idea on paper (2 mins) and then shares with the group (1 min), writer reports ideas on the jamboard
- Discuss as all ideas as a group and assign a score from 1 to 5 to each idea based on how much you like the idea as a group (10 mins)

Final goal: generate 12 ideas individually and converge to those that everyone likes the most as a group.

You are a transportation company whose main business is to bring people to events and trips at the regional, national, and international level. Your design challenge is: how might we make our business more environmentally sustainable in the next 5 years?

Idea 1	**Idea 1**	**Idea 1**
Idea 2	**Idea 2**	**Idea 2**
Idea 3	**Idea 3**	**Idea 3**

Appendix 2. Example of sketching activity in groups

General instructions

1. Grab a piece of paper to draw your sketches individually

2. Choose one person in your group who's going to keep track of time

3. Do the activity in 2 rounds:

- Round 1: everyone draws a sketch of the SEED platform dashboard for one user
One person draws the student's dashboard
One person draws the teacher's dashboard
One person draws the company's dashboard
Try to put yourself in the shoes of the stakeholder you are less familiar with (e.g., teachers design company, companies design teachers/students)
Take 10 minutes to sketch your designs

- Round 2: Discuss everyone's sketches as a group for 15 minutes (5 minutes each)

You may take a picture of your designs and copy the picture in your room jamboard (optional)

Appendix 3. Example of feedback evaluation form for external stakeholders

Evaluation questionnaire template for companies

This is a template of an evaluation questionnaire students can ask companies to fill at the end of the project. Students can also integrate this template with additional questions aimed at gathering information from the company about specific aspects of the project they have been working on they would like to get feedback about, or specific competencies they would like the company to assess.

We would like to thank you for participating in the SEED project as company and proposing a challenge for students to work on. Your participation is greatly appreciated. With this form, we would like to collect your evaluation of your experience with SEED and your assessment of the output you have received from the students who collaborated with your company on this project. Your opinion will be a great opportunity for students and facilitators to learn.

Section 1. Demographics

- *Company name*
- *School name*
- *Project name*

Section 2. Overall satisfaction with the SEED project (1-7 Disagree-Agree scale)

- *I found the project useful for my company*
- *Participating in this project helped me/my company foster interdisciplinarity and inter-department collaboration*
- *Participating in this project helped me better understand the needs of staff, students, and external stakeholders*
- *Participating in this project helped me/my company develop new strategies*
- *Participating in this project helped me/my company identify opportunities I had not considered before*

Section 3. Overall satisfaction with the output proposed by students (1-7 Disagree-Agree scale)

- *I found the solution proposed by students inspiring*
- *The solution proposed by students fits the problem well*
- *I am satisfied with the range of solutions considered by students*
- *I am satisfied with the level of knowledge and competency demonstrated by students while participating in this project*
- *I would be willing to implement the solution proposed by students in my company*

Section 4. Phase specific satisfaction

- *Please rate on a scale from 1 (not satisfied at all) to 5 (extremely satisfied) the extent to which you feel satisfied by the output provided by students for each of the following stages:*

- *Empathize (provide examples of deliverables for this stage, e.g. desk research / business model canvas / whatever testifies research conducted on the partner company) – 1-5 + NA*
- *Define and Ideate (final solution proposed etc.)*
- *Implementation (prototype, implementation plan, pitch etc.)*

Section 5. Additional remarks and recommendations

A. *How do you see yourself implementing the solution proposed by students in the company? (open-ended question)*
B. *Do you have any suggestions, recommendations, or additional remarks you would like to raise?*

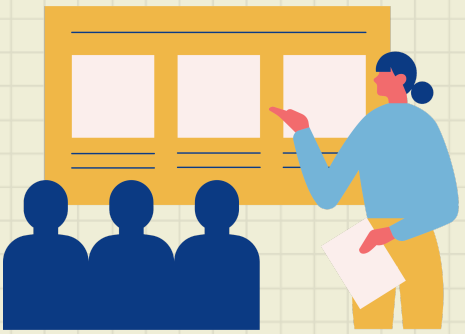
Final question. Keep engaging with SEED

How likely are you to propose other challenges to students using the SEED platform? Please indicate the likelihood on a scale from 1 (not likely at all) to 5 (extremely likely).

- Not likely at all
- Unlikely
- Somewhat likely
- Likely
- Extremely likely

Erasmus+ SEED PILOT PROJECT RESULTS

CHALLENGE ID CARDS



COMPANY CHALLENGES IN A NUTSHELL

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

GIVE METAL A SECOND CHANCE

Name of the company: **Metalmont srl**

Description of the challenge:

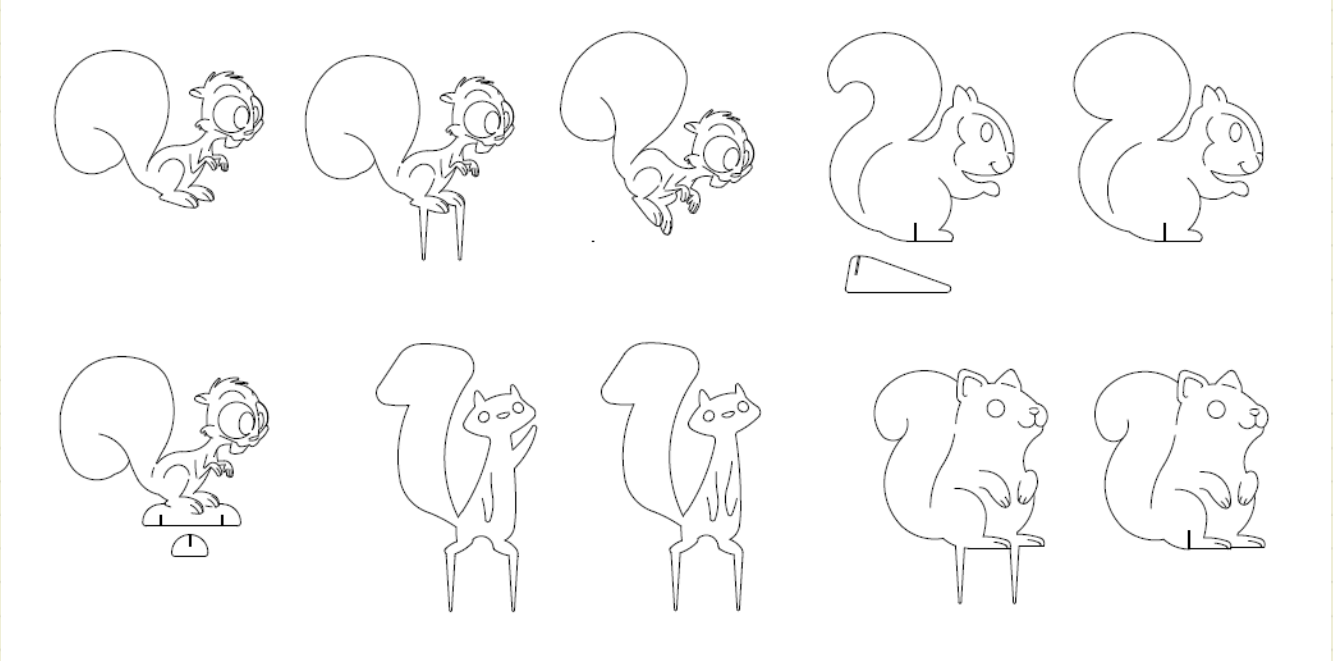
Metalmont is a renowned company that specializes in designing, manufacturing, and marketing machines and solutions for handling and cleaning cereals in storage plants, silos, and flat warehouses, both in Italy and abroad. However, during the metalworking process, there is inevitably some scrap leftover that is typically discarded. Recognizing the potential value in these scrap metal pieces, Metalmont is actively seeking innovative ideas for reusing or recycling them to create beautiful every-day-use objects with a strong sensory value, and with an attractive design, proposed in an original way. Their goal is to reduce waste and improve environmental impact by finding creative ways to repurpose the scrap metal, and to tap into the market demand for unique and sustainable metal objects. By exploring new avenues for product development and embracing e-commerce, Metalmont aims to expand its business and diversify its offerings. It is deeply committed to advancing the principles of a circular economy, where resources are utilized efficiently, and waste is minimized.

- **Number of mentors:** 1
- **Mentors' corporate position:** marketing
- **School(s) involved:** 2
- **Number of participants:** 12
- **Profile of the participants:** 6 students, 5 teachers/tutors, 1 company mentor
- **Number of tutors:** 5
- **Tutors' teaching area:** 2 TIC, 1 electrotechnics, 2 economics.
- **Duration of the activity:** 6 months
- **Time devoted to the challenge (approximate hours):**
  - Students: 100
  - Tutors: 100
  - Mentors: 100
- **Methodologies used in the different phases:**
  - Empathise: brainwriting
  - Ideate: 1x1x1
  - Implement: sketching

Presentation on the final idea/service/product:

Through the implementation of the SEED Toolkit, participants in the project utilized their creativity and problem-solving skills to develop a unique product: a decorative squirrel made from waste metal. This charming sculpture is designed to enhance gardens or serve as an eye-catching ornament for the front of houses. The process began with brainstorming and ideation sessions, where students collaborated to generate the concept for the squirrel sculpture. They then proceeded to create a detailed sketch, outlining the necessary cuts and assembly steps to bring the design to life.

In addition to the design and production aspects, the project also involved the development of a comprehensive business and marketing plan. Recognizing the potential market for their innovative product, students utilized the e-commerce channels to promote and sell the squirrel sculptures. They delved into the realm of online entrepreneurship, considering factors such as pricing, target audience identification, marketing strategies, and logistics.



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

MANAGING HUMAN RESOURCE ATTENDANCE

Name of the company: **Integro srl**

Description of the challenge:

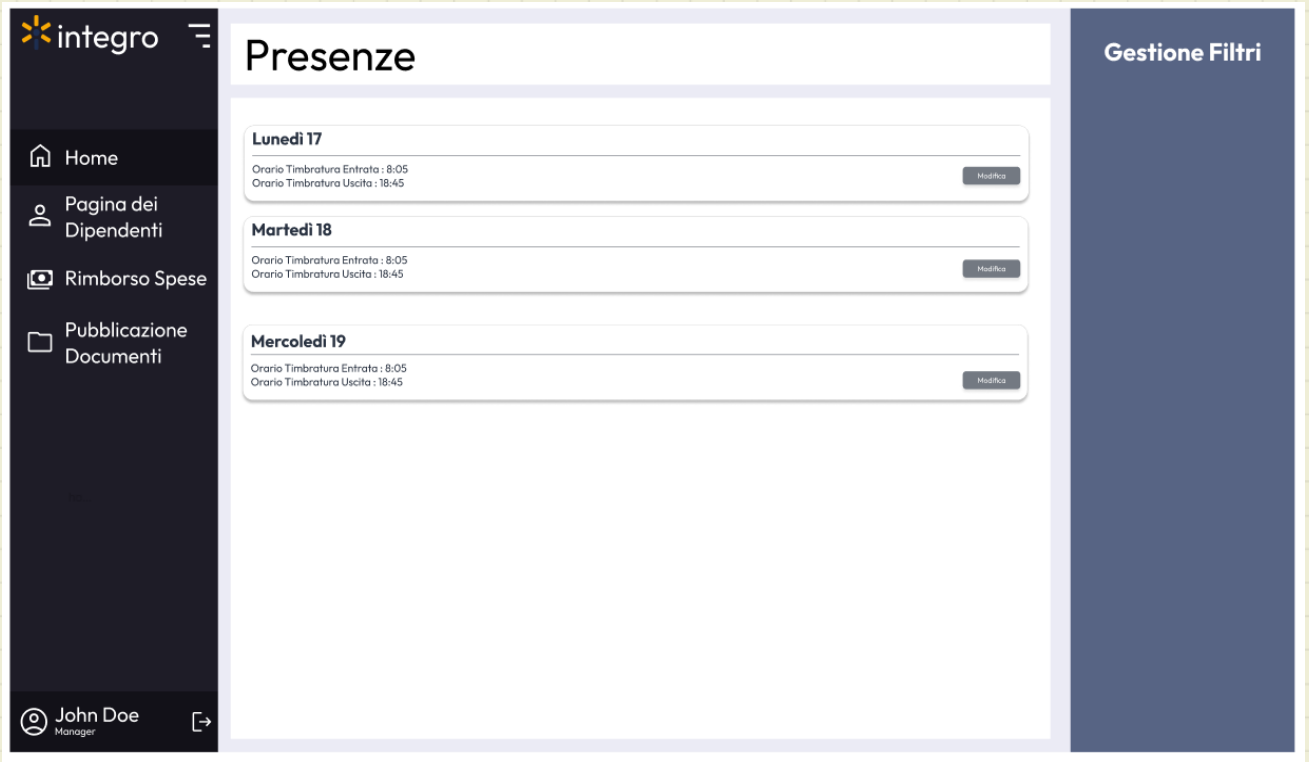
Integro Srl is an ICT company specializing in ERP software development, project management, and digital solutions. With a focus on improving production and organizational processes, Integro aims to create a conducive environment for the successful implementation of development projects.
Currently, Integro is seeking a comprehensive solution - a combined desktop and app-based system for managing employee attendance, clock-ins and travel reimbursements. The goal of this challenge is to develop an integrated system that effectively addresses these requirements. The system should support seamless collaboration and information sharing between employees and departments, promoting efficiency and transparency within the organization.

- **Number of mentors:** 2
- **Mentors' corporate position:** project manager, software developer
- **School(s) involved:** 1
- **Number of participants:** 10
- **Profile of the participants:** 6 students, 2 teachers, 2 company mentors
- **Number of tutors:** 2
- **Tutors' teaching area:** 2 TIC
- **Duration of the activity:** 6 months
- **Time devoted to the challenge (approximate hours):**
  - Students: 100
  - Tutors: 50
  - Mentors: 60
- **Methodologies used in the different phases:**
  - Empathise: brainwriting
  - Ideate: 4x4x4
  - Implement: sketching

Presentation on the final idea/service/product:

During the challenge, the participants developed the "PIPLO" app, an innovative solution to efficiently manage human resources attendance within the company. With PIPLO, the company gains a comprehensive platform to track and monitor employee attendance, handle holiday requests, manage time permits, and streamline expense justifications, all within a single app.

For the company, PIPLO provides a centralized system that compiles and summarizes attendance data for each employee. With this valuable overview, the company gains insights into attendance patterns, leave balances, and overall workforce availability. This enables efficient resource planning and aids in identifying any attendance-related issues or trends that require attention.



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PANINI ORDER MANAGEMENT APP

Name of the company: **Dolciaria Artigianale Testi C. & Figli Snc**

Description of the challenge:

Dolciaria Artigianale Testi specializes in providing foodstuffs for various occasions such as ceremonies, refreshments, and schools. Our challenge is to enhance customer convenience by developing an app exclusively for registered students. Through this app, students can easily access and browse our menu, select their preferred sandwiches for the upcoming days, and specify delivery locations and class details. Meanwhile, our team could efficiently prepare the orders, organize them by class, and pack them for seamless delivery.
Furthermore, we aim to streamline the payment process by implementing automatic payment management in the app. Our ultimate goal is to provide a user-friendly platform that optimizes the ordering process, simplifies delivery logistics, and facilitates secure and efficient payments.

- **Number of mentors:** 1
- **Mentors' corporate position:** sales manager
- **School(s) involved:** 1
- **Number of participants:** 7
- **Profile of the participants:** 5 students, 1 teachers/tutors, 1 company mentor
- **Number of tutors:** 1
- **Tutors' teaching area:** 1 TIC
- **Duration of the activity:** 6 months
- **Time devoted to the challenge (approximate hours):**
  - Students: 90
  - Tutors: 45
  - Mentors: 60
- **Methodologies used in the different phases:**
  - Empathise: brainwriting
  - Ideate: 1x1x1, Dot Voting
  - Implement: sketching

Presentation on the final idea/service/product:

Utilizing innovative techniques such as brainwriting, 1x1x1, Dot Voting, and sketching, the participants successfully devised a new app called "Paninapp." This user-friendly application empowers registered students to conveniently place their daily sandwich orders from an extensive and detailed menu. The app intelligently speeds up the ordering process, starting from the previous orders, allowing students to make their choices swiftly and effortlessly. However, at present, the app does not incorporate a payment management system.

On the operational side, the company efficiently collects and organizes the orders by class, thanks to the app's functionality. The program serves as a valuable tool for tracking and managing the preparation status of each order, ensuring timely and accurate delivery.

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

ENCOURAGING YOUNG PEOPLE TO GET INVOLVED IN THE ACTIVITIES OF TOURISM ASSOCIATIONS

Name of the company: **Rajzefiber**

Description of the challenge:

Rajzefiber develops projects at the intersection of culture and tourism. Recognizing the importance of presenting both tangible and intangible heritage in innovative ways, Rajzefiber strives to create engaging and accessible approaches to raising awareness about heritage, extending support to local and international actors in the creative tourism sector, assisting them in realizing their ideas.

Rajzefiber aims to empower tourist associations in Slovenia, collaborating closely with the Tourist Association of Slovenia. Therefore the organization proposes the digitization of processes and increased involvement of young people in tourism associations. In Slovenia alone, there are over 500 tourist associations dedicated to preserving local traditions, but young people show limited interest in actively participating in them.
The challenge at hand is to inspire and motivate young people to become more engaged in their local communities through tourism associations, as Rajzefiber recognizes the immense potential that young individuals possess in driving tourism initiatives and desires to create an environment that encourages their active involvement.

- **Number of mentors:** 2
- **Mentors' corporate position:** association vice president, marketing assistance specialist
- **School(s) involved:** 1
- **Number of participants:** 6
- **Profile of the participants:** high school students
- **Number of tutors:** 2
- **Tutors' teaching area:** entrepreneurship
- **Duration of the activity:** 3 months
- **Time devoted to the challenge (approximate hours):**
  Students: 23
  Tutors: 35
  Mentors: 48
- **Methodologies used in the different phases:**
  Empathise: interview the representative of the company, gather data and facts
  Ideate: brainwriting, 6 thinking hats, voting
  Implement: 6 thinking hats, prepare a pitch

Presentation on the final idea/service/product:

To engage and motivate young people to become more involved in local tourism associations, a SEED day was organized. During this event, the concept and activities of creative tourism were introduced to the students, providing them with insights into its potential. An exemplary case of successful event utilization at the Pekarna hostel was presented to showcase the positive impact of such initiatives. Additionally, a round table discussion was conducted in collaboration with Rajzefiber, where valuable information and advice were shared. The objective of these activities was to inspire and encourage young individuals to actively participate in local tourism associations. To gather more insights, a survey was conducted among the students to understand their current involvement in the operation of tourist activities in the local area. Based on the research findings, several key conclusions were drawn:

- Tourist associations should hold an open day during which the associations would be presented students.
- Young people would get involved in tourist associations if they were paid for their work.
- By organizing interesting events, tourist associations would also convince young people to join.
- Tourist associations should be more active on social networks.

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

LAUNDRY AUTOMATION

Name of the company: **Henkel Group – Henkel Slovenija**

Description of the challenge:

Henkel, a leading manufacturer of various products including hair care, laundry detergents, fabric softeners, and adhesives, is currently facing challenges in its packaging washing process. The company currently relies on a manual handwork method for washing the packaging used in its production processes. This manual approach involves several workers who work in shifts to clean packaging of different sizes and shapes. However, this system has proven to be outdated, inefficient, and not aligned with the company's goals.

The challenge at hand is to find a better alternative that addresses multiple aspects, including improving working conditions for employees, minimizing environmental impact, enhancing overall efficiency, and minimizing additional costs. Henkel recognizes the importance of finding a solution that aligns with its objectives and values.

- **Number of mentors:** 2
- **Mentors' corporate position:** technologist
- **School(s) involved:** 1
- **Number of participants:** 4
- **Profile of the participants:** high scool students
- **Number of tutors:** 2
- **Tutors' teaching area:** entrepreneurship, accounting
- **Duration of the activity:** 4 months
- **Time devoted to the challenge (approximate hours):**
  - Students: 20,5
  - Tutors: 20,5
  - Mentors: 10
- **Methodologies used in the different phases:**
  - Empathise: interview the representative of the company, gather data and facts
  - Ideate: brainwriting, 6 thinking hats, voting
  - Implement: 6 thinking hats, prepared a pitch

Presentation on the final idea/service/product:

During the challenge, participants conducted an analysis on the introduction of an automatic laundry system, which would represent a significant step for Henkel towards sustainable development and cost reduction. The study highlighted that an automated laundry brings numerous advantages and opportunities while posing minimal risks and disadvantages.

Advantages:

- lower labour costs
- less hard work for employees
- environmental protection
- greater safety and health in the workplace
- automation

Opportunities:

- subsidies
- partnership cooperation

Weaknesses:

- investment costs
- stoppage of production in case of failure
- training of employees

Disadvantages:

- difficulties in obtaining documentation

By carefully assessing the advantages, opportunities, weaknesses, and potential disadvantages, Henkel can make informed decisions regarding the introduction of an automatic laundry system. By embracing automation and sustainable practices, the company can achieve cost reductions, enhance operational efficiency, and continue its commitment to environmental responsibility.

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

CABLEWORLD EXPANSION

Name of the company: **Cableworld**

Description of the challenge:

Cableworld is one of the leading telecommunications companies in the provinces of Alicante and Murcia. It has been operating in these areas since 1988, commercializing fiber optic, Wimax, TV and mobile lines.

The communications sector has become an indispensable service in people's lives, our intention is to offer a quality service, with a competitive and affordable price for most households. Always taking care of the values of the company and excellence in customer service. The company intends to continue expanding its fiber optic network in different cities.

To meet the growing demand for connectivity, Cableworld has plans for expanding its fiber optic network and establish new offices in the city of Alicante. This endeavor involves conducting a comprehensive study of the local population, logistics, and identifying potential customers as well as marketing study to understand the target market and develop effective strategies to reach potential customers.

- **Number of mentors:** 2
- **Mentors' corporate position:** Human resources and Training department managers
- **School(s) involved:** 2
- **Number of participants:** 4
- **Profile of the participants:** Marketing and Administration and Finance students
- **Number of tutors:** 2
- **Tutors' teaching area:** Marketing and Administration and Finance
- **Duration of the activity:** November 2022 – April 2023
- **Time devoted to the challenge (approximate hours):**
  - Students: 80
  - Tutors: 10
  - Mentors: 20
- **Methodologies used in the different phases:**
  - Empathise: Business model outline, interview company representatives, create user profile
  - Ideate: Moodboard, PNI, 1x1x1
  - Implement: Lotus flower, user flow diagram, wireframes, brief prototype guide

Presentation on the final idea/service/product:

During the challenge, participants conducted a study focused on the potential opening of a physical store in San Juan Beach. The study identified several key elements that highlight the benefits and opportunities associated with this initiative:

- New area: Opportunity to grow in a new environment and generate with them more customers. New work environment. Tourist points.
- Human relationship: close relationship with the customer. Personal language.
- Advice: Personal and face-to-face advice. Advise our customers towards a better future.
- Jobs: Encouraging the growth of employment in the area, promoting innovation, qualification and business development.
- Customer service: Create closeness with our customers, friendliness, cordial treatment, etc..
- New opportunities and possibilities: Opportunity to increase the client portfolio and the possibility of geographically expanding the number of company offices.

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

TIKTOK CONTENT PLANNER FOR INTERMEDIAKT

Name of the company: **InterMediaKT**

Description of the challenge:

As an NGO, InterMediaKT feels the need to promote its activities through social media channels so that it reaches more people, especially the youth. That is why its presence in the most popular media channels is of great importance. However, with rapidly changing trends among youth, InterMediaKT is facing difficulties following all the trends and therefore would like to ask the youth, aka social media trend experts, for their help.

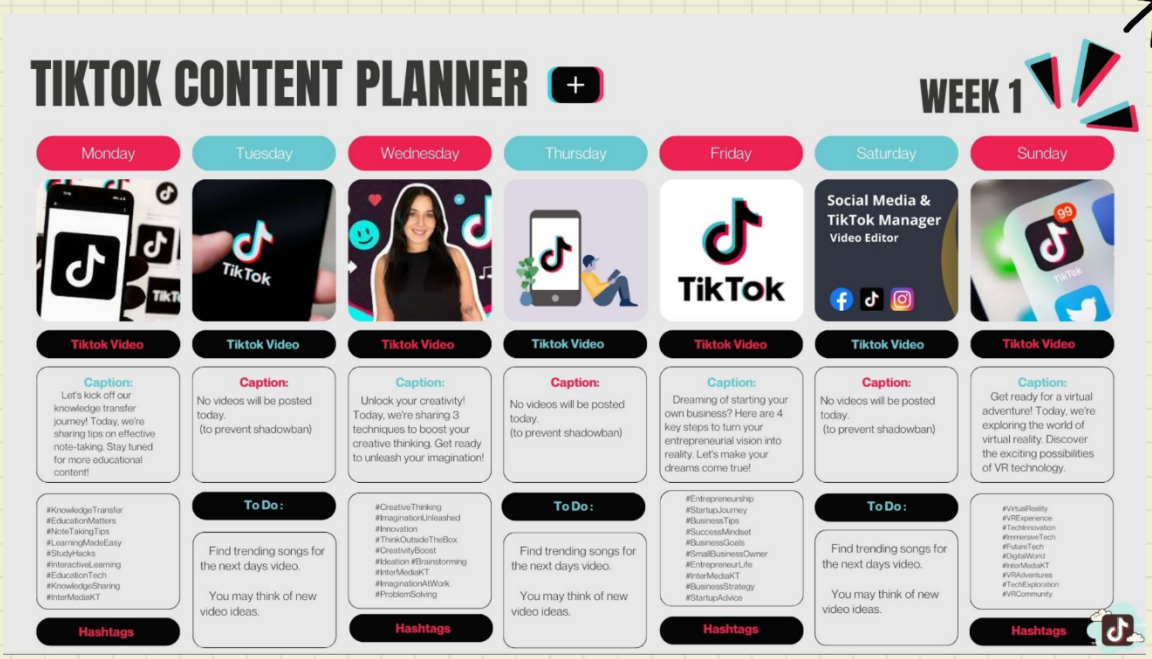
By the end of the challenge, InterMediaKT aims to get inspiration and creative ideas from the youth to create a digital content planner with example videos so that our channel reaches more people and therefore has a bigger impact on youth work and volunteerism.

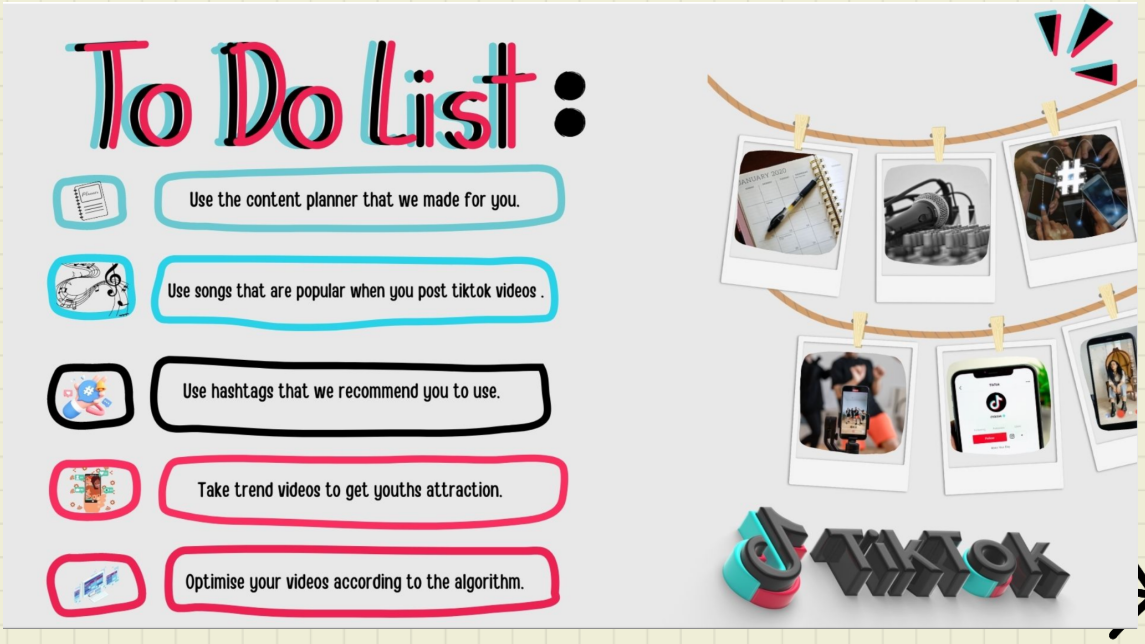
- **Number of mentors:** 1
- **Mentors' corporate position:** Education & Youth Assisstant
- **School(s) involved:** 1
- **Number of participants:** 41
- **Profile of the participants:** 38 students, 2 teachers/tutors, 1 company mentor
- **Number of tutors:** 2
- **Tutors' teaching area:** English as a Foreign Language
- **Duration of the activity:** 2 weeks
- **Time devoted to the challenge (approximate hours):**
  - Students: 8 - 10
  - Tutors: 5
  - Mentors: 5
- **Methodologies used in the different phases:**
  - Empathise: PNI, Business Model Canvas
  - Ideate: 4X4X4
  - Implement: 6 thinking hats

Presentation on the final idea/service/product:

Through the challenge of the SEED project, participants started their investigation of InterMediaKT's TikTok page. In order to increase its impact, they were tasked to create a content planner for InterMediaKT's communication team to use. With the help of creativity-based methods they identified the problem, determined the target group, did market research to see what the needs and interests are, did research to see what kind of solutions there are, and finally based on their findings, worked in groups to create a content planner that might be utilised by the company.

In order to increase the impact, participants also searched for useful tips and tricks to improve the situation. Here are some of the examples:





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ATTACHMENT I.

The Work-Based Learning across Italy, Slovenia, Spain and Greece

may 2023

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Attachment I. The Work-Based Learning across Italy, Slovenia, Spain

1. Context: Work-based Learning Across Countries

Work based learning (WBL) entails learning by working in a real work environment in order to develop technical, academic, and employability skills. WBL is an integral part of the education system in many industrialized countries. The COVID-19 pandemic has significantly disrupted and created challenges to work-based learning (WBL) activities, especially in contexts where these activities need to happen in person. As a result, many internships and WBL activities in real-work environments have been suspended. The framework of WBL across countries thus needs to integrate digital tools to ensure the continuity of distance learning. In this section, we present how WBL works in four countries who are part of the 'School Enterprise Experiences Go Digital' (SEED) project: Italy, Slovenia, Spain, and Greece. We then present a methodology for company mentors, students, and teachers to perform WBL activities in these countries using digital tools and digital-enabled activities. This toolkit is targeted at teachers, tutors, and mentors involved in dual education experiences. It is particularly well suited for dual WBL activities based on creativity-based methods. **Although the toolkit has been designed to fit a fully online digital WBL environment, the activities in this toolkit can also be fully carried out in person as well as by using a mix of digital and in-person activities.** The document starts by integrating the results of a research performed in four countries about different national WBL systems.

1.1 Italy

1.1.1 General information about work-based learning in Italy

In the Italian education system, work-based learning (WBL) is called "*Percorsi per le competenze trasversali e per l'orientamento*", P.C.T.O. ("pathways for transversal skills and career guidance") as stated in the Budget Law 2019, Art.57, paragraph 18[1]. It is regulated by the Italian Law 107 / 2015 (also known as "*La Buona Scuola*"), Reform of the national education and training system. WBL is compulsory in any High-school (ISCED 3) and involves students of the last 3 years of high-school – typically from 15 to 18 years old. The length of WBL ranges from 90 hours to 210 hours, depending on the type of school. WBL activities can take place within the school year timetable or during periods of suspension of teaching activities, depending on each school's or student's personalized educational project. During WBL activities, individuals retain their status as students, the school is responsible for the program and the experience is presented as a teaching method and does not constitute an employment relationship between the host organization and the student(s) involved. Schools typically take care of finding host organizations for their students. There is the possibility for schools to draw on European Social Fund resources for work-based learning, which are allocated on a project basis. Typically, WBL is based on teaching methods including problem solving, learning by doing, action-oriented learning, cooperative learning, and role-playing activities. The guidelines for WBL in Italy place emphasis on using *active learning methods* including project work, role-playing,

[1] For more information please visit:
https://www.miur.gov.it/-/linee-guida-dei-percorsi-per-le-competenze-trasversali-e-per-l-orientamento
https://www.miur.gov.it/documents/20182/1306025/Linee+guida+PCTO+con+allegati.pdf/3e6b5514-c5e4-71de-8103-30250f17134a?version=1.0&t=1570548388496

etc[2]. In the Italian national system, work-based learning is a teaching method: it is carried out under the responsibility of the school or training institution, the placement in the company does not constitute a work relationship, the skills learnt in the operational contexts complement those of the school to achieve the educational, cultural and professional profile of the course of study. The evaluation of students' WBL activities is linked to the school's evaluation and contributes to school credits. The assessment of WBL-related competences contributes to the final mark for the subjects involved in the work experience and to the mark for "student's behavior." The documents needed to setup and complete WBL activities in Italy include:

- Presentation
- Application form
- School/company agreement
- Risk assessment
- Student evaluation
- Experience evaluation
- Skills certification

1.1.2 Information related to students who can participate in WBL in Italy

Students get access to WBL activities through their high school institution. To get access to WBL, students receive an application form and a training agreement. Students' rights and duties for work-based experiences are regulated by the Charter of Rights and Duties of students in work-based programs, a regulation that includes 7 articles. Students should be welcomed in an appropriate and safe training environment that fosters personal growth and is consistent with their course of study. At the end of the experience, students are entitled to express an assessment of the effectiveness and consistency of the experience.

They must be supported by mentors from the host company in relation to the risk of the activities carried out throughout the experience. The students/mentor ratio is 5/1 for high-risk activities, 8/1 for medium risk activities, and 12/1 for low-risk activities. In return, students are required to a) attend at least 3/4 of the hours scheduled for WBL activities (75%), b) comply with the rules of hygiene, health, and safety at the workplace, and c) maintain confidentiality regarding data, information, and knowledge of the hosting organization. Students have insurance against accidents. The school provides insurance to the beneficiary of the work experience against accidents at work, as well as against civil liability with insurance companies operating in the sector. Furthermore, students must be guaranteed adequate general training by the school or training institution on health and safety at work and, where necessary, on health monitoring. Risk assessment for the work-based activity is mandatory. A dedicated committee monitors compliance with the rules at each school's office. At the end of the experience, students complete a final assessment of the effectiveness and coherence of the WBL activities.

1.1.3 Information related to schools that offer WBL activities in Italy

High schools that offer WBL activities can participate in Technical/vocational clusters, which are an organizational way of sharing public and private resources available at local level. They include at least two technical and/or vocational schools, two enterprises, a Higher Technical Institute, and a vocational training organization. A school can set up a Scientific Technical Committee to act as a link between the school's educational objectives, innovations and needs of the local area. The Scientific

Technical Committee plays a fundamental role in connecting the school and its external environment. It helps improve the organizational dimension of schools, linking the school's autonomy to the broader system of territorial autonomies and to the school's capacity to self-organize and innovate. Work-based programs take place on the basis of specific agreements, activated with a range of stakeholders. A list of agreements in force in Italy can be found at the following link: https://www.istruzione.it/alternanza/accordi.html

The agreement between the school and the host organization must include the conditions under which the training course will be carried out, particularly:

a. details of the school and the host structure
b. nature of the activities that the student will carry out during the period of the work experience in the host structure, consistent with the objectives of the training project shared between the latter and the school and with the learning outcomes provided by the educational profile of the course of study
c. identification of the students involved in the alternance activity by number and type of course of study
d. duration of the individual training program
e. identification of the contact persons involved both in the co-planning and in the implementation of the work experience activities
f. information and training on health and safety at work
g. any economic resources committed for the implementation of the work experience project
h. facilities and know-how made available by the host structure
i. obligations and responsibilities of the educational institution and the host structure
j. how the student's assessment of the effectiveness and consistency of the work experience with his or her course of study is to be acquired
k. criteria and indicators for monitoring the project

Internal tutors (teachers) within schools are appointed by the school among those who apply to do so and have documented and certifiable qualifications. School tutors have specific tasks, including:

- Creating the personalized training program to be signed by the parties involved (school, host structure, student/parental guardians), together with the external mentors
- Assisting and guiding students during the work experience and checking, in collaboration with the external mentor, that the activity is carried out correctly
- Managing relationships with the context in which the work experience takes place, in collaboration with the external mentor
- Monitoring the activities and dealing with any criticalities that may emerge from them
- Evaluating, communicating and enhancing the objectives achieved and the skills progressively developed by the student
- Promoting evaluation activities on the effectiveness and consistency of the work experience program by the student
- Informing the relevant school bodies (Headmaster, Departments, Board of Teachers, Technical and Scientific Committee) and updating the Class Council on the progress of the programs
- Assisting the headmaster in drawing up the evaluation sheet on the structures with which agreements have been stipulated for work experience activities, highlighting their training potential and any difficulties encountered during the collaboration.

Schools themselves can sometimes serve as host institutions. Schools can market goods or services produced during their educational activities; some do so occasionally, others on a more permanent and recurrent basis, and all reinvest their profits for educational purposes. A number of institutions have set up instrumental training enterprises to enable their students to train through work experience organized within the school itself. Examples are the agricultural companies attached to technical and professional agricultural institutes or the educational restaurants set up by some hotel management institutes. The educational enterprise works like a real company, with its own balance sheet and its own accounting and stock records, etc. In this case, students learn through real work experience in a company that sells its products in accordance with the law and reinvests the profits in the business activity, with educational purposes.

1.1.4 Information related to companies that offer WBL activities in Italy

The national online register of companies available for work-based programs is held by the Chambers of Commerce, Industry, Crafts and Agriculture (CCIAA). It includes two sections: a) an open list of all public and private bodies available to host students for work-based experiences (the register indicates the maximum number of eligible students and the periods of the year in which experiences can be carried out); b) identification elements related to the activity carried out in the companies. The school's headmaster, using the national register, can identify companies and public or private bodies with which to enter into agreements for work-based experiences.

Host companies must have:

1) Structural capacity – that is, adequate space to allow the exercise of the activities envisaged in the work experience and, in the case of students with disabilities, the overcoming or removal of any architectural barriers
2) Technological capacity - i.e., the availability of equipment suitable for carrying out the activities envisaged in the agreement, which complies with the regulations in force on technical inspection and testing, such as to guarantee, for each student, adequate and direct experience of the work process in safe conditions
3) Organizational skills – that is, they should offer adequate professional competences for the realization of the activities; to this end, the presence of a mentor appointed by the host structure, also external to it, to support the work experience activities, with professional competences and training support, must be guaranteed, at the expense of the host subject

Mentors (tutors) within host organizations are selected by the host structure and serve as the student's reference figure within the company or organization. Those external mentors:

- Collaborate with the internal tutor in the planning, organization and evaluation of the work experience
- Promote the student's integration into the working environment and support and assists him/her during the work experience
- Ensure that the student is informed/trained on the specific risks of the company, in accordance with internal procedures
- Plan and organise the activities based on the training project, also coordinating with other professional figures in the host structure
- Involve the student in the process of evaluating the experience; - provides the educational institution with the agreed elements for evaluating the student's activities and the effectiveness of the training process

Internal (school) tutor and external (host) tutors interact to:

- Define organizational and didactic conditions favorable to learning both in terms of orientation and competences
- Guarantee the monitoring of the progress throughout the program, to set up proper actions if need
- Check the process of certification of the activity carried out and of the competences acquired by the student
- Collect and assess elements that allow the reproducibility of the experiences and their capitalization

The Ministry of Education, Universities and Research (MUR) has signed a memorandum of understanding with the National Agency for Active Employment Policies to provide schools with ANPAL tutors who are experts in the labor market and who can support the school contact persons for the work-based experiences, the school tutors and school managers. ANPAL tutors, thanks to their knowledge of the territory and the local productive world, support matching between supply and demand by creating opportunities for schools and host structures to get to know each other and to meet and facilitate communication between the two parties.

1.1.5 Digital WBL activities in Italy

The Italian context offers examples of digital tools and activities that can be used to carry out WBL activities without physically working in a company. For example, simulated training enterprises are virtual companies run by the students that carry out a market activity on the Internet (e-commerce) and refer to a real company (tutor or sponsor company) which is the reference model to be emulated in each phase or cycle of the company's life. The teaching methodology uses problem solving, learning by doing, cooperative learning and role playing and constitutes a valid tool for the acquisition of skills that can be used in the labour market. Students, with the simulated training enterprise, act as real young entrepreneurs and acquire the spirit of initiative and entrepreneurship with the basic cognitive tools in the economic and financial field. This is an experience that can be useful in all fields of study, if it is considered as a tool for guiding the choices of students who, even after a university course, aspire to be part of a company. The simulated enterprise can use IT Platforms in order to set up networks capable of supporting the training courses for students in the schools that are part of it. The system enables the creation of virtual networked companies that simulate all the actions linked to the specific areas of any business activity. Other examples of tools and Platforms for digital WBL activities include “educazione digitale,” “Impres@ Digitale 2.0 (Cisco),” and https://www.netacad.com/.

1.2 Slovenia

1.2.1 General information about work-based learning in Slovenia

In the Slovenian education system, work-based learning (WBL) is called “usposabljanje z delom (PUD)” in vocational upper secondary programs and “praktično izobraževanje (PRI)” in higher vocational schools. It includes programs of vocational upper secondary education (3 years, ISCED 3C) and higher vocational education (2 years, ISCED 5B), in which an important part of the educational programs take place within companies as work-based learning. It is regulated by the Zakon o poklicnem in strokovnem izobraževanju (ZPSI-1) (Vocational and Professional Education Act). Furthermore, the Center of the Republic of Slovenia for Vocational Education and Training or CPI was

established in 1995 as the central Slovenian institution for development, research and consulting in the field of vocational and professional education. WBL is a compulsory part of the educational program and must be successfully completed by all students within a certain field of the educational program to successfully complete the education. As part of students' curricula, it must be conducted during the school year. Students who participate in WBL in Slovenia are in their second year of higher education and are approximately 16 years old or older.

The duration of WBL activities depends on the type of school and educational path:

- For short vocational upper secondary education (2 years), 35-40% of educational programs are intended for practical training, of which 4 weeks (152 hours) for work-based learning in companies.
- For vocational upper secondary education (3 years), 40% of educational program is intended for practical training, of which at least 24 weeks (3) (912 hours) and not more than 53 weeks for work-based learning in companies; all programs have a prescribed minimum length (24 weeks) of practical training in companies; students may also have an individual agreement with a company whereby the minimum length of practical training is extended, but in any case it must not exceed the limit (53 weeks).
- For technical upper secondary education (4 years), 15% of the educational program is intended for practical training, of which 4-8 weeks (152-304 hours) for work-based learning in companies.
- For vocational technical education (2 years, after vocational upper secondary program), 10% of the educational program is intended for practical training, of which 2 weeks (76 hours) for work-based learning in companies.
- In higher vocational schools (2 years), 40 % of educational programs are intended for work-based learning in companies (20 weeks).

WBL activities contribute significantly to the final grade. These activities are compulsory, and one cannot finish vocational secondary school without finishing WBL. The methods used for WBL depend on the educational institution and the type of the company where students are conducting WBL. The most used methodologies are learning by doing, role playing, and problem solving.

The documents needed to setup and complete WBL activities in Slovenia include:

- For companies: Application for verification of conditions for conducting WBL
- For students: Individual learning contract, risk assessment consent, midterm exam, final exam, Work report
- For schools: Collective learning contract, Referral for the performance of PUD, Certificate of written, testing of knowledge in occupational safety, Record of attendance at WBL, Evaluation form on the success of the student at WBL, Survey questionnaire for mentors

1.2.2 Information related to students who can participate in WBL in Slovenia

Students' rights and duties for work-based experiences are regulated through a Student Guide, which is intended for students to be able to take greater responsibility for their own education and training. Students can find potential employers in their home environment. Priority is given to the ones listed in the WBL guide, but students can also contact other employers that are not on the list, as long as the host organization's business is consistent with the activity or profession for which the student is training. If the school finds that it has not yet advertised or verified teaching places, it is encouraged from the school to ensure the appropriate conditions for the implementation of the WBL.

The learning agreement can be:

a) An individual learning contract, if entered into by the employer and the student (also signed by the student's parents or legal representative if the student is a minor)
b) A collective learning agreement if concluded by the school and the employer for one or more students.

Prior to starting WBL, students must also certify their medical fitness for work-based learning. In these regards, the Labor Inspectorate is of the opinion that a medical examination is sufficient in terms of the ability to perform the profession for which the student is trained, or a medical examination performed by these persons within their preventive health care (systematic medical examination in the 1st and last year of education).

The minimum number of weeks or hours of WBL is determined by the educational program. To advance to a higher year or to complete the education according to the program, students must complete the entire number of hours. Students take an intermediate test in the 2nd year during the practical training with work, as well as a final examination. When a student passes the final exam or the contractual relationship expires, the employer no longer has contractual obligations to the student. After completing WBL activities, the student must submit a work report in writing or electronically (by e-mail) to the organizer at the school for review and as proof of the obligation and to form a grade from the WBL. At the end, the students at the school will fill out a survey questionnaire in which they evaluate their experiences with the WBL. As feedback, the teaching staff and mentors in companies will be informed about the joint results of the questionnaire.

1.2.3 Information related to schools that offer WBL activities in Slovenia

The internal body within schools dedicated to WBL includes the WBL organizer and designated internal mentors for WBL. Internal (school) tutors cooperate with school and host companies to help students successfully complete WBL. In order to carry out WBL, employers must conclude a training contract. They can conclude it directly with the student (individual learning agreement) or with the school (collective learning agreement). The learning contract is a legally valid proof in the case of an inspection. Without a learning contract, practical training with work is not possible. The task of an internal tutor includes connection and cooperation with school and companies and to provide help to students with successful completion of WBL in companies. At the systemic level, there is an agreement that the school can advertise only as many enrollment places as it has guaranteed study places with employers for implementation of WBL.

The WBL internal tutor is responsible for providing a place of employment for each student, as well as for coordinating the implementation of the part of the educational program which falls under the responsibility of the partner employers. Schools can also serve as work-based learning environments themselves. For example, the learning company is a learning space and at the same time a learning method, where students mainly use the acquired theoretical knowledge (economic subjects, languages, computer science, law, administrative or secretarial business…). The work takes place in the secretariat, finance and accounting department, human resources and marketing. Students research the market, compile offers, conclude sales contracts, sell their products, control delivery times, issue payment orders, calculate costs, compile annual accounts, take care of social insurance… All tasks are performed independently, of course under the mentorship of professors. It is very important that students also acquire increasingly valued professional qualities: reliability at work, protection of business data, orderliness of the workplace, work discipline, monitoring of innovations, continuous additional education, to learn problem solving and teamwork, to know

written and oral communication with clients and co-workers. The Slovenian headquarters of learning companies in Celje enables the creation of the most real environment possible and offers learning services to learning companies, such as e.g. registration of learning companies, bank, tax office, employment and insurance service, customs service, foreign trade service and connection with the international market of learning companies. This method is used in high school of economics.

1.2.4 Information related to companies that offer WBL activities in Slovenia

Companies willing to host students for work-based programmes are listed on the Central Register of business entities that have been verified by the Slovenian Chamber of Commerce (GZS), Chamber of Craft and Entrepreneurship of Slovenia (OZS) and the Chamber of Trade of Slovenia (TZS) for practical training through work and apprenticeships. The register combines the data of the proceedings, and its maintenance is taken care of by the Center of the Republic of Slovenia for Vocational Education and Training (CPI). Host organizations must have adequate work premises and equipment, and the future mentor must have the education to perform the profession for which the student is being educated. This means that companies' business must include the activity of the profession for which the student is studying, have adequate working spaces and equipment, and be able to provide a mentor or educator that has the same education for performing the profession as the one for which the student is being educated. External mentors in practical training within companies must hold a master's, foreman's, or manager's exam or at least a secondary professional education in the relevant field and pedagogical-andragogical qualification. They must also have a pedagogical-andragogical education or at least a certificate from the education provider on pedagogical-andragogical competence. The employer must also ensure the technical equipment of the training place and the minimum conditions necessary to achieve a satisfactory quality of services and the realization of the objectives of WBL in full and in accordance with the requirements of the educational program. The competent chambers are in charge of the verification of study places after a formal application and at the request of an individual employer. The responsible chamber checks the staff conditions of the mentor and, by prior agreement with the employer, sends an expert commission to the company. After checking the conditions, the company is verified and enlisted in the register of WBL, which is a publicly accessible document. Employers receive a decision on the verification of the position and a representative certificate. If it is established that the employer where the student would like to conduct WBL cannot provide verified training places, the WBL organizer within the school encourages the employer to ensure appropriate conditions for the implementation of the WBL. More detailed staffing and material conditions for individual educational programs, which are checked by the verification commission of the competent chamber, are listed in a special collection of annexes to the Rules on Verification and Management of the Register of Learning companies.

In order to carry out WBL, employers must conclude a training contract. They can either conclude it directly with the student (individual learning agreement) or with the school (collective learning agreement). The learning contract is a legally valid proof in the case of an inspection. Without a learning contract, practical training with work is not possible.

Prior to the start of the WBL, the employer must also inform the student about the regulations on safety and health at work and the risk assessment at the workplace; the student and his / her legal representative sign a statement of consent. External (company) mentor in company will be required to report on students':

- Presence at work

- Attitude to work (diligence, self-initiative, responsibility, independence, accuracy, punctuality, consistency, activity)
- Quality and extent of career advancement,
- Attitude towards others (communication with superiors, colleagues, clients)

The employer must also register the student with the Health Insurance Institute of Slovenia and arrange for the payment of health insurance for the student if this is not paid by the school by prior agreement with the employer. Employers or mentors must pay a lot of attention to safety and health at work, as well as environmental protection and ecology. During the process itself, students must be properly guided, supervised and informed about the risk in each job. Employers must inform the student about the safety and protection of health at work before starting the practical training.

1.2.5 Digital WBL activities in Slovenia

Despite the COVID-19 pandemic has created significant challenges to WBL activities, during the lockdown period due to COVID, school-ruled enterprises in economics schools were able to do WBL activities online.

1.3 Spain

1.3.1 General information about work-based learning in Spain

In Spain, WBL is called “Ciclos formativos de Formación Profesional (FP)” (VET Cycles) with a specific module called “Formación en Centros de Trabajo (FCT)” (Training in the Workplace), or “Formación Profesional Dual (FPD)” (apprenticeships/dual VET). FCT is an internship programme, while FP/VET Dual is an apprenticeship programme.

The professional module of Workplace Training (FCT) has a formative, non-labor nature and does not entail a contractual relationship between the student and the company (collaboration agreement). In Dual FP or Dual VET there can be an apprenticeship contract (“contrato para la formación y el aprendizaje”) or a learning agreement (scholarship). This contract or learning agreement allows students to receive a remuneration (contract 100% MW/ scholarship 80% MW) and access to the Spanish Social Security System.

The VET system has three levels:

- Lower secondary basic VET (ISCED 353) programmes, which targets learners over 15 years of age
- Upper secondary intermediate VET (ISCED 354) programmes, which target learners aged 17-18;
- Higher VET (ISCED 554) programmes, which target learners aged 18-19.

WBL is regulated by the following laws at the national level:

- The VET system is governed by Act 5/2002 on qualifications and vocational education and training (LOCFP). This covers the training programmes included in initial and continuing VET, to enable skilling, upskilling and reskilling
- Law 2/2006, of May 3, on Education
- Royal Decree 1147/2011, of July 29, which establishes the general organization of professional training in the educational system
- Organic Law 8/2013, of December 9, Act for the improvement of educational quality

- Act 30/2015 regulates vocational training for employment; implementation of the new framework created is still under development
- Royal Decree 1529/2012, of November 8, which develops the contract for training and learning and establishes the bases of dual vocational training.

At the regional level, the regulation of the FCT module is developed by each educational Administration, and managed and organized by each educational center following the programming of the Professional Family department of the VET center and the instructions of the Ministry competent in education. The regulations of each Autonomous Community or of the Ministry of Education and Vocational Training can be found here. In the Valencian region, FCT, "Formación en Centros de Trabajo" (Training in the Workplace) is regulated by Order 77/2010 of August 27, 2010, while FP or VET DUAL is regulated by Decree 74/2013, of June 14, which regulates Dual Vocational Training of the educational system in the Valencian Community; Order 2/2014, of January 13, which regulates certain aspects of the organization of dual Vocational Training of the educational system in the Valencian Community; and Decree 47/2021, of March 26, modification of Decree 74/2013, of June 14.

In Spain, WBL is compulsory in VET schools while it is a choice of the students in other schools. There are educational centers that only provide Vocational Training ("Centros integrados de Formación Profesional", VET Integrated Centers). Students maintain their student status throughout their WBL experience and can take part in WBL activities during the holiday period with a prior authorization from educational inspection. However, internships are normally carried out during the school period in the established work center/s. Periods of school holidays are normally excluded except in exceptional situations, due to the specificity of the professional family or other motivations.

Both students and employers who participate in WBL activities have a series of regulated rights and obligations. The methods used for WBL in Spain are primarily aimed at learning by doing and depend on the objectives set in the training plan provided to the company.

The main organizations (both public and private) dedicated to WBL in Spain include:

- The General Council for the national employment system (Consejo General del Sistema Nacional de Empleo), which is the main consultative and participatory body for public authorities and social partners; for issues related to VET, it carries out its functions through the training for employment State commission (Comisión estatal de formación para el empleo)
- The sectoral conference on labour affairs (Conferencia Sectorial de Empleo y Asuntos Laborales), which is the general instrument for coordination and cooperation between the central Government and the regions in employment policy, and distributes available funds between the regions
- The State foundation for training in employment (Fundación Estatal para la Formación en el Empleo – Fundae), which is a public body comprising the State general administration, the regions and the most representative business and trade union organisations; this institution provides technical support to the State public employment service (SEPE), and to the labour ministry in the strategic development of the system of vocational training for employment in the work sphere
- Joint sectoral structures including the representative business and union organisations in each relevant sector, whose main task is to anticipate training needs and propose sectoral training based on their knowledge of the real productive environment

Each autonomous community has its own documentation needed to carry out WBL activities. There are also autonomous communities that have management programs, such as the Valencian Community SAÓ FCT[2], an online Administration System for Training in the Workplace.
In the Valencian community, the forms needed to carry out WBL include:

- School-company agreement
- Student-company agreement
- FCT professional module training program
- Curricular adaptations to the training program
- Student Weekly follow-up sheet
- Assessment report of the external instructor and specialized labor coach
- Acceptance of inclusion in the catalog of collaborating work centers
- Certificate of collaborating work center
- Internal tutor memorandum
- Report of FCT formative practices department
- Certificate of completion of FCT module

Documents needed to carry out FP DUAL activities include:

- Request for regional authorization of the FP Dual project
- Training program
- Renewal of the authorization of the FP Dual project
- Company responsible declaration
- Certificate from the company in the FP Dual project
- Instructor certificate in the FP Dual project
- Final annual report of the FP Dual tutor of the group
- Individualized report from the instructor
- Compliance of the students to take Dual FP and company agreement
- Certificate accrediting the training activities carried out in the companies by the students in Dual FP
- List of students that have completed the Training Cycle in Dual FP

1.3.2 Information related to students who can participate in WBL in Spain

Students take part in WBL at the age of 15. Access to the Basic Vocational Training cycles requires the simultaneous fulfillment of the following conditions:

- Being over 15 years of age, or meeting them during the current calendar year, and not exceeding 17 years of age at the time of access or during the current calendar year
- Having completed the first cycle of Compulsory Secondary Education or, exceptionally, having completed the second year of Compulsory Secondary Education
- The teaching team has proposed to the parents or legal guardians the incorporation of the student to a cycle of Basic Vocational Training

Access to a work-based experience also depends on the educational stage. To access basic training, students must have passed all technical subjects. Requirements are slightly different for middle or higher training.

[2] https://fct.edu.gva.es/index.php?&lang=en

The duration of the experience depends on the educational level – particularly whether it is Vocational Training Basic Level, Intermediate Level or Advanced Level – and ranges between 60 hours to 400 hours of work. The duration of this professional module is determined in the official curriculum of each training cycle.

Within the Vocational Training titles, two paths can be distinguished:

- In Basic Vocational Training Titles, the duration of the FCT module will generally represent a minimum of 12% of the total duration of the training cycle (i.e. 240 hours)
- In the Intermediate or Advanced Level Titles, the duration of the FCT will always be 400 hours, and activities take place in the first semester of the year of the second school year, generally between March and June.

In the Valencian community, the duration of training would be:

- 350 hours for VET Intermediate
- 400 hours for VET Advanced Level
- 800-1200 hours (FCT Module hours included) for FP Dual/ Dual VET

In any case, students must achieve 80 percent of activities. When students access WBL, a training agreement for students is drawn up in which the training guidelines, duration and hours are established. The specific schedules of completion are agreed between the tutors of the educational center and the company according to the hours of each professional profile (see options above). Students also carry out their own monitoring and memory of the training in the company by completing the student weekly follow-up sheet.

1.3.3 Information related to schools that offer WBL activities in Spain

Not all schools have an internal body dedicated to work-based learning, but some schools have a “Jefatura del departamento de prácticas” (Head of the internship department). WBL is coordinated through the tutors destined to it or through the head of studies of the education center or head of department.

Schools formally deal with companies willing to serve as host organizations for students during WBL activities through a school-company agreement. It is a formal agreement between the educational center and the company or institution where the FCT internships will take place called "Educational center-company agreement for the development of Training in Work Centers". This collaboration agreement has the following characteristics:

- It can cover one or more students studying in the same educational center
- It can be terminated at the request of either party
- It does not imply an employment relationship between students and the company
- Students are covered for accident risks through school insurance and third-party liability through an additional insurance policy signed by the Educational Administrations.

Before students start WBL activities, it is mandatory to draw up a work risk assessment on the part of the school, while companies also carry out their own prevention courses. All students are covered by civil liability and accident insurance subscribed by each educational administration for this purpose. Schools also provide training on health and safety in the workplace.

Internal (school) tutors have the primary role of coordinating and monitoring the training of students during WBL. According to Article 48 of Order 77/2010 of August 27, 2010[3], by which the professional module of Workplace Training (FCT) is regulated, the functions of the FCT internal tutor are:

1. To preside Assessment Boards of FCT Module
2. To assign the formative workplaces to the students (depending on the educational team criteria).
3. To complete all the documentation about his/her group of students
4. To draw up the formative program of the FCT module. Together with the workplace instructor (mentor)
5. To decide the sequencing of training practices if there is more than one enterprise
6. To monitor the FCT Module in collaboration with the external mentor
7. To assist the students (fortnightly or with the periodicity established by each educational centre), and be accessible online, during the workplace training, in order to value the developing program and established the necessary educational supports
8. To evaluate FCT module together with the educational team and the external instructor (mentor)
9. To establish contacts with local environment workplaces to promote new collaboration agreements
10. To guide students, together with the FOL (Formation and Labour Orientation) teacher and the Orientation Department, at the beginning of the work practices
11. To inform about different procedures (resignation, suspensions, exemptions…)
12. To inform at the beginning of the school year, to the students, mothers and fathers, or legal representatives about everything concerning to the FCT module
13. To elaborate the monitoring program and students in practice visits, in order to be authorized by the direction team
14. To elaborate curricular adaptations when needed (in collaboration with the orientation department and the educational team)
15. To propose the applications for extraordinary permits to be processed
16. To provide the students in practice (in collaboration with FOL teacher and the educational team) the information and assessment information and training on security and occupational risk prevention
17. To elaborate the final practice memory of the group which has been tutorized
18. To disseminate institutional programs that improve practice process or labour insertion
19. To detect information and formation needs of the instructor/s and propose activities before the beginning of the practice period

Schools can also serve as organizations where students may carry out WBL activities. They have their own training plan offering training and apprenticeship contracts for two years (Dual VET).

1.3.4 Information related to companies that offer WBL activities in Spain

To participate in WBL, companies have to be registered. Educational centers have a database of companies willing to offer WBL training to students. Each educational center has its own database with a business registry available to the student, but students are free to choose the company they

[3] https://dogv.gva.es/portal/ficha_disposicion_pc.jsp?sig=009647/2010&L=1

want. Regional responsibles for Education draw up a Catalog of approved work centers and training positions that meet the requirements of this order, with the following goals:

1) Facilitate the search by tutors for training positions for students to develop practices
2) Facilitate the search by the work centers for students to develop training practices in them
3) Catalog the work centers according to different criteria: activity, type of training positions they offer, certifications they hold and more
4) Recognize and value the collaboration of the participating work centers in the development of practices in accordance with quality criteria

Collaboration between educational centers and companies is usually regulated by agreements, with specific characteristics depending on the type of agents involved. Agreements include for example "Conventions-Framework" and "Pre-Agreements", and effective collaboration agreements through the "Conventions of the Educational-Company Center for the Development of Training in Labor Centers". The pre-agreement implies a declaration of intent by the signatory company to cooperate in the development of vocational training student practices. Most of the Chambers of Commerce signed pre-agreements of collaboration with companies of their territorial demarcation. Effective collaboration between educational centers and companies is carried out through a specific agreement called “collaborative agreements”. Agreements between educational centers and companies include:

- For FCT: “concierto centro educativo-empresa para la realización de prácticas formativas en centros de trabajo [4]” (agreement between the educational centre and the company for practical work experience at work centres)[5]
- For Dual VET: “Convenio de colaboración entre el centro educativo y la empresa” (company-educational center agreement)[6]

The framework agreements involve educational administrations and intermediate entities. The Collaboration Agreements signed between the Ministry of Education and Culture and the Superior Council of Chambers of Commerce, Industry and Navigation of Spain, (February 15, 1993 and the 1st of June 1999) and Law 31/1993 of March 22 (BOE of 23), and the basic of official chambers of commerce, industry and navigation, determine the collaboration of the Chambers with the competent educational administrations in the management of training in labor centers.

Requirements for trainers/instructors depend on the type of training to be provided. In the case of training linked to the national catalogue of occupational standards (CNCP), each professional certificate regulation sets the academic and teaching qualifications and experience that trainers must meet for each training module. Trainers must generally hold a higher qualification than the one they are delivering, at least one year of experience, and some qualification on teaching methodology for adults.

According to Article 48 of Order 77/2010 of August 27, 2010, by which the professional module of Workplace Training (FCT) is regulated, the functions of the FCT external tutor (mentor) are:

1. To tutor and mentor the trainee during the whole of the training period at the workplace.

[4]

[5] See for example: https://ceice.gva.es/documents/161863064/165369616/CONCIERTO.pdf/bdd4e360-11ee-4f5d-b597-31da367b5111

[6] See for example: https://www.educacionyfp.gob.es/va/dam/jcr:b4d7ae74-6737-4008-834c-1667e9f0dd80/convenio-fp-dual-pdf.pdf

2. To keep in touch with the tutor:
    - Permanently, to inform the tutor about the developing of workplace training (more info mentioned in article 33)
    - Extraordinarily, when the student incurs inappropriate behavior, absences, unjustified delays, or poor performance
    - Extraordinarily, if there is a possibility of working engagement after training period
    - Extraordinarily, in case of any calendar, schedule, or location changes
    - To ask for information or training related to FCT module
1. To issue an individual final report of each FCT student. It can be "satisfactory/unsatisfactory" but is just for guidance to the Assessment Board.

1.3.5 Digital WBL activities in Spain

Spain has an online system of administration of WBL. In most cases, the COVID-19 pandemic has caused significant challenges to WBL activities in the real-work environment. In most professional families, work practices have been carried out from home or have had to be canceled. The extent to which face-to-face work practices are substitutable for digital distance training depends on the professional family and the simulators. In some cases, software and digital platforms exist. In many cases, however, there is no digital infrastructure in place to carry out WBL activities from a distance.

1.4 Greece

1.4.1 General information about work-based learning in Greece

WBL has gained increasing importance in Greece as a consequence of growing emphasis of Formal Education from a theoretical basis to working experience in real working place conditions in society. As a result, apprenticeship was recently introduced in Greece, as an optional fourth year at Vocational Secondary Schools, following the policy of many European Countries. The term "apprenticeship" is used to describe an educational system in which the learning period alternates between workplace and educational structure. The apprenticeship is based on a curriculum allocated both to the workplace and the educational structure. The apprenticeship leads to the certification of the knowledge and skills acquired by the apprentice and eventually leads to a particular profession. Learning in a workplace thus can take the form of practical training.

The introduction of the "Apprenticeship Class" from the Ministry of Education, Research and Religious Affairs was established by Law 4386/2016. According to this law, the Vocational Secondary School offers two options to students attending its courses: (a) to graduate after attending three years of a "Secondary Cycle of Studies" and leave school with a Level 4 degree, or (b) to attend the "Postgraduate Apprenticeship Class". The latter is a "Postsecondary Cycle of Studies" that lasts one academic year; it is optional and belongs to the non-formal education system. Graduates of the "Postgraduate Apprenticeship Class" receive a Level 5 Vocational Education and Training Degree after completing their qualification certification procedures. The "Postgraduate Apprenticeship Class" was implemented for the first time during the academic year 2016-2017. Thus, since 2016 young people have the opportunity to acquire work experience after graduating from the Vocational Secondary School through the introduction of an Apprenticeship Class. The "Apprenticeship Class" is a dual system of theory and training. Apprentices:

- Hold an apprenticeship agreement with the employer

- Receive a pay in accordance with applicable law
- Have insurance coverage

Apprenticeship has a total duration of 9 months and includes a dual system of both apprenticeship training in businesses and specialty lessons at the school unit. Upon completion of the Post-Graduate Year of Apprenticeship and before taking part in a Certification Exam, each apprentice may attend Pre-Qualification Certification Courses, organized under the responsibility of the Ministry.

Although in Greece the apprenticeship system at secondary education is at a very early stage, a similar institution has been implemented for many years at the post-secondary level from Technical Universities or the upper secondary level from Technical Schools, where internship programs are mainly applied to technical education graduate candidates. The difference between practical training and the newly introduced apprenticeship at the fourth year of Vocational Secondary Schools lies in their structure. During the practical training that takes place before graduation from a technical school or a technical university, the student is away from school and his / her duties. On the other hand, apprenticeship at the fourth year of Vocational Secondary School combines school lessons and workplace training, which take place in parallel and on different days within the same week.

The "Postgraduate Apprenticeship Class" is structured in a dual system as follows:

(a) "Specialty laboratory courses" of a total of two hundred and three (203) hours. These courses are taught one (1) day per week, for seven (7) hours, by the teaching staff of the Vocational Secondary Schools (EPA.L) and of the Laboratory Centers of the Secondary Vocational Education (E.K.)

(b) "Workplace training program" of twenty-eight (28) hours a week, for a period of four (4) days per week for 9 months.

1.4.2 Information related to students who can participate in WBL in Greece

Trainees who take part in apprenticeship hold an apprenticeship agreement with the employer, receive a pay or allowance and have insurance coverage. The apprenticeship is designed for young people aiming at assimilation of necessary professional knowledge and skills. The apprenticeship is conducted on the basis of a specific curriculum in order to achieve specific learning outcomes and the successful cooperation between educational structure and businesses.

The upper limit in the number of apprentices in each school is 25 students per specialty. In order for the apprenticeship class of a specific specialty to be formed, at least 8 students are required to enroll. To enroll in the "Postgraduate Apprenticeship Class" students must that satisfy cumulatively all three of the following criteria:

a) Hold a degree in the secondary education course of the EPA.L of Law 4186/2013 and Law 3475/2006.
b) Be out of employment, education, or training
c) Do not exceed the age of 24 years

If the number of candidates fulfilling the above conditions is larger than the offered positions, candidates who have graduated in the most recent school year have priority to those of the previous school years. Among candidates who graduated during the same school year, precedence is given to those with the higher Grade Point Average (GPA).

The pay for trainees is 75% of the minimum wage set by the National General Collective Labor Agreement for the four semesters of practical training, which corresponds to €17.12 per day. Apprentices are entitled to regular paid leave from the workplace training in accordance with the applicable provisions. The limit of absences from the laboratory's specialty lesson (school-based training), may not exceed 10% of the total number of hours in the program (which is set at 203 hours in total). The final assessment of each apprentice is composed by two evaluations:

1. One evaluation in the school unit. This evaluation is performed by the teacher responsible for the Specialty Laboratory Course, is on a 0-20 score scale and constitutes 50% of the student's final assessment.
2. One evaluation at the workplace. The evaluation is held by the responsible trainer of the enterprise. It is again performed on a 0-20 grade scale, and constitutes 50% of the students' final evaluation.

At the completion of the Postgraduate Apprenticeship Class, students receive a Degree of Specialization, Vocational Education and Training Level 5 according to paragraph D, paragraph 14, article 46 of Law 4186 / 2013 (A 193), which was added by the provisions of paragraph 6, article 72, of Law 4310/2014 (A 258). The Postgraduate Classification Certificate is on a pass/fail basis.

1.4.3 Information related to schools that offer WBL activities in Greece

Apprenticeship in the EPA.S schools was introduced as an educational system that combines theoretical and laboratory-education with practical training in private and public sector enterprises. Attendance in the EPA.S schools lasts two years (four semesters). The students of the EPA.S schools receive their practical training in businesses during the morning hours, while in the afternoon they attend theoretical and laboratory courses in the same specialties. Every year 10.000 – 11.000 students attend the EPA.S schools. Students attending this type of school acquire professional experience in real working conditions in companies in many technical specialties. EPA.S's job-training system has proven to be effective in practice, as students continue to work at a significant rate in the same businesses where they did their apprenticeship upon completion of their studies.

The responsibility for the implementation of the "Postgraduate Apprenticeship Class", is given to the Vocational Secondary Schools called EPA.L, where the apprentices enroll, in cooperation with the Laboratory Centers of the Secondary Vocational Education (called E.K.), where the students perform the laboratory exercises of their laboratory course (7 hours a week), according to their specialization

1.4.4 Information related to companies that offer WBL activities in Greece

Apprentices are trained in small and medium-sized enterprises, freelancers, and the public sector. Employers must provide training according to a defined program, combined with the learning program in the educational structure. The rate of compensation for students in the Apprenticeship Class is set at 75% of the statutory minimum wage of the unskilled worker (currently set at €22.83/day), which amounts to €17.12 daily compensation. €6.12 of such compensation – as well as statutory insurance contributions – are paid monthly by the company where the workplace training is carried out.

The remaining €11 of the daily compensation is paid by the Ministry of Education.

The contributions to the Social Security Institution (IKA), are based on the current wage and are paid by both the employer and the student.

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Erasmus+ Programme
of the European Union

ATTACHMENT II.

The Ideal SEED Journey:
Guidelines for the Digital Learning Environment

may 2023

seed

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

THE IDEAL SEED JOURNEY

GUIDELINES FOR THE DIGITAL LEARNING ENVIRONMENT

PRIZMA
Fondazione Università Ca'Foscari Venezia
ALTEREGO
InterMedia
elCaleidoscopio

INTRODUCTION

WHAT IS SEED PROJECT

Welcome to the “School/Enterprise Experiences go Digital – SEED” Project.
The project has a 24-month duration and its main pillars are:

1. Work-based Learning
2. Vocational Education
3. Creativity-based Digital Solutions
4. Creativity and Critical Thinking

The main objective of the SEED project is to capitalize on existing and already applied creativity-based methodologies to deliver ready-to-use innovative solutions, developed and tested at European Level, for high schools and vocational schools in order to ensure the continuity in performing extra-curricular activities (work-based learning) also on distance.

WHAT IS ON THE PLATFORM

Nowadays, it is challenging to build an innovative model that engages 3 different stakeholders, which collaborate with each other by using information and communication technologies (ICTs), in order to deliver ready-to-use innovative solutions for real-life challenges.

Based on this main objective, the following operational objectives are defined:

- To recognize the importance of creativity as a crucial transversal skill for students in order to better face the increasing request of innovation in all sectors of the labour market and, in general, to improve their resilience, since OECD stated that “creativity and critical thinking are key skills for complex, globalized and increasingly digitized economies and societies”
- To improve the use of “work-based training” as a fundamental pillar for faster and more profitable access of students in the labour market, especially by ensuring more digitalized and creativity-based methodologies for its implementation, able to create advantages for both educational institutions and companies
- To equip vocational education and gymnasium with the necessary digital skills and solutions to manage distance work-based training experiences based on creative-led methodologies (creative thinking, design thinking, etc…)

WHAT IS ON THE PLATFORM

- To contribute to the empowerment of the EU educational policies by testing and delivering a new creativity-based and digital solution, aligned with EPALE, aiming at enabling European educational institutions to keep on performing “work-based training” as well as to maintain the crucial relationship with companies.

The way that the companies will work with students will be performed with a project, which will be referred to as a “Challenge”. By “Challenge” we mean a (creative or technical) project a company would like students to work on within a defined time period. The inspiration for a “Challenge” can be a problem or an opportunity the company is currently facing or would like to explore.

As mentioned before, each Challenge has 6 different stages. The stages are:

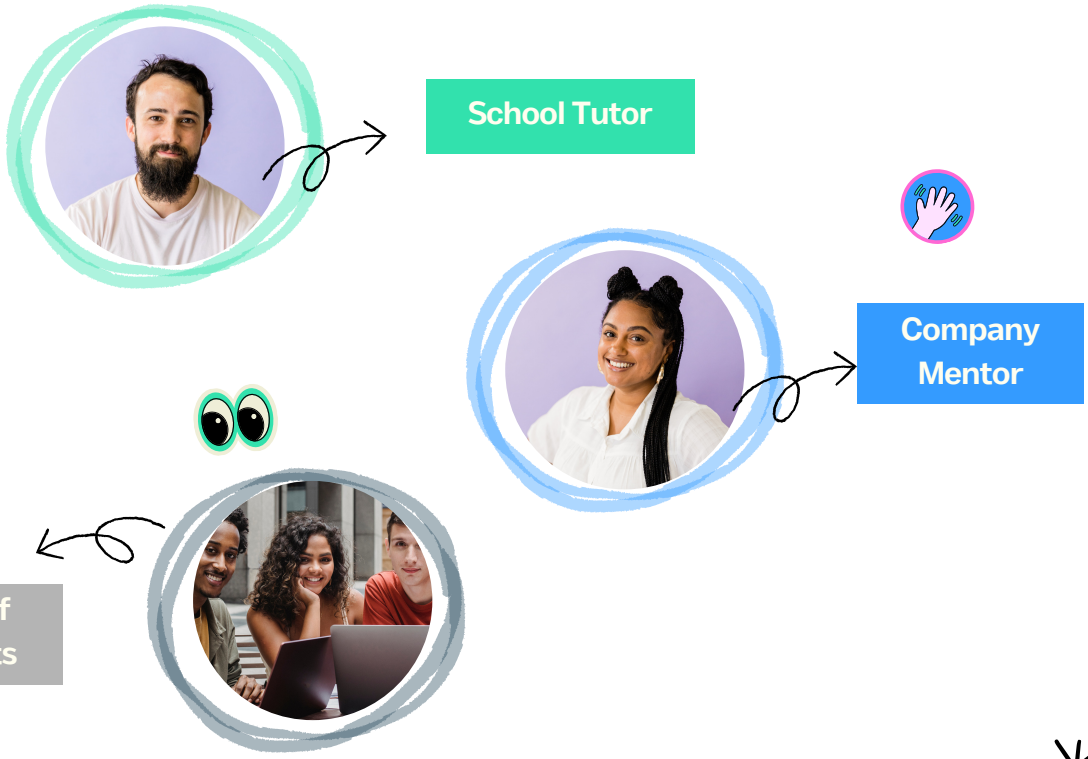
- **Introduction**
- **Empathize**
- **Ideate**
- **Implement**
- **Evaluate**
- **Finalize**

In order for a challenge to be solved, all the stages should be completed. The final solution of the challenge will be evaluated from the companies and their mentors.

THE REAL PROTAGONISTS

The real protagonists of the SEED Project are:

1. **Companies:** Companies with their mentors are responsible to create real-life challenges, that need to be solved by the students assisted by their Tutors.
2. **Schools:** Schools with their tutors, show interest in challenges - focused on creating ready-to-use innovative solutions - to solve them together with their students. After that, they assign the challenge to their students.
3. **Students:** They enroll in challenges, and they have to solve them by using creativitiy-based methods. If they need help, School Tutors will assist them by using the ICT Tools, provided by the platform.



HOW CAN YOU USE THIS PROJECT?

This co-working platform is dedicated to enhancing vocational education and gymnasium/middle/high school with the necessary digital skills and solutions to manage distance work-based training experiences based on creative-led methodologies.

Through a large variety of different challenges, the students will obtain faster and more profitable access to the labour market, especially by providing innovative solutions for educational institutions and methodologies.

Thanks to this co-working platform, the skills that students will acquire form different challenges will help them improve their performance in their next professional life.

Through the project learning environment, the students will recognize the importance of creativity as a crucial transversal skill, that will help them to face better the increasing request of innovation in all sector of the labour market.

In general, they will understand and learn better how to use digital tools and creative-based methodologies and how they could improve resilience, since OECD stated that “creativity and critical thinking are key skills for complex, globalized and increasingly digitized economies and societies”.

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COMPANY MANUAL

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COMPANY MANUAL

REGISTRATION

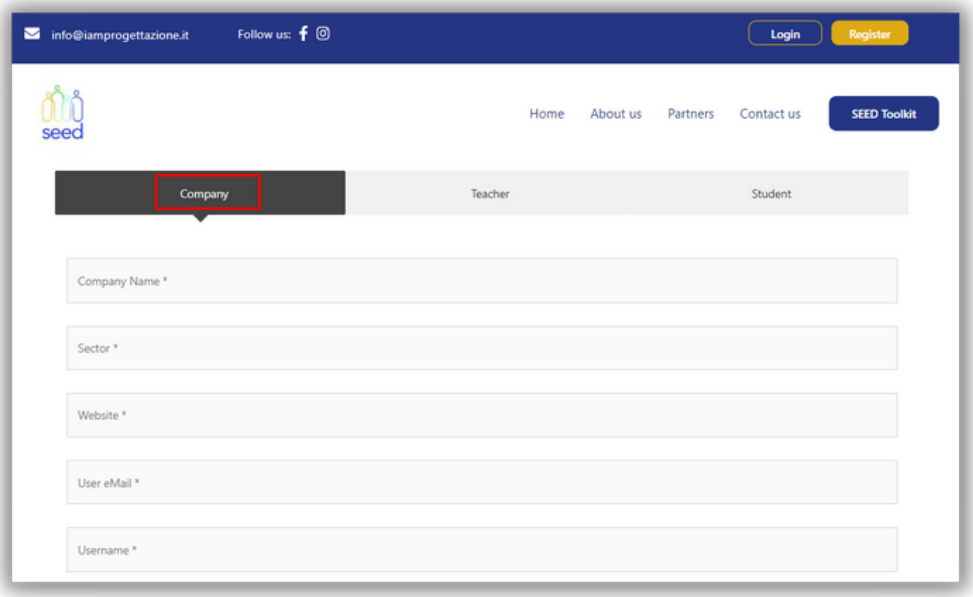
Before you start exploring the SEED platform you have to register. As a Company you have to register to the platform through this link:

https://seedforfuture.eu/registration/

The required details that a company has to enter are:

- Company Name
- Sector
- Website
- User email
- Username
- Password (with confirmation)

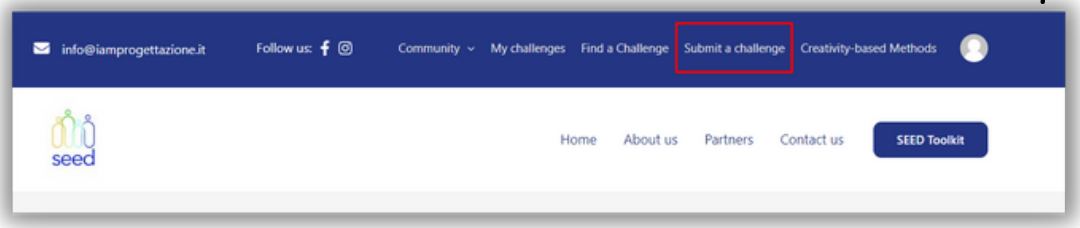
In the image below you can see the registration page for companies



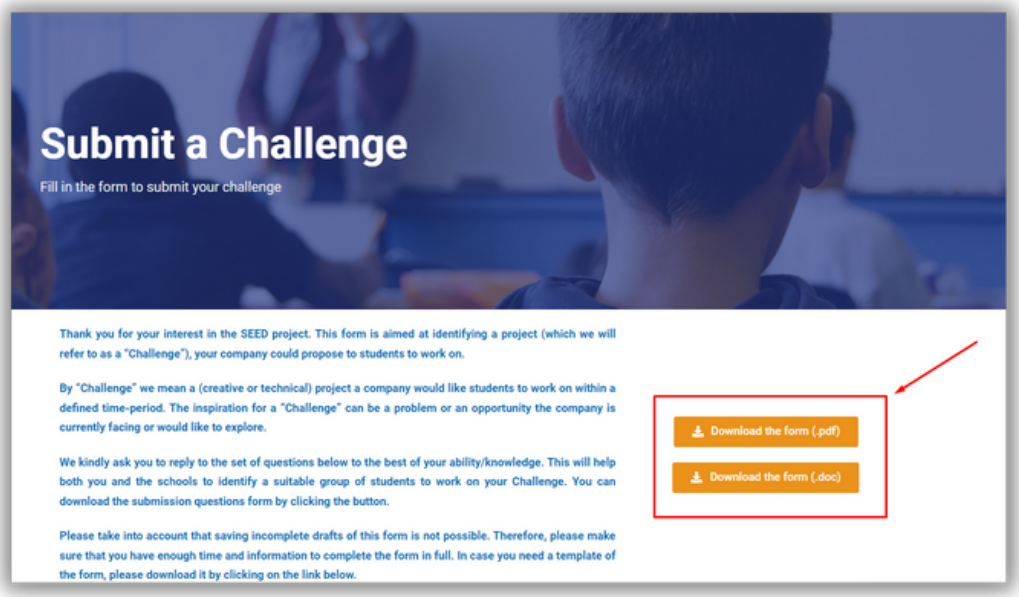
COMPANY MANUAL

HOW TO CREATE A CHALLENGE

After successfully registering, companies are responsible to set/create challenges. From the top bar menu, companies select the "Submit a challenge" option. In the image below you can see the top bar menu with the mentioned option.



When a company enters the [challenge submission page] the user will find a submission form in 2 different formats (pdf & doc). Companies are able to download the form, work on the challenge and then transfer it into the submission form of the platform.

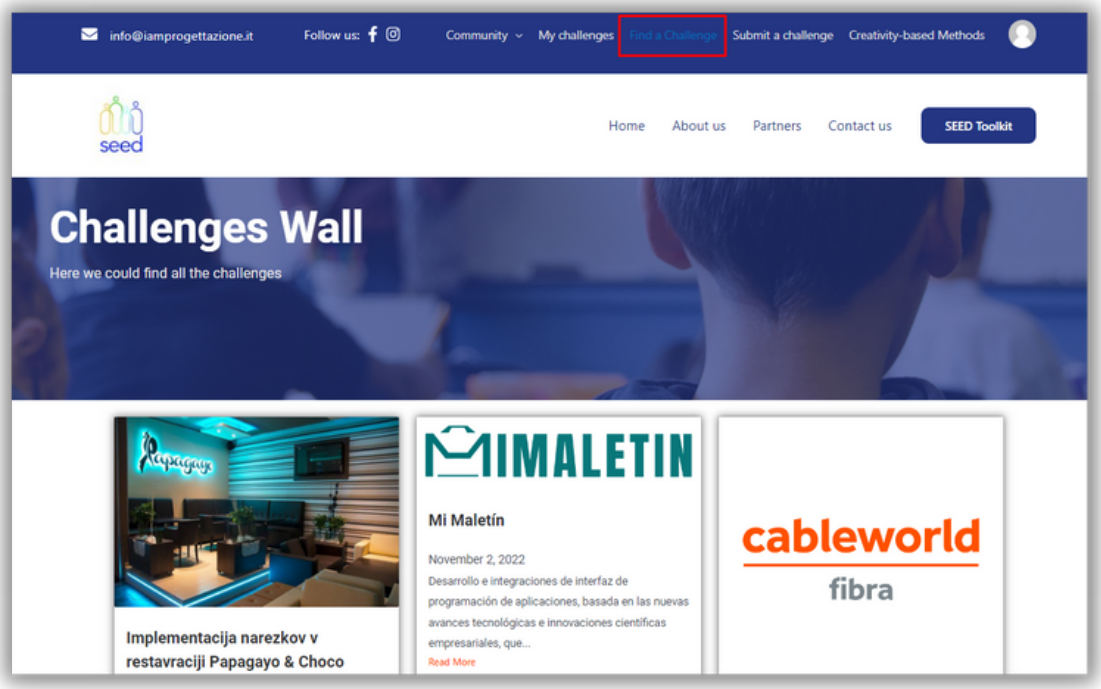


COMPANY MANUAL

HOW A CHALLENGE WORKS

When a company submits a challenge, the challenge goes into pending status and will be approved from the SEED project admins only if the challenge meets the general challenge criteria.

When a challenge is approved, it will be published on the SEED website "**Challenges Wall**". In the image below you can see the Wall with the Challenges.

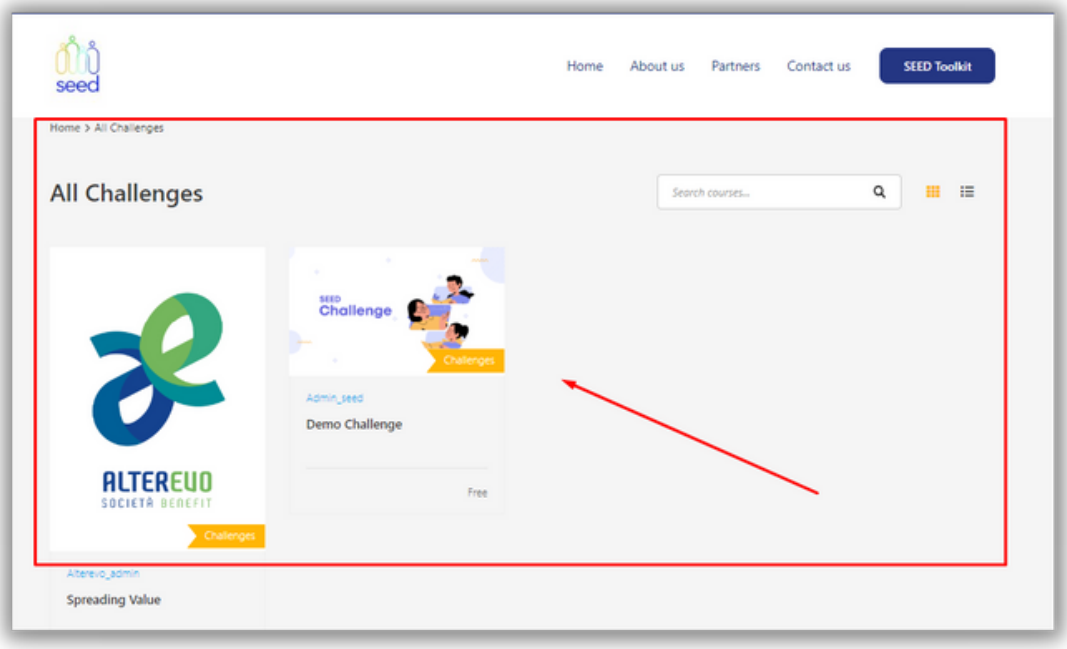


When a school shows interest for a challenge, an email will inform the company about the interest and then the admins will make the matching between the Company Mentor and the School Tutor.

COMPANY MANUAL

HOW TO ENROLL IN A CHALLENGE

After successfully registering, companies have the opportunity to follow the process of their challenge enrollment. From the top bar menu companies select the "All challenges" option. Then they will select the challenge they created and enroll.



When they select the challenge, the challenge learning environment will open, and in the right side students will be able to press the "**Enroll**" button. Check the image below.

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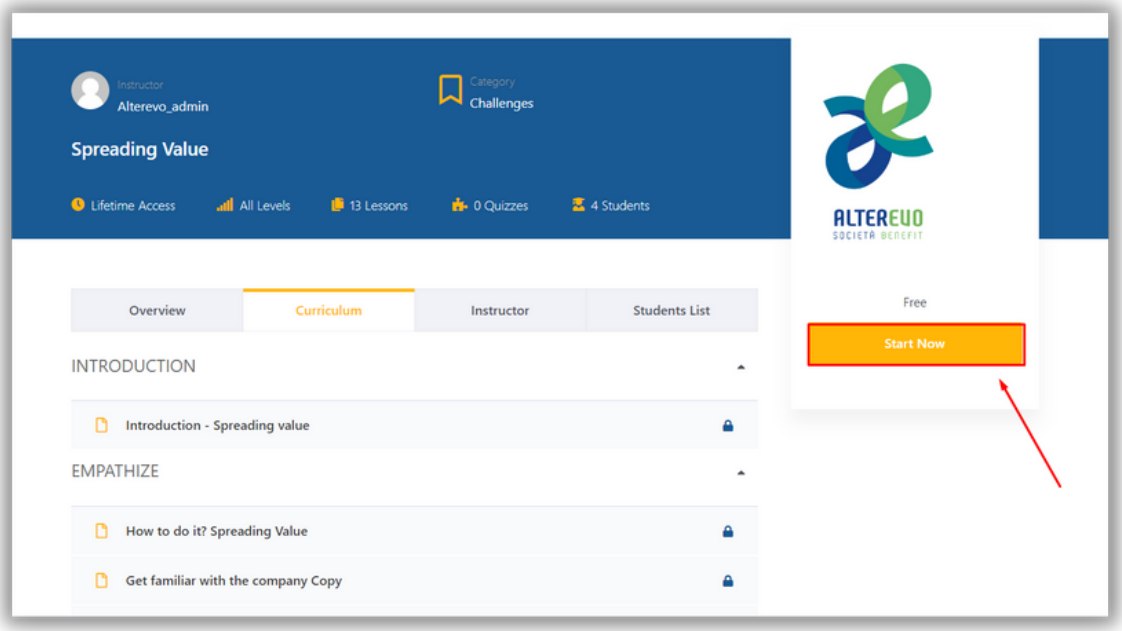
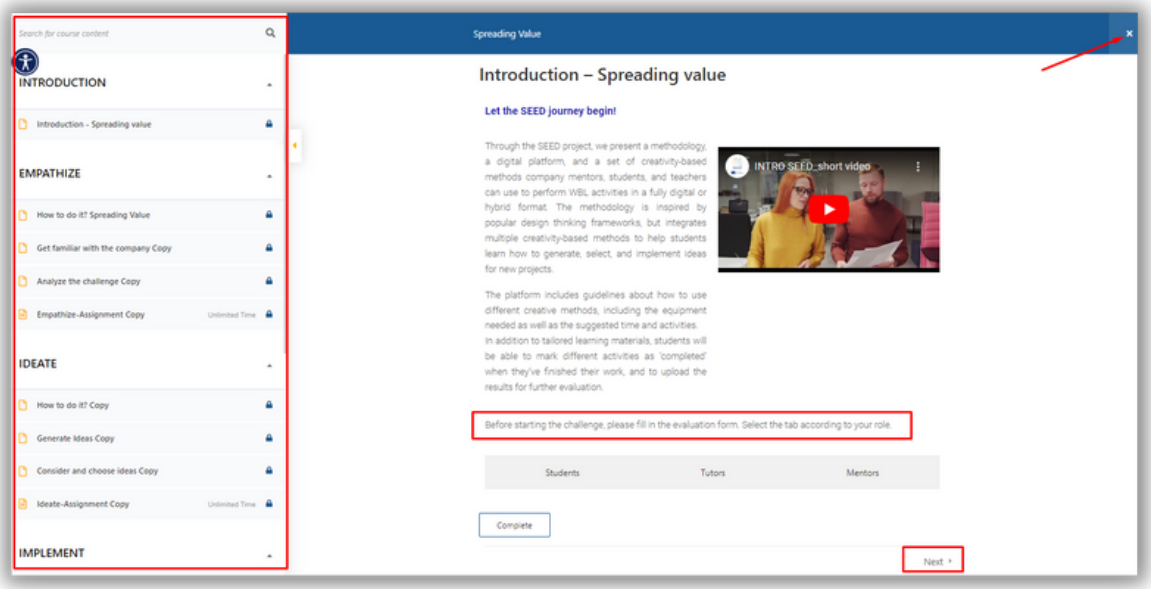
COMPANY MANUAL

HOW TO ENROLL IN A CHALLENGE



When the companies enroll to a challenge, they will be automatically redirected to the **digital learning environment.**



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COMPANY MANUAL

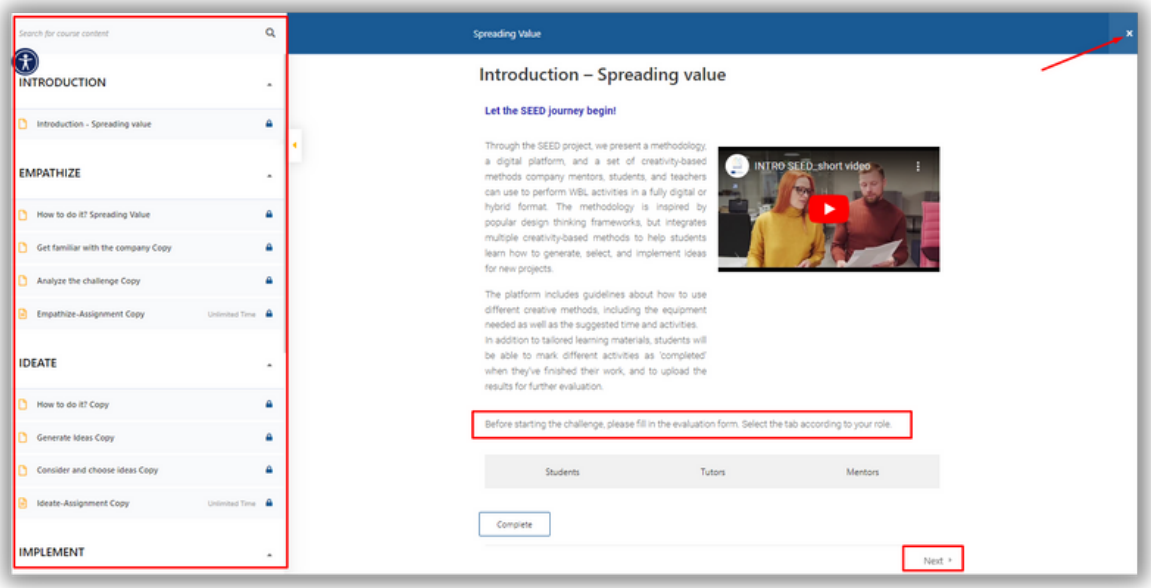
HOW TO NAVIGATE IN A CHALLENGE

When companies enter the learning environment, they can find:

- On the left side, the curriculum with the sections of the challenge
- In the middle, the main learning space which contains texts, videos, quizzes, infographics, images etc.

The companies can follow the same process that students do.

The first step for a company is to complete **evaluation forms.** There is a **pre-evaluation form** and at the end of the challenge a **post-evaluation form.** Both are mandatory.



COMPANY MANUAL

HOW TO NAVIGATE IN A CHALLENGE

In each challenge, as mentioned before, there are 6 different stages to be completed. The stages are:

- **Introduction**
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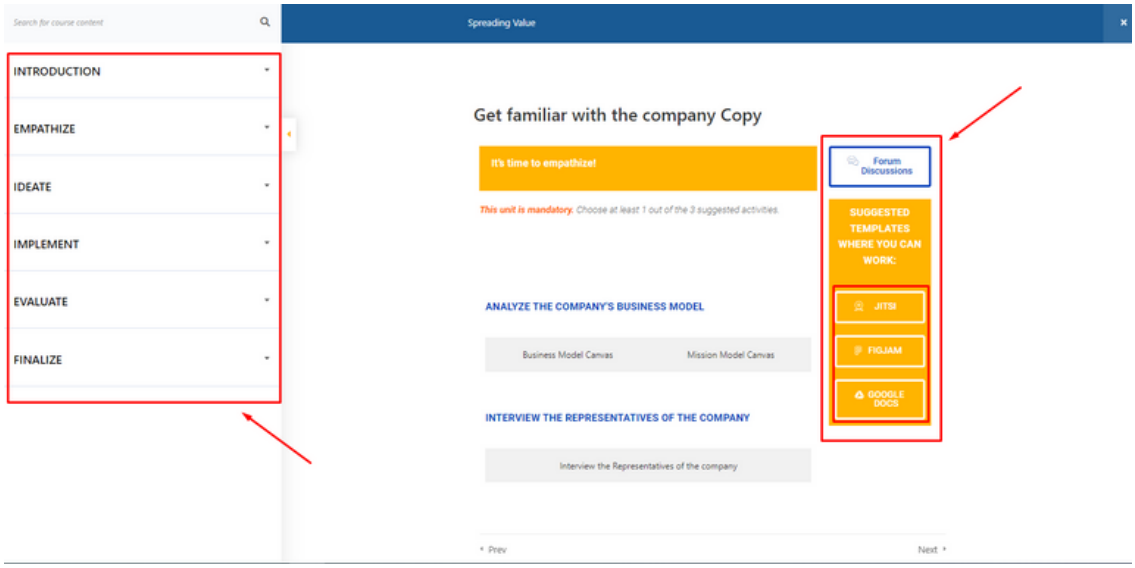
At the end of the 4 middle stages (Empathize, Ideate, Implement, Evaluate) there is a mandatory assignment to be completed.
Also, in each section there is a sidebar with the collaborative tools that students are encouraged to use in order to give solutions to the challenge.



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TUTOR MANUAL

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TUTOR MANUAL

REGISTRATION

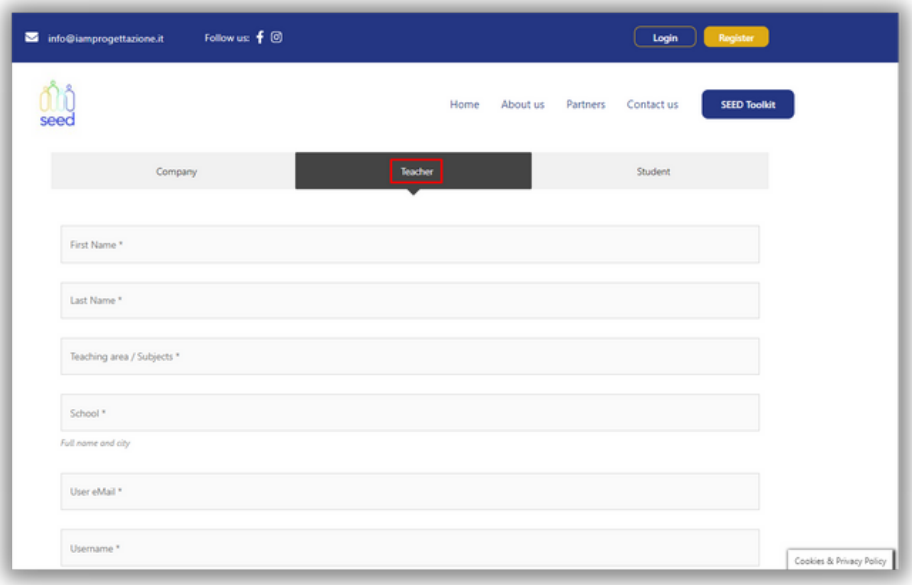
Before you start exploring the SEED platform you have to register. As a Tutor you have to register to the platform through this link:

https://seedforfuture.eu/registration/

The required details that a school tutor has to enter are:

- First Name
- Last Name
- Teaching area / Subjects
- School
- User email
- Username
- Password (with confirmation)

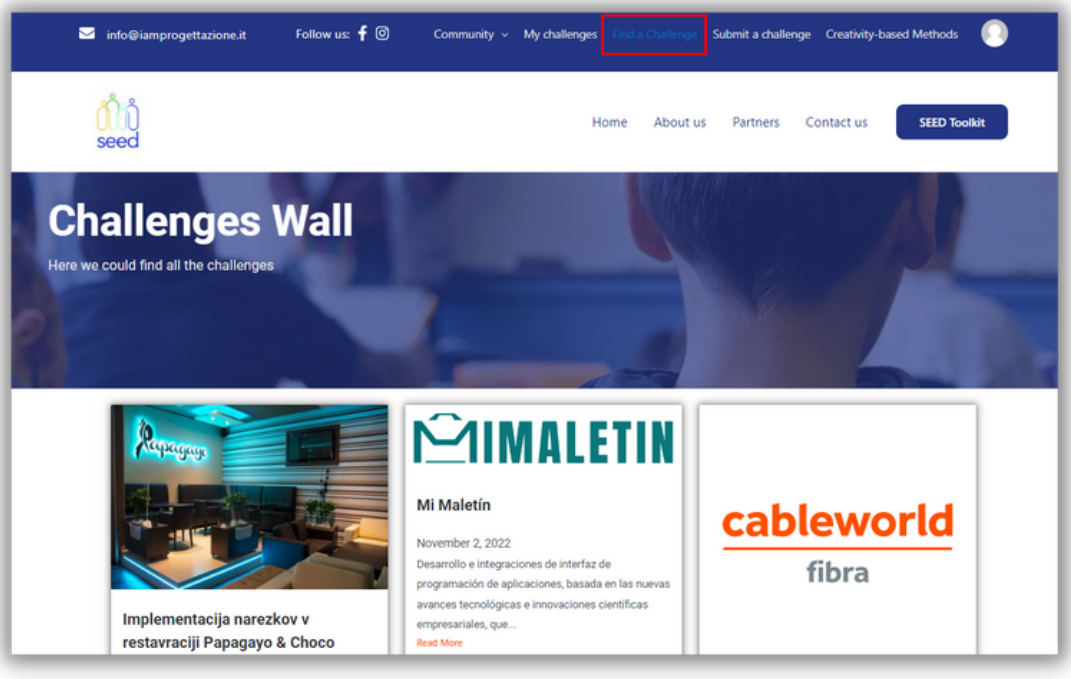
In the image below you can see the registration page for school tutors.



TUTOR MANUAL

HOW TO SHOW INTEREST FOR A CHALLENGE

After successfully registering, tutors can show interest for a challenge. From the top bar menu, tutors select the "Find a challenge" option. In the image below you can see the top bar menu with the mentioned option.

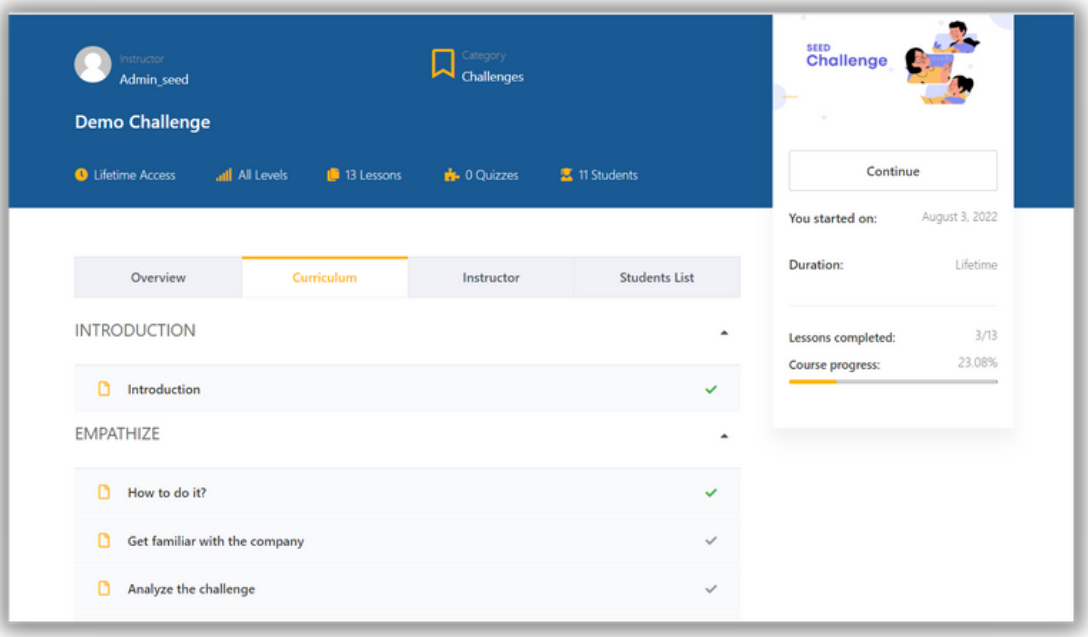


When a tutor enter a challenge, s/he will find an "Interest for the challenge" form, s/he should fill in to show interest in a challenge. When the form is submitted, the admins of the platform will make the matching between the Companies and the Schools, that subsequently will be informed via emails.

TUTOR MANUAL

HOW TO EDIT A CHALLENGE AS INSTRUCTOR

After the submission of the interest form, the admins of the project platform activate the learning environment. Then, admins assign to tutors the chosen challenge, in order to modify it, according to the creativity-based methods that they have selected.



When the Tutors have Co-Instructor permissions for a challenge, they will be able to modify it with the Frontend Editor. The Frontend Editor is under the "My challenge" Option on the Top Bar Menu. Check the image below.

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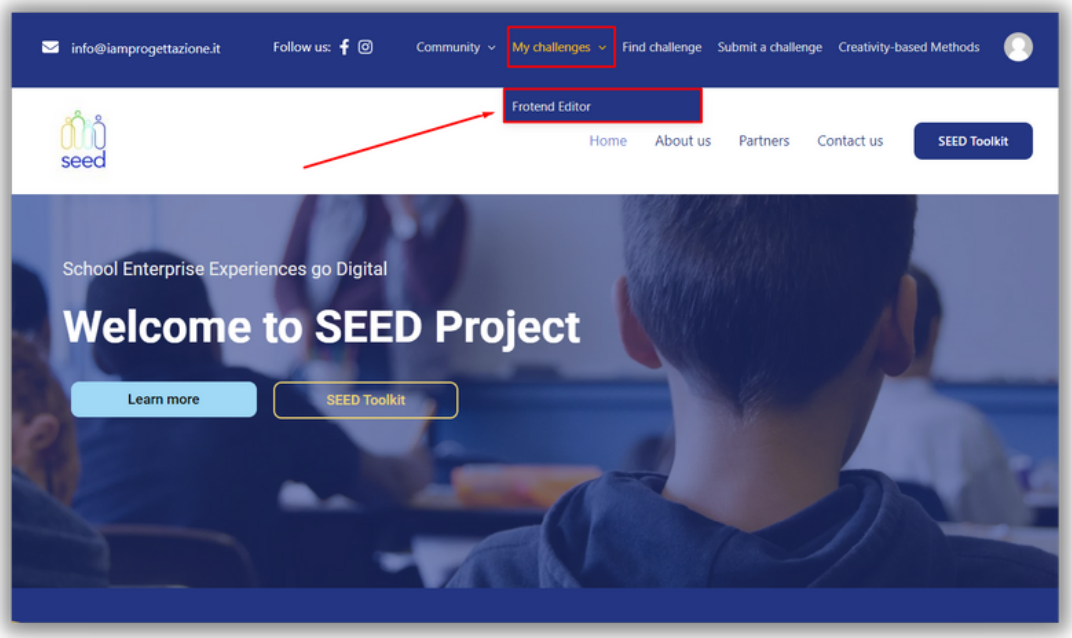
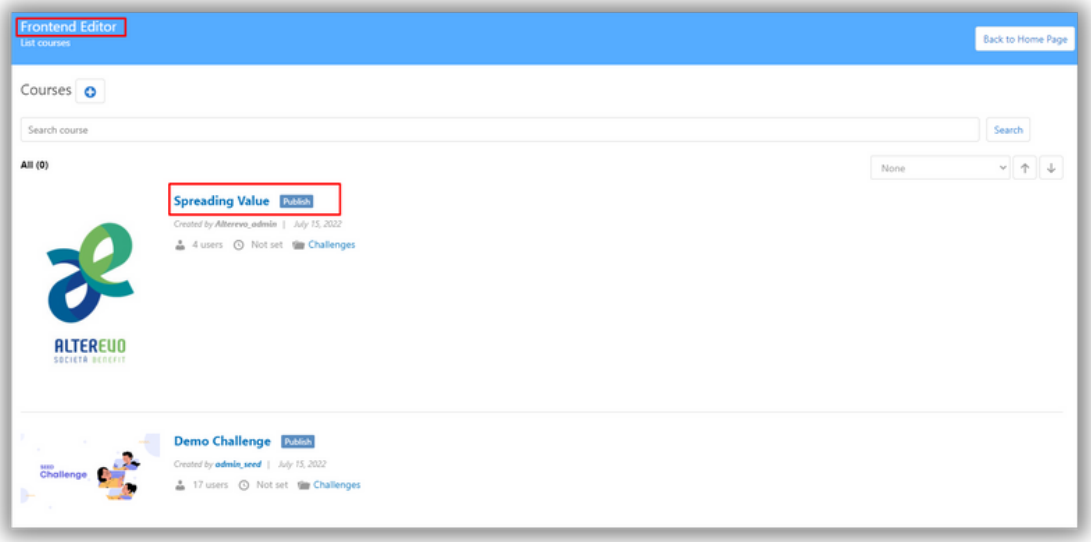
TUTOR MANUAL

HOW TO EDIT A CHALLENGE AS INSTRUCTOR



By selecting the **"Frontend Editor"** the Tutor has the possibility to see only the challenges in which s/he is assigned as Co-Instructor. Check the image below.



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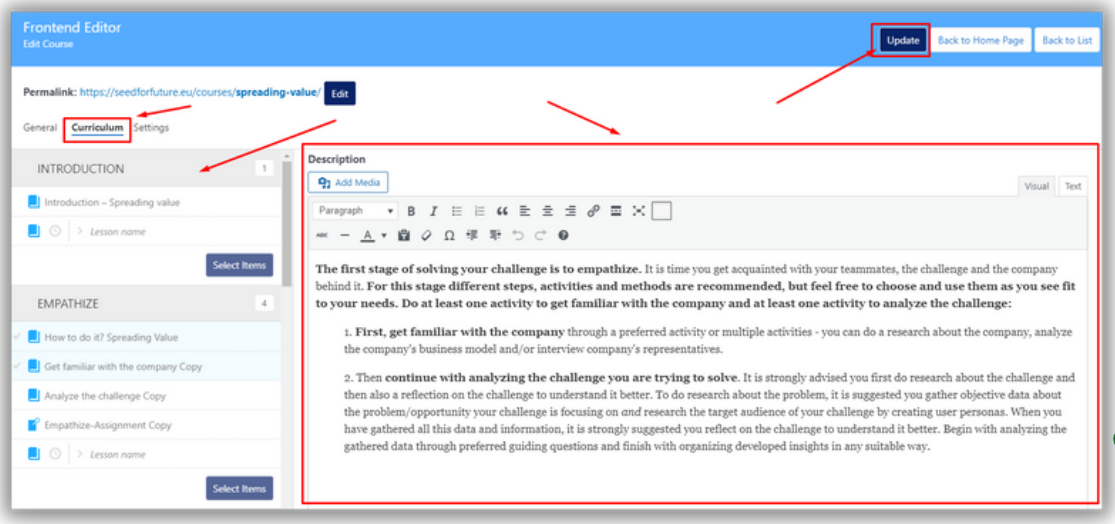
TUTOR MANUAL

HOW TO EDIT A CHALLENGE AS INSTRUCTOR

When you select the challenge that you want to modify, the "Frontend panel" opens to edit the challenge. As Instructor, in the frontend panel you can see:

1. The panel menu with 3 options: General, Curriculum and Settings
2. The Challenge Layout (Curriculum) on the left-side, where the instructor selects the sections of the challenge in order to modify them.
3. The "edit panel", where the instructor can edit/modify the main content of the challenge in each section and module.

When the content is ready, the instructor just presses the "update" button. Check the image below.

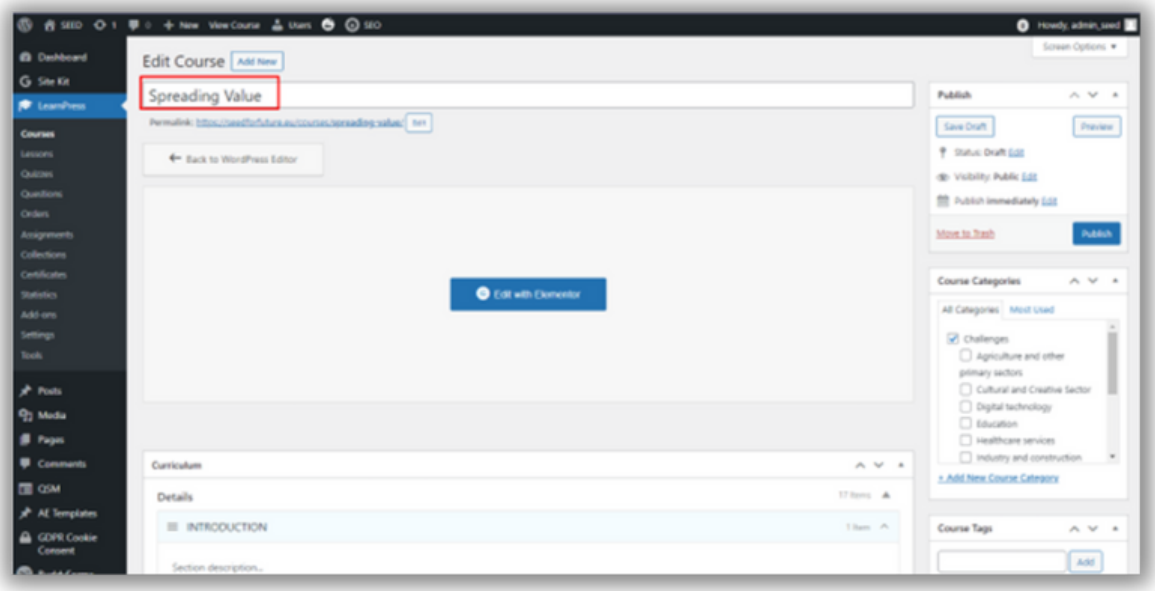


TUTOR MANUAL

HOW TO EDIT A CHALLENGE AS INSTRUCTOR

There is also an alternative way to edit a challenge, but the instructor should be able to know how to manage a WordPress website.

First, after successfully registering, the instructor should access the **WordPress Dashboard** and be able to edit the challenge as co-instructor. Check the image below.



Then, the instructor selects the challenge and scrolls down to check the Curriculum. In the curriculum, the instructor clicks the edit option (pencil icon) to edit the section with Elementor. After that, the instructors have the possibility to hide and unhide the sections they want to keep and edit them. Check the image below.

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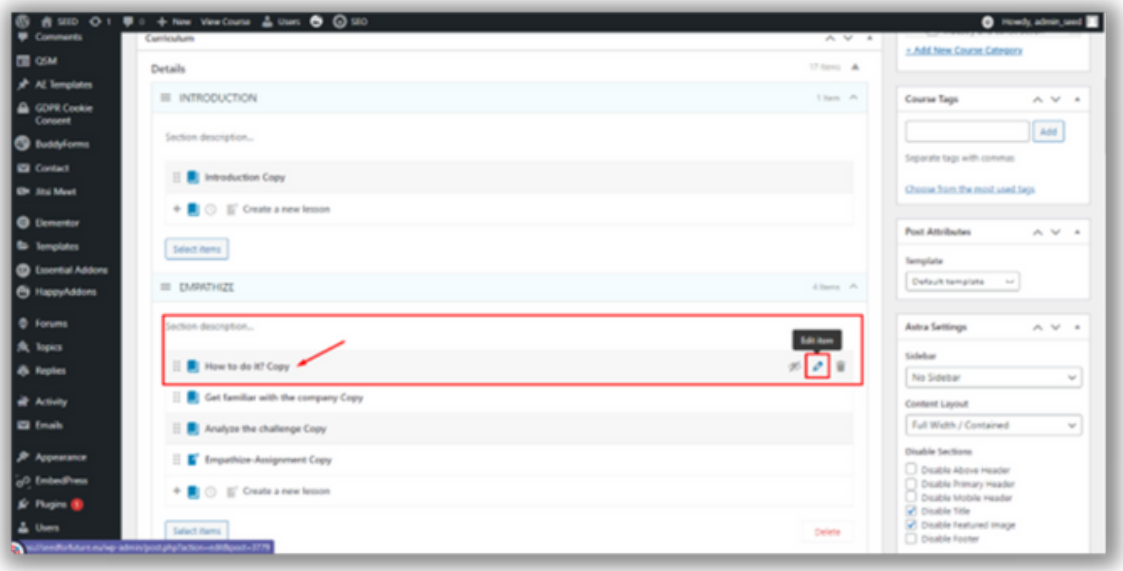
TUTOR MANUAL

HOW TO EDIT A CHALLENGE AS INSTRUCTOR



The steps that instructors should follow are:

1. Click the dots in the section **"edit section"**:
2. From the left **Elementor** menu click the **"advanced"** tab.
3. From the **"advanced"** tab select **"Responsive"** and from **visibility** click the switcher from **"show"** to **"hide"**.

Check the images below and follow the order.

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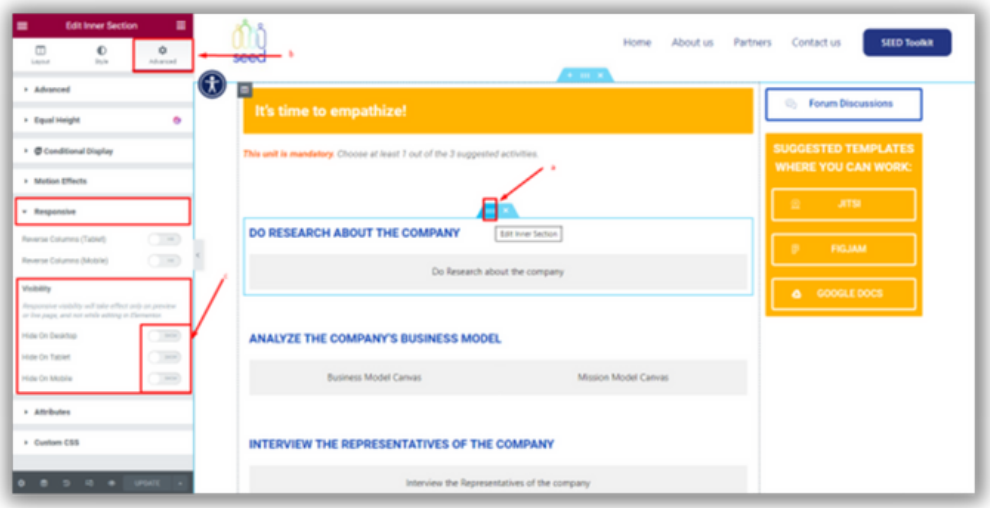
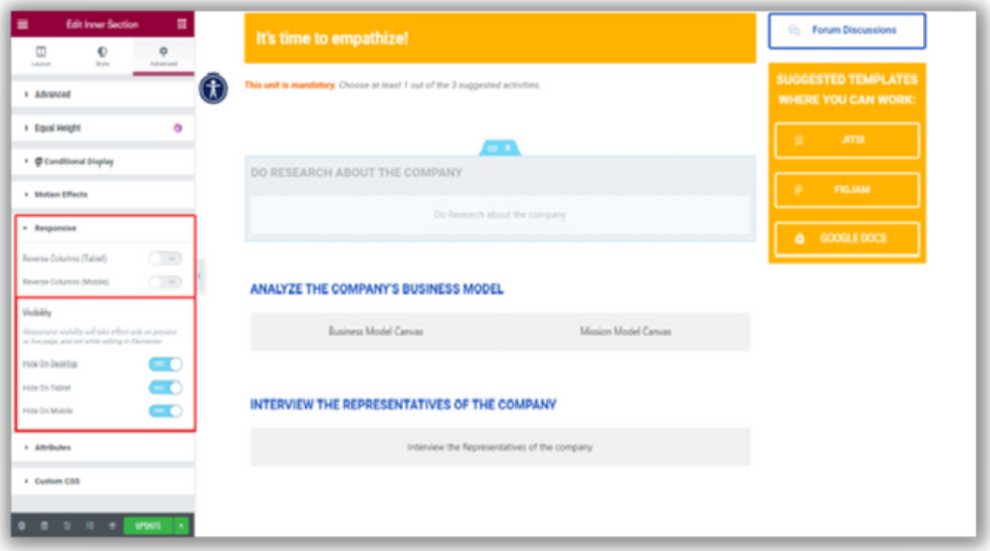
TUTOR MANUAL

HOW TO EDIT A CHALLENGE AS INSTRUCTOR





When instructors finalize the **challenge**, they should keep in mind to save (**update**) **every change** they made for the sections.
Last but not least, the instructors will send the final link of the challenge to their students in order to enroll.

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TUTOR MANUAL

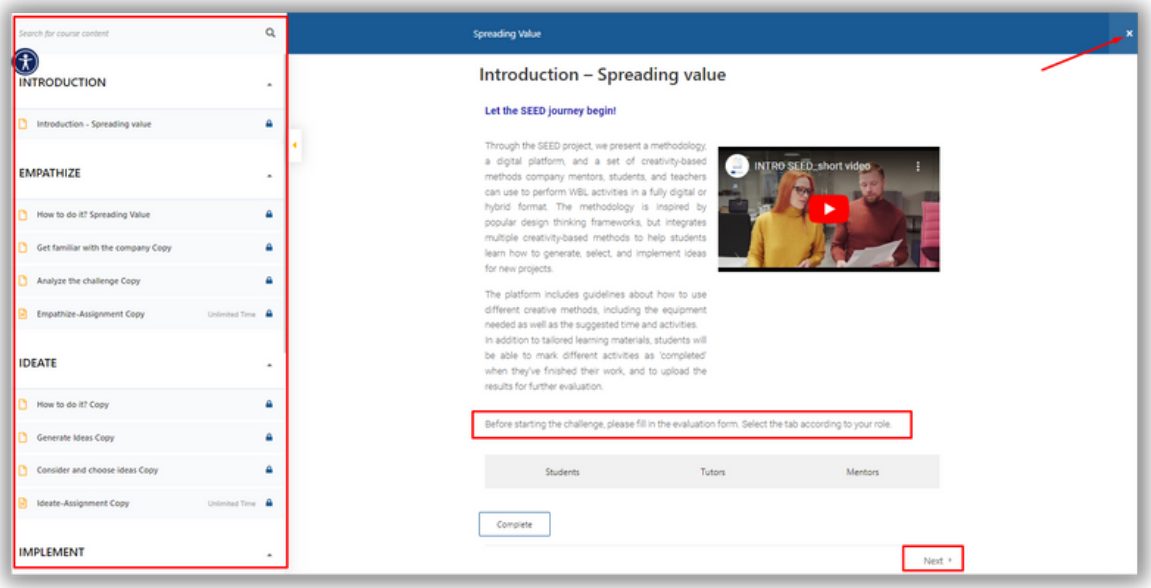
HOW TO NAVIGATE IN A CHALLENGE

When the tutors enter the learning environment, they can find:

- On the left side, the curriculum with the sections of the challenge
- In the middle, the main learning space which contains texts, videos, quizzes, infographics, images etc.

The tutors can follow the same process that students do.

The first step for a tutor is to complete **evaluation forms.** There is a **pre-evaluation form** and at the end of the challenge a **post-evaluation form.** Both are mandatory.



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TUTOR MANUAL

HOW TO NAVIGATE IN A CHALLENGE

In each challenge, there are 6 different stages to be completed. The stages are:

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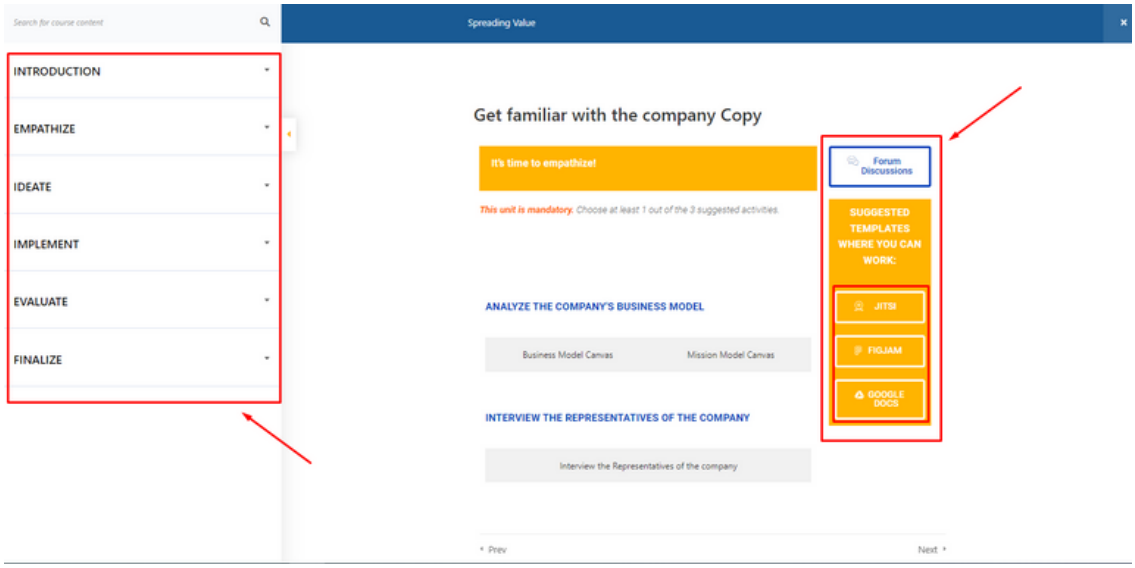
At the end of the 4 middle stages (Empathize, Ideate, Implement, Evaluate) there is a mandatory assignment to be completed.
Also, in each section there is a sidebar with the collaborative tools that students are encouraged to use in order to give solutions to the challenge.



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STUDENT MANUAL

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STUDENT MANUAL

REGISTRATION

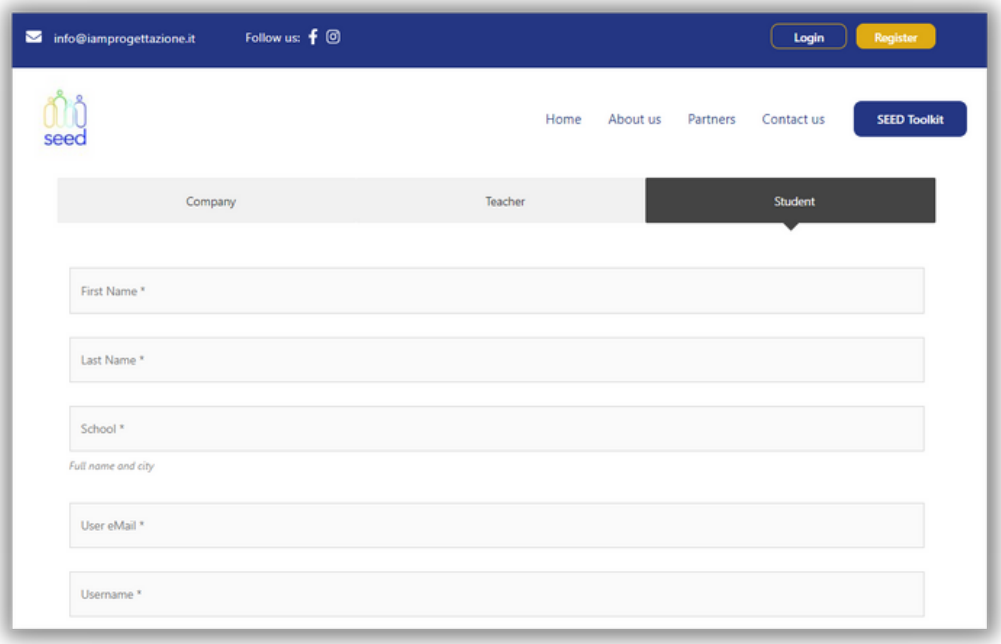
Before you start exploring the SEED platform you have to register. As a student you have to register to the platform through this link:

https://seedforfuture.eu/registration/

The required details that a student has to enter are:

- First Name
- Last Name
- School
- User email
- Username
- Password (with confirmation)

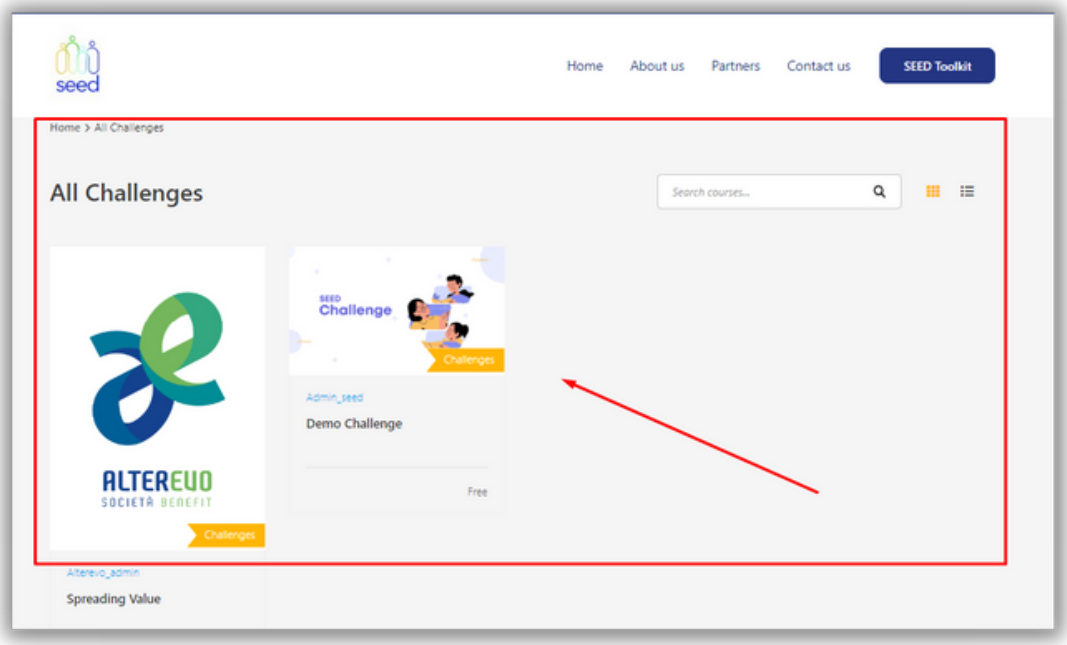
In the image below, you can see the registration page for students:



STUDENT MANUAL

HOW TO ENROLL IN A CHALLENGE

After successfully registering, students will receive from their tutors the link to the challenge that they have to enroll in. Otherwise, students can enroll in the challenge on their own, by selecting from the top bar menu the "All challenge" option. Then they will select the challenge that their tutor had created and enroll.



By selecting the challenge, the challenge learning environment will open, and in the right side students will be able to press the **"Enroll"** button. Check the image below.

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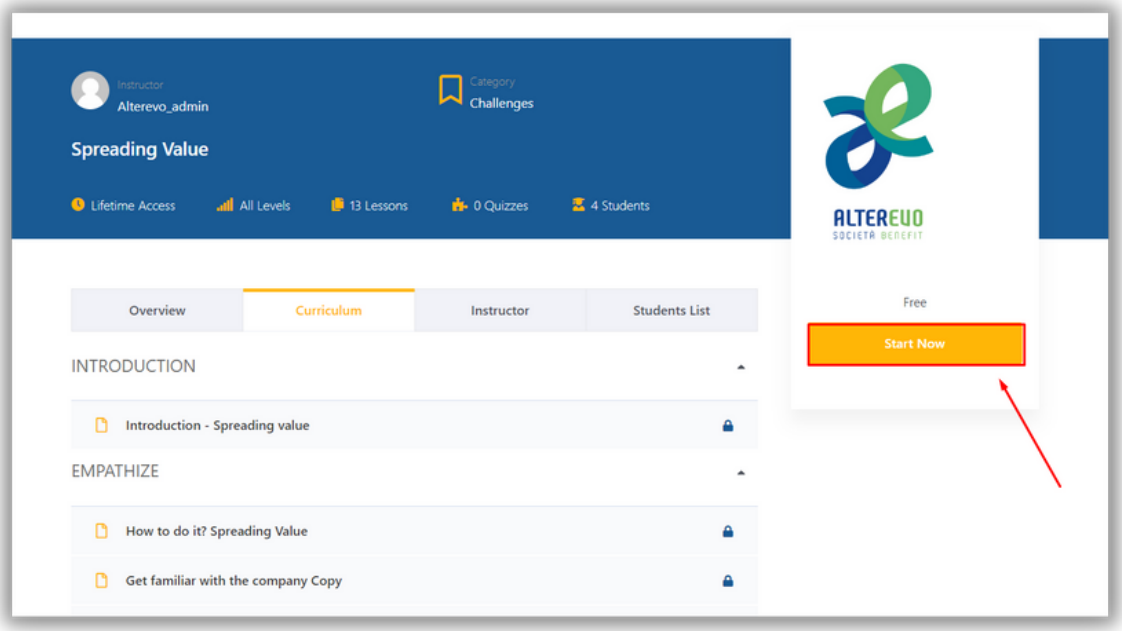
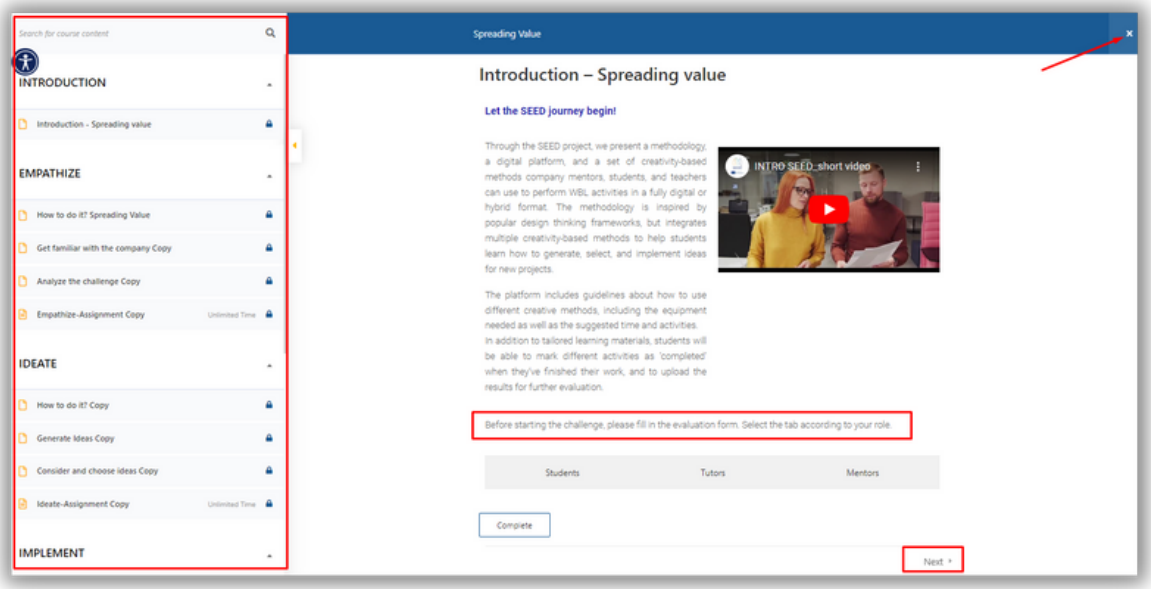
STUDENT MANUAL

HOW TO ENROLL IN A CHALLENGE



When the student enrolls in a challenge, s/he will be automatically redirected to the **digital learning environment.**



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STUDENT MANUAL

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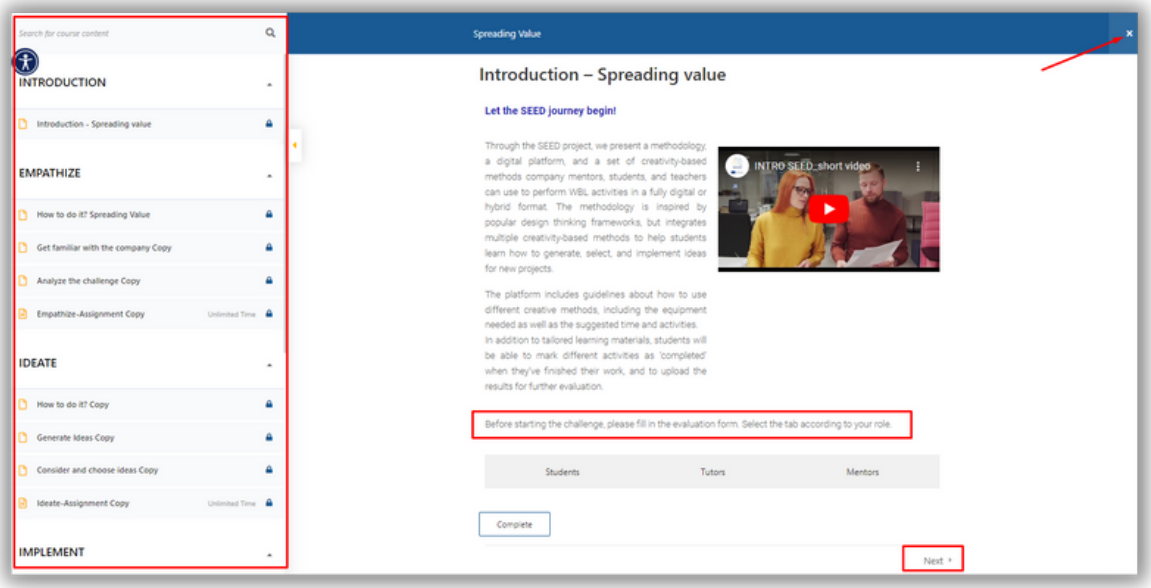
When students enter the learning environment, they can find:

- On the left side the curriculum with the sections of the challenge
- In the middle the main learning space which contains texts, videos, quizzes, infographics, images etc.

When students finalize a section, they press **"Next" -** to be found in the bottom-right side.
On the top-right side there is an **"X" escape button** students can use to exit the process.

The first step for a student is to complete the **evaluation form.** There is a **pre-evaluation form** and at the end of the challenge a **post-evaluation form.** Both are mandatory.



STUDENT MANUAL

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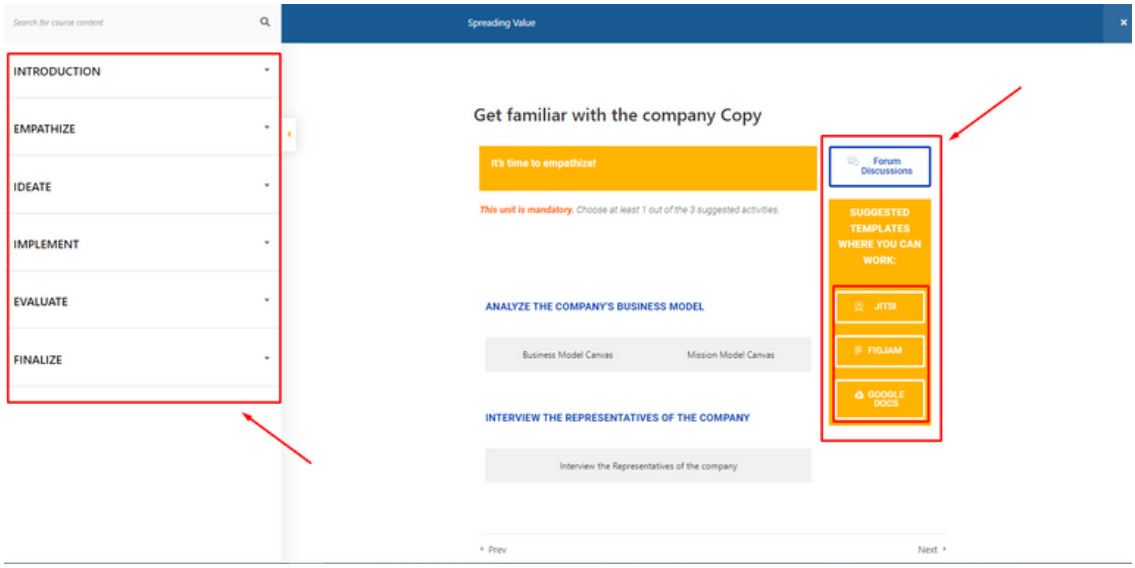

STUDENT MANUAL

CHALLENGE COMPLETION

After the end of the challenge, the provided solutions of the challenge will be under evaluation from companies and their mentors.

Also, when students complete all the stages of a challenge, they will receive a certification of completion.

CONCLUSION

SUMMARY

After the completion of each challenge, all the protagonists will receive a certification for their participation.

In order to achieve the goals of the project, the protagonists have to cooperate. The best results will come only if the users of the platform follow the steps of the manuals to have a smooth navigation experience.

Summing up, the creative innovative solutions will have a double meaning: they will represent a great starting point for students to connect with the professional world and they can also be implemented in real life by companies

Thank you for participating in the SEED Project.

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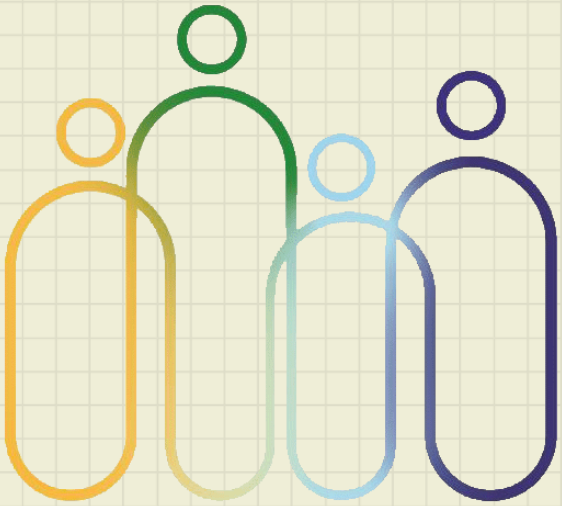
ATTACHMENT III.

Creativity-based methods guidelines

may 2023



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GUIDELINES: **CREATIVITY-BASED PROCESS & METHODS**

SOLVE THE CHALLENGE BY FOLLOWING STAGES:

- EMPATHIZE
- IDEATE
- IMPLEMENT
- EVALUATE

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CONTENTS

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GET FAMILIAR WITH THE COMPANY

- DO RESEARCH ABOUT THE COMPANY
- ANALYZE THE COMPANY'S BUSINESS MODEL
- INTERVIEW THE REPRESENTATIVES OF THE COMPANY

ANALYZE THE CHALLENGE

- DO RESEARCH ABOUT THE CHALLENGE
- REFLECT ON THE CHALLENGE AND UNDERSTAND IT BETTER

EMPATHIZE GUIDELINES

for creativity-based process

STAGE 1

STAGE 1

EMPATHIZE

HOW TO DO IT?

The first stage of solving your challenge is to empathize.

It is time you get acquainted with your teammates, the challenge and the company behind it.

For this stage different steps, activities and methods are recommended, but feel free to choose and use them as you see fit to your needs. Do at least one activity to get familiar with the company and at least one activity to analyze the challenge:

1. **First, get familiar with the company** through a preferred activity or multiple activities - you can do a research about the company, analyze the company's business model *and/or* interview company's representatives.

2. Then **continue with analyzing the challenge you are trying to solve.** It is strongly advised you first do research about the challenge *and* then also a reflection on the challenge to understand it better.

To do research about the problem, it is suggested you gather objective data about the problem/opportunity your challenge is focusing on *and* research the target audience of your challenge by creating user personas.

When you have gathered all this data and information, it is strongly suggested you reflect on the challenge to understand it better. Begin with analyzing the gathered data through preferred guiding questions and finish with organizing developed insights in any suitable way.

GET FAMILIAR WITH THE COMPANY

DO RESEARCH ABOUT THE COMPANY

Doing research about the company is a great and easy way to get a bigger picture and deeper comprehension of the company for a good challenge understanding and solving.

What can you do?

- Read materials the company might have provided.
- Do an online research of the company - visit their website and social media profiles, find articles about them...

Try to understand the company and its perspective. Get familiar with its business, purpose, goals, values, functioning, area of work and their services/products...

Take notes and share your discoveries in a team, sum it up and prepare a short description of the company.

WHAT DO YOU NEED?

- web browser
- notepad
- discussion channel

TYPE OF ACTIVITY

group or firstly individual

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

low

GET FAMILIAR WITH THE COMPANY

ANALYZE THE COMPANY'S BUSINESS MODEL

USE **BUSINESS MODEL CANVAS**
of for-profit company

WHAT DO YOU NEED?

- business model canvas template
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

medium

*Bussines model canvas is a great method to help you take into account and better understand a business model and functioning principles of a **for-profit company** in a structured way while focusing you on the key areas to address.*

What can you do?

Try to understand the company (which provided your challenge) and its perspective. Get familiar with its current business functioning by identifying the key characteristics of its business model. Think about each aspect in the recommended order and try to answer belonging questions:

- CUSTOMER SEGMENTS - Who are your company's costumers? Is it people or companies? What kind of people or companies? Segment the costumers based on similarities.
- VALUE PROPOSITION - What is the product or the service of the company? What does the company offer costumers? What is its special value? (is it the price, the speed, costumer experience, design...?)
- COSTUMER RELATIONSHIPS - What type of relationship does the company have with each of its costumer segments? How does it interact with them? How does it maintain the relationship? Is it in person, through a third party, automated services...?
- CHANNELS - What are the touchpoints where costumers come into contact with the business/product/service of the company? How do they deliver the value proposition? Is it social media, public speaking, website, advertising, email...?
- REVENUE STREAMS - How does the company convert its value proposition (product/service) into financial gain? How does it earn revenue? Is it subscription fee, usage fee, licensing... or just free services?

GET FAMILIAR WITH THE COMPANY

ANALYZE THE COMPANY'S BUSINESS MODEL

- KEY ACTIVITIES - What are the tasks and actions that company has to do for its business to work? What activities does the company have to undertake in order to achieve the value proposition, generating revenue, reaching costumer segments and maintaining costumer relationships?

- KEY RESOURCES - What resources (people, knowledge, equipment, copyright, money...) are needed to achieve the key activities of the company's business?

- KEY PARTNERS - Which external partners (companies or suppliers) does the company need to perform its key activities and achieve the value proposition?

- COST STRUCTURE - What are company (top) costs of its business/product/service? How much does it cost to fulfill the key activities and achieve value proposotion? Are there any additional costs?

You may need to pause your activity and get more information, which is completely fine.

More information about business model canvas here, here and here for example.

The company is non-profit? You can use **mission model canvas.**

GET FAMILIAR WITH THE COMPANY

ANALYZE THE COMPANY'S BUSINESS MODEL

USE MISSION MODEL CANVAS
of non-profit company

*Mission model canvas is a great method to help you take into account and better understand a mission model and functioning principles of a **non-profit company/organization** in a structured way while focusing you on the key areas to address.*

What can you do?

Try to understand the company/organization (which provided your challenge) and its perspective. Get familiar with its current mission functioning by identifying the key characteristics of its mission model. Think about each aspect in the recommended order and try to answer belonging questions:

- BENEFICIARY SEGMENTS - Who benefits from the value company/organization creates? What kind of people or communities? Who benefits directly and who indirectly? Segment the beneficiaries based on similarities.
- VALUE PROPOSITION - What is the product or service of the company/organization? What does the company/organization offer beneficiaries? What is its special value/benefit?
- CHANNELS - What are the touchpoints where beneficiaries come into contact with company's/organization's solution? How does it deliver/widespread its solution/value proposition? Is it social media, events, flyers, website, advertising, email...?
- BENEFICIARY RELATIONSHIPS - What type of relationship does the company/organization have with each of its beneficiary segments? How does it interact with them? How does it maintain the relationship? Is it in person, through a third party, automated services...?
- IMPACT METRICS - What are the quantifiable measures of impact and achievements? How does the company/organization monitor delivered benefits and proposed value?

WHAT DO YOU NEED?

- mission model canvas template
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

medium

GET FAMILIAR WITH THE COMPANY

ANALYZE THE COMPANY'S BUSINESS MODEL

- KEY ACTIVITIES - What are the tasks and actions that company/organization has to do for its mission to work? What activities does the company/organization have to undertake in achieving the value proposition, generating impact, reaching beneficiary segments and maintaining beneficiary relationships?

- KEY RESOURCES - What resources (people, knowledge, equipment, copyright, money...) are needed to achieve the key activities of the company's/organization's mission?

- KEY PARTNERS - Which external partners (people, companies or suppliers) does the company/organization need to perform its key activities and achieve the value proposition?

- COST STRUCTURE - What are the company/organization (top) costs of its mission/product/service? How much does it cost to fulfill the key activities and achieve value proposotion? Are there any additional costs? How is the mission funded? What financing mechanisms are used?

You may need to pause your activity and get more information, which is completely fine.

More information about mission model canvas here and here.

The company is for-profit? You can use **business model canvas.**

GET FAMILIAR WITH THE COMPANY

INTERVIEW THE REPRESENTATIVES OF THE COMPANY

Conducting interviews is a great way to get an insightful information and therefore a better comprehension of the company (and the challenge).

What can you do?

Interview someone from the company (which provided your challenge), to get a bigger picture about the company. Get familiar with its perspective, business, purpose, goals, values, functioning, area of work and their services/products...

- HOW TO CONDUCT THE INTERVIEW?

Maximum of 3 of your team members should be present in an interview at the same time to avoid overloading the interviwee.

Each team member needs to have a clear role in the interview: interviewer, note-taker, observer/photographer/voice-recorder/...

It is recommended you prepare your questions beforehand. You can ask broad questions about company's (or interviewee's) values, habits, goals, functioning, work... and more specific questions related to the challenge.

Take a note of exactly what the person answers and avoid writing down your own interpretations of the answer. Don't forget to observe and take a note of your interviwee's behavior, body language and the context of your conversation.

- HOW MANY PEOPLE TO INTERVIEW?

We recommend interviewing 3 to 5 company's representatives.

- WHERE TO CONDUCT THE INTERVIEW?

If possible, conduct the interviews in a face-to-face setting with each interviewee individually. The recommended location for the interviews is a familiar space for the interviewees, so they can be more relaxed and comfortable.

If it is necessary, you can also conduct interviews in an online setting. If face-to-face setting is not possible, you can send your questions to the interviewees and then collect written feedbacks.

Compare the answers of different interviewees, organize your notes and insights and prepare a summary of your discoveries about the company (and the challenge).

WHAT DO YOU NEED?

- voice recorder/pen and notepad/keyboard
- discussion channel
- **interviewees**

TYPE OF ACTIVITY

group or individual

SUGGESTED TIME FOR ACTIVITY

minimum 5 hours

LEVEL OF DIFFICULTY

medium

ANALYZE THE CHALLENGE

DO RESEARCH ABOUT THE CHALLENGE

GATHER **DATA AND FACTS**

Gathering data about the challenge (its problem/opportunity) is a great way to broaden the understanding of a challenge and take on a different perspective on the challenge, the goals and the means to get there. This raises the probability of a successful solution since you try to target the real issues.

What can you do?

Try to thoroughly understand the challenge:

Gather objective data and facts about the problem/opportunity from the company or online. Try to find the numerical data (e.g. number of items produced, the amount of waste, ratings, number of complaints...), that is usually available in company's databases and information systems and can typically be generated as some sort of statistics (averages, trends...) over a period of time.

Focus also on more subjective data about the problem/opportunity, that is based on someone's opinions and answers (e.g. the content of complaints or survey's answers...) in a form of statistics or just descriptions.

Try to really understand:

- what is the problem/opportunity about,
- who is involved,
- when, where, why and how does the problem/opportunity appear or show,
- why, how, when, where, with whom should a problem be solved/opportunity seized...

Try to comprehend the broad context and situation behind the challenge and its background.

ANALYZE THE CHALLENGE

DO RESEARCH ABOUT THE CHALLENGE

CREATE **USER PERSONAS**

Gathering further insights about the challenge by creating user personas (target audience of the solution) is a great way to take on a different perspective on the challenge, the goals and the means to get there. This raises the probability of a successful solution since you try to target the real issues and needs.

What can you do?

Try to really understand your target audience (users) - their experiences, issues, needs, expectations, motivation, behavior, feelings, thoughts, desires, goals, skills... and create user personas following the sequential steps:

1. EMPATHIZE WITH USERS

Empathize with users through observation, engaging with users and imagining yourselves in users' situation to gain a deeper understanding of their situation. Identify your target audience (Who are users, relevant for your challenge? What is typical for them? What are their characteristics?) and their functioning (What kind of issues/complaints do they have? How do they function? What do they need/want? What could benefit them?...). Use all or just some of the following activities to understand your problem/opportunity and users better:

- BEGINNER'S MINDSET – Mentally put yourselves in the situation of a beginner (someone who has no experience with this particular matter) and consider how they would feel and react, how would they do something, what would they need...

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• notepad	individual	minimum half an hour	low

More information about beginner's mindset here.

ANALYZE THE CHALLENGE

DO RESEARCH ABOUT THE CHALLENGE

- USER-BASED STUDIES – Do a research on users through website/app analytics and/or observations (on social media, through photos and videos...) or survey/interview. This activity is especially recommended if you want to create *user personas* in the third step of the research about the challenge.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• notepad • discussion channel • (web browser)	group or individual	minimum 2 hours	low / medium in a case of a survey or interview

More information about observations and interviews here.
More information about conducting survey/interviews here.

- BODYSTORMING – Physically experience a situation and immerse yourselves fully in the users' environment. Prepare scenarios and props to imitate the real situation. Some of you play the scenarios, others observe. Note and discuss those observations and experiences to better understand users' experience.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• notepad • discussion channel	group	minimum 5 hours	hard

More information about bodystorming here.

ANALYZE THE CHALLENGE

DO RESEARCH ABOUT THE CHALLENGE

2. SHARE-AND-CAPTURE YOUR DISCOVERIES

To draw out nuance and meaning that wasn't initially realized, share gathered stories or discoveries with your whole group, compare each other's experiences, listen closely and look for more (hidden) information about your target audience (users).

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• notepad • discussion channel	group	minimum half an hour	low

More information about story share-and-capture here.

ANALYZE THE CHALLENGE

DO RESEARCH ABOUT THE CHALLENGE

3. CREATE USER PERSONAS

To really understand and vividly imagine your target audience (users), group your detected users and create user personas = semi-fictitious representations of your user groups.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• user personas template • information about users • discussion channel	group	minimum 3 hours	medium

Use the following sequential steps:

i. SEGMENT YOUR USERS – Analyze the research data you have collected about users and identify patterns of attributes that make it possible to group similar people together. Create groups (4 groups maximum) of users with similar characteristics that represent user personas.

More information about segmenting/identifying patterns here.

ii. CREATE USER PERSONAS – Based on your needs and identified groups of users with similar characteristics, prepare presentations of main user personas (name, photo, motto, background, demographics, personality traits, motivations, goals, frustrations, preferences...).

More information about creating user personas here and here.

ANALYZE THE CHALLENGE

REFLECT ON THE CHALLENGE AND UNDERSTAND IT BETTER

Reflecting on the challenge is a great way to first think about all the gathered data (about the company, the challenge, the context and the situation) and then prepare an organized, whole and clear picture of the problem/opportunity you are working on.

WHAT DO YOU NEED?

- notepad
- information about the challenge
- discussion channel

TYPE OF ACTIVITY

group or individual

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

low

1. ANALYZE THE DATA

Firstly, analyze all the gathered data and clarify the problem/opportunity by asking yourselves some following questions. It is recommended to use all the following activities, but feel free to choose and use them as you see fit to your needs:

- WHAT'S GOING ON? – Think about what's actually going on with this challenge - e.g. What do we already know? What's the problem/opportunity exactly? What's the impact of this problem/opportunity? Who is involved in this?
- WHAT IS THE ROOT CAUSE OF THE CHALLENGE? – Think about what's the real, core reason of this challenge - ask "why" five times: firstly, start with your challenge and form the question "why" based on the apparent result and then further questions based on the previous answer. *More information about 5 whys method here and example here.*
- WHAT'S SUCCESS? – Think about how will you know you successfully solved the challenge - what's the vision of the future when this problem is solved or opportunity seized? What do you want the solution to do? What are the restrictions? What must it not do? What are the essential outcomes? How will you evaluate the success of the solution?
- WHAT ARE THE FEELINGS? – Think about what do you feel about the challenge based on all the information you have - explore and express emotions, feelings, hunches about the challenge and the vision of the solution; share fears, likes, dislikes...

ANALYZE THE CHALLENGE

REFLECT ON THE CHALLENGE AND UNDERSTAND IT BETTER

WHAT DO YOU NEED?

- notepad
- information about the challenge
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

low

- WHAT ARE THE POSITIVE, NEGATIVE AND INTERESTING ASPECTS? – Think about what are the positive, negative and interesting aspects of this challenge you are facing. You can do PNI method:

  Use 3 columns: P, N and I. individually or collectively (in groups of 4 participants maximum) identify positive (P), negative (N), and interesting (I) aspects of the problem/opportunity and fill in the columns with your answers.
  In the interesting aspects section you can also include neutral or complex aspects.
  Try to follow the sequential order P – N – I and avoid jumping between the columns.

  To finish, share all the PNI tables and collaborate.

2. ORGANIZE THE INSIGHTS

Organize and display the insights you have collected and developed about the challenge you are about to solve.

It is recommended you organize and display your gained insights about the problem/opportunity. For example you can use a Mind Map:

Firstly, in the center of the diagram write down the core topic of the mind map (the challenge/main problem/main opportunity). Expand your diagram outwards by adding branches that outline the most basic subtopics/key elements, e.g. users, goals, core reasons... Here you can keep it simple and not worry about too much detail. Then explain each subtopic/element into more detail by adding more specific branches. Continue with the branching until you run out of relevant information/aspects/elements.

Use different fonts, shapes, images, colors on specific branches to visualize it better.

If needed, you can rearrange the topics in your mind map.

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GENERATE IDEAS

- INNOVATE ON AN EXISTING PRODUCT/SERVICE
- GENERATE IDEAS WITH INSPIRATION
- PRODUCE BRAND NEW SOLUTIONS

CONSIDER AND CHOOSE IDEAS

- CONSIDER THE GENERATED IDEAS
- CHOOSE THE BEST IDEA

IDEATE GUIDELINES

for creativity-based process

STAGE 2

Erasmus+ - Partnerships for Digital Education Readiness (KA226) |Project ID: 2020-1-IT01-KA226-VET-009196

STAGE 2

IDEATE

HOW TO DO IT?

The next stage of solving your challenge is to ideate.

Based on the knowledge you gained about the company and challenge, it is now time to produce creative ideas on how to solve your challenge.

For this stage different steps, activities and methods are recommended, but feel free to choose and use them as you see fit to your needs. Do at least one activity to generate ideas and at least one activity to consider the generated ideas.

1 **Start with generating ideas** through an activity *or* multiple activities suitable to you:

If your challenge is to work on *an existing product/service,* it is recommended you use SCAMPER method.

If your challenge doesn't rely on an existing product/service, but rather *needs completely new solution*, one *or* more activities for producing many brand new ideas are recommended - you can use brainwriting *and/or* 4x4x4. In addition, even though lotus blossom method is not our first recommendation in this stage, you can try using it *if other methods don't suit you*.

If you want some *inspiration to start producing the best ideas*, you can generate ideas with inspiration gained through the use of mood board *and/or* sketching. If you want to generate many ideas after developing the inspiration, you can still use method(s) for producing brand new ideas.

2 After the generation process, **consider gathered potential idea(s)** through preferred guiding questions of 6 thinking hats method + productive thinking model *and/or* PNI method.

Lastly, if you still have several potential ideas of the solution and trouble choosing the best one, you can pick the best solution by using 1x1x1 *and/or* dot voting.

GENERATE IDEAS

INNOVATE ON AN EXISTING PRODUCT/SERVICE

USE **SCAMPER**

SCAMPER is a great method to improve an already existing solution to your challenge and it helps to easily and quickly broaden your perspective and look on the possible improvements of an existing solution from various different angles.

What can you do?

Have in mind the existing product/service and its relevant aspects (values, benefits, touch points, attributes, pricing, markets...). Individually or collectively consider 7 following perspectives in any order. Not necessarily all the questions need to be answered. Do not worry if questions seem overlapping. All answers should be welcomed – generate as many ideas as possible.

- SUBSTITUTING – What part of the product/service can we substitute, replace, or use instead to make an improvement? Is it components, ingredients, procedures, materials, people, name, time, location, policy...?
- COMBINING – What can we combine, mix, merge, blend, or integrate to make an improvement? Is it resources, units, components, technologies, steps of the process, purposes, objectives, activities...?
- ADAPTING – What can we adapt, change, copy, borrow, adopt, alter, adjust, tweak to make an improvement?
- MODIFYING – What can we modify, magnify, minify, exaggerate, multiply, duplicate, emphasize to make an improvement? Is it smell, form, motion, meaning, size, time, duration, frequency...?
- PUTTING TO OTHER USES – What can we repurpose or use in new ways (e.g. in other places, people...) to make an improvement?
- ELIMINATING – What can we eliminate, remove, eradicate, simplify, narrow down to make an improvement?
- REARRANGING – What can we rearrange, turn the other way around, reverse, interchange to make an improvement? Is it the process, components, roles...?

Gather or present all the answers and think: Do any of the answers stand out as viable solutions? Could we use any of them to create a new product/service or develop an existing one? Take the good ideas and explore them further.

For an example of this method, see this.

If you don't have/don't want to work on an already existing solution, you can use activities for producing brand new solutions.

WHAT DO YOU NEED?

- **an existing product**
- **knowledge about an existing product**
- knowledge about the challenge
- SCAMPER template
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

low

GENERATE IDEAS

GENERATE IDEAS WITH INSPIRATION

USE **MOOD BOARD**

Mood board method is great to visualize inspirations and ideas and therefore allows to more easily work through a challenge and an idea, while also enabling triggers for new inspirations and interpretations of a collected content to encourage new perspective and ideas.

What can you do?

Create a visual presentation or »collage« of inspirations for generating and expressing ideas of the solution. Don't forget to keep an open mind, so you don't limit yourselves. Follow the sequential steps individually or collectively.

- SELECTING MOOD BOARD THEME – Name your mood board and put down some initial ideas and notes before starting to collect inspiration.
- COLLECTING MATERIAL – Collect material based on the established theme of the mood board and »pin it« to the board. Is it inspiring words, websites, samples of objects, images, examples of motion and sounds (GIFs, videos, audios)? You can even add samples of colours, fonts, shapes etc. for finishing touches of the product.
- ORGANIZING MESSY MOOD BOARD – Arrange the ideas in a best composition. This process can take a while, because you'll probably have more material than you need, and it might look scattered. Start by exploring composition and introducing hierarchy. Place a key element such as a logo to anchor your board and change the size and position of the remaining elements to indicate their importance and relationships to one another.
- EXPLAINING THOUGHTS – Write down some notes about thinking process and found ideas (not necessarily into too much detail – can be in the form of notes, labels, emojis...).
- DISCUSSING – When the first version of mood board is done, it's time to sum up and present ideas to the whole group. Discuss the ideas and collect further suggestions.
- BUILDING ON YOUR IDEA – Consider and implement new suggestions/ideas onto the mood board and use it as fundament of solution development. You can even create multiple mood boards to explore different directions.

WHAT DO YOU NEED?

- knowledge about the challenge
- e-board
- discussion channel(s)

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 2 hours

LEVEL OF DIFFICULTY

low

GENERATE IDEAS

GENERATE IDEAS WITH INSPIRATION

USE SKETCHING

Sketching is a great method to quickly try out and present ideas while enabling visualisation to more easily work through a challenge and an idea and also enabling different interpretations of a sketch to encourage new perspective and more ideas.

What can you do?

Express and explore ideas through doodling, rough drawing, or sketching freely, where your artistic skills are not in the spotlight. Keep an open mind and don't limit yourselves.

Sketching can be done collectively or individually and then shared with others.

You can sketch concepts, process, overview of gathered information, metaphors...

Explore different interpretations of sketches and discuss it collectively.

Use it to organize information, to explore inspiration, to build on the idea, to clarify issues...

You can also do the structured 4-STEP SKETCH in the following order:

- NOTES - During 20 minutes, individually take into consideration everything displayed and discussed so far, then take notes of what the main, important points are.
- IDEAS - During next 20 minutes, individually take a look at the notes and try to make brief sketches and notes of possible solutions.
- CRAZY 8'S - Section your individual board into 8 sections and work further on your ideas by rapidly sketching eight variations of your ideas (spend 1 minute per sketch, all together 8 minutes).
- SOLUTION SKETCH - Take 30 minutes of individual sketching to make your best idea more specific and detailed. All of your sketches can then be shared with the team, discussed and voted upon.

More information about 4-step-sketch here.

WHAT DO YOU NEED?

- knowledge about the challenge
- sketchpad
- discussion channel(s)

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 2 hours

LEVEL OF DIFFICULTY

low

GENERATE IDEAS

PRODUCE BRAND NEW SOLUTIONS

USE **BRAINWRITING**

Brainwriting is a great method to produce many new ideas of the solution by giving time and bigger privacy to express ownselves. It also includes all team members and gives everybody a chance to simultaneously join with their own ideas and upgrade the previous ideas.

What can you do?

Each participant gets their own blank template divided into three (or more) boxes.

Now generate ideas individually – you have 5 to 7 minutes to fill your first box with indications on possible solution to the challenge. Keep in mind to be daring - there is no right or wrong answers and even the craziest ideas may eventually lead to a potentially ground-breaking perspective.

After the first box is filled, everybody passes the template to their neighbor clockwise. You should consider the idea on the received template and continue with generating the ideas by expanding the colleague's idea or starting from scratch with a new proposal.

After 7 minutes, templates are passed again, and the process repeats until the whole template is filled.

Then all of you begin to examine and discuss the products of the brainwriting session.

For the example of this method, see this.

WHAT DO YOU NEED?

- knowledge about the challenge
- notepad
- discussion channel
- channel for passing the ideas to colleagues
- **at least two participants**

TYPE OF ACTIVITY

individual and group

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

low

GENERATE IDEAS

PRODUCE BRAND NEW SOLUTIONS

USE **4X4X4**

4X4X4 method is great for producing many ideas while including all team members and at the same time already narrowing down the selection of the best ideas.

What can you do?

You individually write down four essential ideas about the solution to the challenge.

Then you get into pairs - share your own ideas with each other and reach an agreement on the four essential ideas.

Then get into groups of four and do the same.

Repeat the process until only one big group is left and the whole group has reached an agreement and decided which are the four essential ideas related to the challenge. If already possible, you can then also decide on one main essential idea (otherwise continue with the following steps of *idea consideration*).

WHAT DO YOU NEED?

- knowledge about the challenge
- notepad
- discussion channel(s)
- **at least four participants**

TYPE OF ACTIVITY

individual and group

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

low

GENERATE IDEAS

PRODUCE BRAND NEW SOLUTIONS

USE LOTUS BLOSSOM

➡ADDITIONAL METHOD YOU CAN CONSIDER IF PRIMARELY SUGGESTED METHODS DIDN'T SUIT YOU

Lotus blossom method is great for producing many ideas of the solution for your challenge and also already for delving into each of the produced ideas and searching for more specific and detailed ways of how to achieve a specific idea.

What can you do?
Focus on the problem/opportunity of your challenge and think about possible solutions following sequential steps:

- Get a lotus blossom template or create one 3x3 square (known as blossom) in the middle of your sheet and eight independent 3x3 squares (blossoms) around a central blossom, not touching it.
- Put your initial challenge (problem/opportunity) in the central box of your central blossom.
- Brainstorm components, solutions or themes, related to this challenge, and put them in the boxes surrounding the central box.
- These eight ideas from the surrounding boxes should now be used as the centers of eight outer blossoms.
- Now that every outer blossom has its own central concept/idea, that can be better understood and broken down, brainstorm further components, solutions or themes, related to this outer centers, and put them in the boxes surrounding outer centers.

Try to complete all of the blossoms (fill all the empty squares and boxes) to maximize ideas. If you exhausted all the ideas and you are satisfied with the outcome, you can finish earlier.

If you find concepts in the lotus blossoms that need to be further broken down, you can add new squares (blossoms) with these concepts as the centers and continue the process.

At the end, you can assess and eliminate collected ideas based on their suitability, practicality, financial perspective, feasibility...

For more information about lotus blossoms here and here.

WHAT DO YOU NEED?
- knowledge about the challenge
- lotus blossom template
- discussion channel

TYPE OF ACTIVITY
individual and group

SUGGESTED TIME FOR ACTIVITY
minimum 1 hour

LEVEL OF DIFFICULTY
medium

CONSIDER AND CHOOSE IDEAS

CONSIDER THE GENERATED IDEAS

USE 6 THINKING HATS + PRODUCTIVE THINKING MODEL

6 thinking hats and productive thinking model are two methods that work great together to think about the strenghts, weaknesses, potential and possible improvements of an idea.

What can you do?

Focus on the developing idea and follow the steps in any order (it is recommended you think about attractions before the worries). Not all steps need to be used.

The whole group should focus on a particular step/perspective at once to achieve more collaboration. You can initiate a few minutes long individual thinking before the collective discussion or even during an open discussion.

Keep in mind that you focus on one step/perspective at the time and avoid frequent switching between the perspectives. You shouldn't think in your own way and then say it's a specific perspective, but opposite: you should start thinking in a direction that the step commands.

- WHAT DO YOU FEEL ABOUT THE IDEA? – Explore and express the emotions, feelings and hunches about the idea.
- WHAT ATTRACTS YOU TO THE IDEA? – Explore positives, values, benefits of the idea.
- WHAT WORRIES YOU ABOUT THE IDEA? – Spot difficulties and possible obstacles of the idea. Think why something might not work or could go wrong.
- DOES THE IDEA MEET THE CRITERIA? – If you developed success criteria when you *tried to reflect on the challenge and understand it better*, think if the idea meets your success criteria and why it does or does not.
- CAN YOU UPGRADE THE IDEA? – Based on your reflections of the idea, express new possible perspectives and concepts. What can make it better? If you developed success criteria, you can think how can you make the idea meet the success criteria more?

To help yourselves, you can repeat the necessary previous steps/activities of ideation and assessment.
If you don't find any attractions or sense in the idea, there is no point of developing it further.

WHAT DO YOU NEED?

- knowledge about the challenge
- knowledge about the existing product (if you are working on it)
- generated idea(s) of the solution
- notepad
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 2 hours

LEVEL OF DIFFICULTY

low

CONSIDER AND CHOOSE IDEAS

CONSIDER THE GENERATED IDEAS | USE **PNI**

PNI is a great method to think about strenghts, weaknesses and interesting aspects of an idea.

What can you do?

Have in mind the challenge (problem/opportunity) and potential ideas, that are to be analyzed. Set the topic or guiding question (e.g. Is this idea good? What are the pros and cons of each idea? What are the costs and benefits of the idea? What would happen if...?).

Get a template with three columns: positive aspects (P), negative aspects (N), interesting aspects (I).

Individually or collectively (groups of 4 participants maximum) identify positive, negative, and interesting aspects of each potential idea and fill in the columns with your answers. In the interesting aspects section you can also include neutral or complex aspects. Try to follow the sequential order P – N – I and avoid jumping between the columns.

To finish, share all the PNI tables and discuss the best option.

WHAT DO YOU NEED?

- knowledge about the challenge
- potential idea(s) of the solution
- PNI template
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

low

CONSIDER AND CHOOSE IDEAS

CHOOSE THE BEST IDEA

If you have several potential ideas of the solution and some trouble picking the best one you would like to implement, we suggest the following choice-making activities.

What can you do?

You can use any of the following activities, depending on your needs and preferences:

- DOT VOTING

Dot voting is a great method to democratically choose the best idea by taking in account opinion of every team member.

Everyone has to give their vote. Each individual gets a number of "dots" (usually it is 10 dots per person), that you assign to the ideas you think are the best. You can assign all dots to one idea or however divide them between ideas.

Voting should take place in silence and without lobbying.

The idea with most votes wins.

If you have a tie between the best ideas, you can discuss your answers and/or vote again (but only on the top ideas).

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • **at least two potential ideas of the solution** • voting sheet • discussion channel	individual and group	minimum half an hour	medium

CONSIDER AND CHOOSE IDEAS

CHOOSE THE BEST IDEA

- 1X1X1

1X1X1 is a great method to gradually narrow down the list of best ideas while making discussions and agreements.

You individually consider the list of potential ideas and pick one essential idea about the solution to the challenge.

Then you get into pairs - share with each other which idea you picked and why. Then reach an agreement on the one (best) idea out of those two shared.

Then get into groups of four and do the same.

Repeat the process until the whole group has reached an agreement and decided which is the best idea related to the challenge.

If you couldn't reach the final agreement as a group, you can use *dot voting*.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • **at least four potential ideas of the solution** • **at least four participants** • discussion channel	individual and group	minimum 1 hour	low

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REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

CREATE A PRESENTATION OF THE PROTOTYPE

IMPLEMENT GUIDELINES

for creativity-based process

STAGE 3

Erasmus+ - Partnerships for Digital Education Readiness (KA226) |Project ID: 2020-1-IT01-KA226-VET-009196

STAGE 3

IMPLEMENT

HOW TO DO IT?

The last stage of solving your challenge is to implement.

Now it is time to create a prototype of the idea you chose for solving your challenge.

For this stage different steps, activities and methods are recommended, but feel free to choose and use them as you see fit to your needs. Do at least one activity to refine the chosen idea, at least one activity to prototype the chosen idea and at least one activity to create a presentation of the prototype.

1. **First, take the chosen idea and refine it** by developing it further through a preferred activity *or* multiple activities:

If not done previously (in the stage 2), it is strongly suggested to first think about the chosen idea by using guiding questions of 6 thinking hats + productive thinking model.

Then it is strongly suggested to think about the idea and delve into more specific details of the solution through a preferred activity *or* multiple activities - you can use lotus blossom method, business/mission model canvas *and/or* address your answers from previous step (6 thinking hats + productive thinking model).

2. When the idea is becoming a more specific and detailed concept of your solution, **continue developing the detailed concept of the solution and create your prototype** through a preferred activity *or* multiple activities - you can use mood board, sketching, diagrams, drawings, animations, business/mission model canvas, storyboard *and/or* wireframes...

If suggested prototyping options are not suitable for you, you can use any other prototyping activity of your preference.

3. Lastly, when the prototype is finished, **create a presentation of the prototype** by creating a short guide of the prototype *and/or* preparing a pitch.

REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

USE 6 THINKING HATS + PRODUCTIVE THINKING MODEL

6 thinking hats and productive thinking model are two methods that work great together to think about the strenghts, weaknesses, potential and possible improvements and clarifications of the concept.

What can you do?

Focus on the developing idea and follow the steps in any order (it is recommended you think about attractions before the worries). Not all steps need to be used.

The whole group should focus on a particular step/perspective at once to achieve more collaboration. You can initiate a few minutes long individual thinking before the collective discussion or even during an open discussion.

Keep in mind that you focus on one step/perspective at the time and avoid frequent switching between the perspectives. You shouldn't think in your own way and then say it's a specific perspective, but opposite: you should start thinking in a direction that the step commands.

- WHAT DO YOU FEEL ABOUT THE IDEA? – Explore and express the emotions, feelings and hunches about the idea.
- WHAT ATTRACTS YOU TO THE IDEA? – Explore positives, values, benefits of the idea.
- WHAT WORRIES YOU ABOUT THE IDEA? – Spot difficulties and possible obstacles of the idea. Think why something might not work or could go wrong.
- DOES THE IDEA MEET THE CRITERIA? – If you developed success criteria when you *tried to reflect on the challenge and understand it better*, think if the idea meets your success criteria and why it does or does not.
- CAN YOU UPGRADE THE IDEA? – Based on your reflections of the idea, express new possible perspectives and concepts. What can make it better? If you developed success criteria, you can think how can you make the idea meet the success criteria more?

When finished answering, you can address the answers you produced and think about how to make the solution meet criteria even more, how to resolve the reasons for negative feelings about the idea and how to use and implement the reasons for positive feelings about the idea to achieve creating the best solution you will feel comfortable with.

WHAT DO YOU NEED?

- knowledge about the challenge
- knowledge about the existing product (if you are working on it)
- chosen idea of the solution
- notepad
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 2 hours

LEVEL OF DIFFICULTY

low

REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

USE **LOTUS BLOSSOM**

Lotus blossom method is great for delving into your idea and searching for more specific and detailed ways of how to achieve your idea.

What can you do?

Focus on the challenge and the chosen idea. Delve into your idea following sequential steps:

- Get a lotus blossom template or create one 3x3 square (known as blossom) in the middle of your sheet and eight independent 3x3 squares (blossoms) around a central blossom, not touching it.
- Put your chosen idea in the central box of your central blossom.
- Brainstorm components, solutions or themes, related to this idea, and put them in the boxes surrounding the central box.
- These eight components from the surrounding boxes should now be used as the centers of the eight outer blossoms.
- Now that every outer blossom has its own central concept, that can be better understood and broken down, brainstorm further components, solutions or themes, related to this outer centers, and put them in the boxes surrounding outer centers.

Try to complete all of the blossoms (fill all the empty squares and boxes) to maximize ideas. If you exhausted all the ideas and you are satisfied with the outcome, you can finish earlier.

If you find concepts in the lotus blossoms that need to be further broken down, you can add new squares (blossoms) with these concepts as the centers and continue the process.

If you want to assess the developed solution/concept, you can use 6 thinking hats + productive thinking.

For more information about lotus blossoms here and here.

WHAT DO YOU NEED?

- knowledge about the challenge
- chosen idea of the solution
- lotus blossom template
- discussion channel

TYPE OF ACTIVITY

individual and group

SUGGESTED TIME FOR ACTIVITY

minimum 1 hour

LEVEL OF DIFFICULTY

medium

REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

USE **BUSINESS MODEL CANVAS**
of for-profit company

*Bussines model canvas is a great method to help visualize what is important for the solution implementation and therefore understand and specify the key areas/elements for the implementation of a solution into a **for-profit company** in a structured, strategic way.*
Later on is also a great way to present the concept of the solution and implementation idea.

What can you do?

If you are working on creating profit through customers, use the business model canvas.
Have in mind your goals and chosen idea. Take the for-profit business model canvas template and go through 9 steps in this recommended order:

- CUSTOMER SEGMENTS - Who are your taget costumers? Is it people or companies? What kind of people or companies? Segment your costumers based on similarities. If you created user personas in ideation process, you can use them.
- VALUE PROPOSITION - What is your proposed solution - what is your product or service? What will you offer costumers? What is your special value - is it the price, the speed, costumer experience, design...?
- CHANNELS - What are the touchpoints where your costumers will come into contact with your business/solution? How will you deliver the value proposition? Is it social media, public speaking, webiste, advertising, email...?
- COSTUMER RELATIONSHIPS - What type of relationship will you have with each of your costumer segments? How will you interact with them? How will you maintain the relationship? Is it in person, through third party, automated services...?
- REVENUE STREAMS - How will you convert your solution/value proposition into financial gain? How will you earn revenue? Is it subscription fee, usage fee, licensing... or just free services?

WHAT DO YOU NEED?

- business model canvas template
- chosen idea of the solution
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

medium

REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

- KEY ACTIVITIES - What are the tasks and actions that are needed to make your business/solution model to work? What activities do you have to undertake in achieving the value proposition, generating revenue, reaching costumer segments and maintaining costumer relationships?

- KEY RESOURCES - What resources (people, knowledge, equipment, copyright, money...) are needed to achieve the key activities of the business/solution?

- KEY PARTNERS - Which external partners (companies or suppliers) will you need to perform your key activities and achieve the value proposition?

- COST STRUCTURE - What will your (top) costs of your business/solution be? How much will it cost to fulfill your key activities and achieve value proposotion? Will there be any additional costs?

Now take a step back and check if every costumer segment is linked to a value proposition and a revenue stream. Check if everything on the left side of the canvas is needed to support the right side of the canvas - if not, eliminate it.

If you want to assess the developed solution/concept, you can use 6 thinking hats + productive thinking.

More information about business model canvas here, here and here for example.

REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

USE **MISSION MODEL CANVAS** of non-profit company

*Mission model canvas is a great method to help visualize what is important for the solution implementation and therefore understand and specify the key areas/elements for the implementation of a solution into a **non-profit company/organization** in a structured, strategic way. Later on is also a great way to present the concept of the solution and implementation idea.*

What can you do?

If you are not focused on creating profit or targeting costumers, use business model canvas for non-profit context - mission model canvas.
Have in mind your goals and chosen idea. Take the mission model canvas template and go through 9 steps in this recommended order:

- BENEFICIARY SEGMENTS - Who will benefit from the value you'll create? What kind of people or communities? Who will benefit directly and who indirectly? Segment your beneficiaries based on similarities. If you created user personas in ideation process, you can use them.
- VALUE PROPOSITION - What is your proposed solution - what is your product or service? What will you offer beneficiaries? What is the special value/benefit of your solution?
- CHANNELS - What are the touchpoints where your beneficiaries will come into contact with your solution? How will you deliver/widespread your solution/value proposition? Is it social media, events, flyers, webiste, advertising, email...?
- BENEFICIARY RELATIONSHIPS - What type of relationship will you have with each of your beneficiary segments? How will you interact with them? How will you get their buy-in/support? Is it in person, through third party, automated services...?
- IMPACT METRICS - What are the quantifiable measures of impact and achievements? How will you monitor delivered benefits and proposed value?

WHAT DO YOU NEED?

- mission model canvas template
- chosen idea of the solution
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

medium

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REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

- KEY ACTIVITIES - What are the tasks and actions that are needed to make your solution model to work? What activities do you have to undertake in achieving the value proposition, measuring impact, reaching beneficiary segments and maintaining beneficiary relationships?

- KEY RESOURCES - What resources (people, knowledge, equipment, copyright, money...) are needed to achieve the key activities of your solution?

- KEY PARTNERS - Which external partners (people, companies or suppliers) will you need to perform your key activities and achieve the value proposition?

- COST STRUCTURE - What will your (top) costs of your solution be? How much will it cost to fulfill your key activities and achieve value proposotion? Will there be any additional costs? How will your solution be funded? What financing mechanisms will be used?

Now take a step back and check if every beneficiary segment is linked to a value proposition and a impact metrics. Check if everything on the left side of the canvas is needed to support the right side of the canvas - if not, eliminate it.

If you want to assess the developed solution/concept, you can use 6 thinking hats + productive thinking.

More information about mission model canvas here and here.

REFINE THE CHOSEN IDEA

FURTHER DEVELOP THE CHOSEN IDEA

FOCUS ON **DETAILS**

Focusing on the details is a great way to better visualize, imagine, represent, develop and present clear and concrete solution.

What can you do?

When your concept is established, you can think of specific features and characteristics which represent how your product will truly look like when finished.

Add details – style, right content, text, images, logo, colors, textures, fonts…

You can help yourselves with *mood board, sketching*…

If you want to assess the developed solution/concept, you can use 6 thinking hats + productive thinking.

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

INTRODUCTION

What can you do?

Create simple (low-fidelity) prototypes, that are not meant to be really sophisticated, but rather just tangible and concrete representations of the concept that help you work on the specifics of your concept and present it appropriately.

Think about what kind of prototype would suit your idea/concept/project best, e.g.:

- What is the best way to present a clear and informative image of the concept, that shows well enough what you had in mind?
- How could you show your proposed idea that the audience would understand it best?
- How could you show your proposed idea that the audience could form valuable feedback?
- How could you present and test the concept without using too many resources?
- What is the simple and quick way to present the concept? Is there a simpler or easier way to show it?

Choose the most appropriate way of prototyping, e.g.: mood board, sketching, user flow chart, flow chart, mind map, drawing, animation, storyboard, wireframes, business/mission model canvas...

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

USE **MOOD BOARD**

Mood board method is great to easily visualize the concept and is also allowing to more easily work on the specifics of the concept, while also enabling triggers for new inspirations and interpretations of a collected content to encourage new perspective and ideas.

What can you do?

Create a visual presentation or »collage« of the concept of your solution (the key elements, features, functioning...). Don't forget to keep an open mind, so you don't limit yourselves. Follow the suggested sequential steps individually or collectively.

- SELECTING MOOD BOARD THEME – Name your mood board according to your proposed solution.
- COLLECTING MATERIAL – Collect material that sums up, represents, captures the concept of your solution and »pin it« to the board. Is it words, websites, samples of objects, images, samples of motion and sounds (GIFs, videos, audios)? You can even add samples of colours, fonts, shapes etc. for finishing touches of the solution.
- ORGANIZING MESSY MOOD BOARD – Arrange the collected material in a best composition. You can introduce hierarchy and place a key element (such as a logo) to anchor your board and change the size and position of the remaining elements to indicate their importance and relationships to one another.
- EXPLAINING THOUGHTS – Write down some notes (not necessarily into too much detail – can be in the form of notes, labels, emojis...).
- DISCUSSING – When the first version of mood board is done, it's time to sum up and discuss possible adaptations.
- BUILDING ON YOUR IDEA – Consider and implement new suggestions onto the mood board and try to develop and present the best version of your solution.

WHAT DO YOU NEED?

- knowledge about the challenge
- idea of the solution
- e-board
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

low

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

USE **SKETCHING**

WHAT DO YOU NEED?

- knowledge about the challenge
- idea of the solution
- e-whiteboard
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 2 hours

LEVEL OF DIFFICULTY

low

Sketching is a great method to quickly present the idea while enabling visualisation to more easily work through the concept and also enabling different interpretations of a sketch to encourage new perspective and more ideas.

What can you do?

Use rough sketching to visualize your solution, represent the key functions or operation of the solution and organize information about your concept. If needed, also sketch elements of motion, sounds, colours, fonts, material, shapes etc. for finishing touches of the solution.
Sketching can be done collectively or individually.

You can sketch freely or use THE 8-6-4-2 SKETCHING METHOD:

Everybody sketches their own proposed concept in short sessions of 8, 6, 4 and 2 minutes. In between the sketching sessions, everybody gives and receives feedback that helps to further develop your sketches of the concept. At the end, all of you share your final sketches and choose the best sketch of the concept to work on.

More information about the 8-6-4-2 method here.

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

USE **WIREFRAMES**

WHAT DO YOU NEED?

- knowledge about the challenge
- idea of the solution
- e-board
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

medium

Wireframes are a great method to visualize and present the solution that is a website/app/software.

What can you do?

Create wireframes – a simple website/app/software blueprint. Think about the basic structure of website/app and focus on the key elements, the layout of elements, its functionality and navigation…

Have in mind the chosen idea, goals, user personas…

- How can be content organized to support our goals?
- What will user need for a good user experience?
- What should be the first thing user sees on the page?
- What will user expect to see on specific areas of the page?
- Where should the main message go?
- How can we make the user experience more intuitive?

You can keep it simple – visual appeal is not critical, because the main focus is on the blueprint. So you can use simple rectangles and squares as placeholders. But if preferred, you can also add colors, fonts, flashy graphics, actual images…

You can also use wireframes to create *user flow chart* or create clickable wireframes by linking them together to create the user flow.

More information about creating wireframes and user testing here and here.
More information about clickable wireframes here.

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

USE **DIAGRAMS**

What can you do?

Use diagrams to visualize and organize different aspects of the solution (key elements, features, functioning...). You can use different diagrams, e.g.:

- MIND MAPS – *visualize the structure and concept of a solution:*

First determine the core topic of the mind map (your solution) and write it down in the center of the diagram. Expand your diagram outwards by adding branches that outline the most basic subtopics/key elements. Here you can keep it simple and not worry about too much detail. Then explore each subtopic/element into more detail by adding more specific branches. Continue with the branching until you run out of relevant information/aspects/elements.

If needed, you can rearrange the topics in your mind map.

Use different fonts, shapes, images, colors on specific branches to visualize it better.

More information about mind maps here.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • e-whiteboard • discussion channel	group	minimum 2 hours	low

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

- USER FLOW CHARTS – *visualize the user flow (the path of the user):*

Have in mind your user personas and goals. Think of what users do before and after they interact with a part of your solution. Identify:

· What are the entry points and other touchpoints where user interacts with your product/service?
· What happens after or follows each step?
· What content you need to provide to users?
· How should different content be connected to each other?

Now visualize all the necessary information with a user flow chart. The flowchart can be used to describe both user task flows and back-end processes (necessary operations that users don't see).

It is recommended that in the flow chart you stick to chosen symbols as visual language (e.g. square = steps user takes, oval = starting/ending point of users path, diamond = point of user's choice/decision, arrow = the flow of the symbol).

More information about flow charts here and here.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • e-whiteboard • discussion channel	group	minimum 3 hours	medium

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

- FLOW CHARTS – *visualize the system flow (activities and decisions solution executes):*

Have in mind your solution and goals. Identify:

· What are the activities and decisions the solution executes?
· What are the necessary steps?
· What happens after or follows each step?
· How should steps be connected to each other?

Now visualize all the necessary information with a flow chart.

It is recommended that you stick to chosen symbols as visual language (e.g. square = process and steps, oval = start/end, diamond = decisions, arrow = the flow of the symbol).

More information about flow charts here.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • e-whiteboard • discussion channel	group	minimum 3 hours	medium

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

USE OTHER **LOW-FIDELITY PROTOTYPES**

- USE AN EXISTING BUSINESS/MISSION MODEL CANVAS OR UPGRADE IT WITH DETAILS – Show the mission/business structure and plan of your solution by displaying business/mission model canvas, created in the section *"Refine the chosen idea"*. For audience to better understand the design and features of your solution, you can also add to canvas one more section "Solution", where you describe or visualize by other methods your concept's key aspects (features, elements, functioning, details...).

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • business/mission model canvas • discussion channel	group	minimum 1 hour	low

- CREATE A DRAWING – Visualize your solution by creating 2D or 3D drawing of a scene that shows the look and the key functions or operation of your solution. You can make it simple by keeping the sketch look or you can refine it by making precise drawings, adding colors, textures, graphics etc.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • e-whiteboard • discussion channel	group	minimum 3 hours	medium

CREATE THE CHOSEN IDEA

PROTOTYPE THE CHOSEN IDEA

- CREATE A STORYBOARD – Visualize your solution and its features, elements and functioning by creating a storyboard, which contains several scenes that tell a story how the solution looks and works/is used. You can simply sketch it or refine it by adding colors and textures or even using graphics, templates...

  More information about storyboard here and here.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • e-whiteboard • discussion channel	group	minimum 5 hours	hard

- CREATE AN ANIMATION – Visualize your solution (the key elements, features, functioning) and how user uses it by animating it. Animation contains scenes that tell a story how the solution looks and works.

  More information about animation here.

WHAT DO YOU NEED?	TYPE OF ACTIVITY	SUGGESTED TIME FOR ACTIVITY	LEVEL OF DIFFICULTY
• knowledge about the challenge • idea of the solution • **animation tool** • discussion channel	group	minimum 5 hours	hard

CREATE THE CHOSEN IDEA

CREATE A PRESENTATION OF THE PROTOTYPE

What can you do?
Use your low-fidelity prototype and create efficient presentation of your solution. The following steps and activities are suggested:

- PREPARE A SHORT GUIDE OF THE PROTOTYPE:

Present a short introduction of the idea and the context. Shortly summarize the challenge you were attempting to solve and, if relevant, also indicate solutions that were considered and how/why they were not chosen.

Especially focus on the chosen/prepared solution. To thoroughly present it, add tittles, names, descriptions, explanations...
You can present expected outcomes, reasons for choosing this concept of the solution, goals and benefits of your concept, also possible/expected obstacles, possible ways to overcome obstacles, necessary further adaptations, additional suggestions...

Turn your prototype/solution visualisations into video presentations, brochures, sample ads, PowerPoint presentations, flyers...

WHAT DO YOU NEED?
- knowledge about the challenge
- the prototype of the solution
- discussion channel

TYPE OF ACTIVITY
individual and/or group

SUGGESTED TIME FOR ACTIVITY
minimum 3 hours

LEVEL OF DIFFICULTY
low

CREATE THE CHOSEN IDEA

CREATE A PRESENTATION OF THE PROTOTYPE

WHAT DO YOU NEED?

- knowledge about the challenge
- the prototype of the solution
- discussion channel

TYPE OF ACTIVITY

individual and/or group

SUGGESTED TIME FOR ACTIVITY

minimum 3 hours

LEVEL OF DIFFICULTY

low

- PREPARE A PITCH:

Pitch is a great way to clearly present your solution and attract audience's attention and interest through informative explanation.

Think about how could you attract and catch your audience at the very beggining of your pitch. You can even do a storytelling - tell a scenario/story in which you describe user's pain point or vision of success that your solution will address.

It is recommended you firstly position your challenge (the problem/opportunity you were trying to solve) - explain it, describe users' situation and perspective and back it up with any evidence you have collected during previous steps. It is suggested you also include a mission statements, e.g. our team's goal was to help users to...

When your challenge's context and goals are pictured and the need for solution is obvious, share how you're solving the challenge. Demonstrate your solution with the prototype you created. It is recommended you provide visual, tangible presentation of your prototype along with the guide of the prototype you might have prepared in a previous step, so that audience can easily and quickly understand it.

Keep it precise and to the point. Focus on the benefits and contributions of your proposed solution. Highlight what is so special about your solution, why it works, why it is better/different than other options, why are you sure it could work... Also, think about possible obstacles, downsides or limitations of your solution and especially prepare how to present it and respond to discussion about it, e.g. can you explain it, can you suggest how to correct, prevent or limit it...

Practice you pitch, so your pitching is fluent, confident and straightforward. Try to use the language your audience will understand (don't over complicate it). Try to be authentic and passionate about your work, but not too long (recommendation is 15 - 30 minutes of pitching maximum).

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EVALUATE THE PROTOTYPE

CONDUCT A SURVEY AND GATHER FEEDBACK

EVALUATE GUIDELINES

for creativity-based process

STAGE 4

Erasmus+ - Partnerships for Digital Education Readiness (KA226) |Project ID: 2020-1-IT01-KA226-VET-009196

STAGE 4

EVALUATE

HOW TO DO IT?

After solving your challenge and presenting your prototype of the solution, the last part of your project is to evaluate.

Now it is time to gather feedback from the audience you presented the prototype to, and create a summary of the received evaluation.

You can find some instructions for this stage below. However, do feel free to use them as you see fit to your needs. Prepare survey questions and gather at least one feedback about your presented solution.

EVALUATE THE PROTOTYPE

CONDUCT A SURVEY AND GATHER FEEDBACK

Collecting feedback about the prepared solution and reflecting on it is a great way to further develop your competencies. By collecting external feedback, you can learn how to analyze others' opinions, make sense of them, upgrade your problem-solving skills, and develop an even better solution.

What can you do?

After showing the prototype of your idea to others, gather spoken or written feedback about your solution. It is best if you collect feedback directly or shortly after the presentation, so the impressions are still fresh. It is recommended you use an anonymous response format, especially if your audience is not directly involved in your challenge.

You can conduct short group or individual interviews with your audience or use short (printed or online) questionnaires... and collect the answers. It is suggested you always prepare your questions beforehand. You might ask your audience about e.g.:

- GENERAL OPINION – What do you think about this concept? On a scale of one to ten, how much do you like this solution? Why? What do you remember most about it?
- PERCEIVED BENEFITS AND SHORTCOMINGS – What do you think is the key benefit/advantage of this concept? What do you think is missing or is superfluous? What would you change or never change about it?
- INTENTION OF USE – On a scale of one to ten, how much would you be willing to use this product/service once it has been launched? Why? What current features would make you use it? Which features did you miss that would make you want to use it?
- EMOTIONAL REACTIONS – How does this product/service make you feel? On a scale of one to five, how excited, bored, frustrated etc. do you feel by this concept? Why?

If you feel it is necessary or relevant, you can also include demographic questions, e.g. about the age, gender, etc. of the respondent.

Collect the feedback and analyse it, e.g.: group similar answers and count the most frequent answers (especially if the answers are words), calculate the average answer (if the answers are numbers)... Find similarities or trends in those evaluations of the prototype and create a short summary of your most important discoveries.
Reflect on it: What have you learned? What was great? What could be done differently?

WHAT DO YOU NEED?

- knowledge about the challenge
- presented prototype of the solution
- notepad/printer/online survey tool
- discussion channel

TYPE OF ACTIVITY

group

SUGGESTED TIME FOR ACTIVITY

minimum 2 hours

LEVEL OF DIFFICULTY

low

MORE INFO ABOUT CREATING A SURVEY

- here
- here

RECOMMENDED DIGITAL SURVEY TOOLS

- Google Forms
- Microsoft Forms
- SurveyMonkey
- Mentimeter