

# FABULA C-Plus

Circular Economy applied to FABULA Project  
Framework



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The "FABULA C-Plus: Circular Economy applied to FABULA Project Framework" project, through **interactive, gamified and laboratory teaching**, develops consciousness and knowledge in students of classes IV and/or V (9-11 year olds) of Primary Schools in **Italy, Spain and Greece** and an ability to adopt behaviours oriented to the circular economy, experimenting and producing new creative and inventive ideas for an **early entrepreneurial vision in the field of reuse and recycling of resources and materials**.

**The** project focuses on the **educational field**, valorising the Primary School as a fundamental actor to promote the culture of sustainability, environmental sensitivity together with a proactive and enterprising way of thinking and acting, to give **waste a "second life"** transforming it into something artistically and entrepreneurially new.

The FABULA C-Plus project foresees:

- the consolidation of an international **multi-player network** for the **adaptation** of **education programmes** to the current and future needs of society and the labour market in the emerging sector of the **circular economy**
- the creation of **Open Educational Resources** in the form of **virtual tours**, consisting of 360° images, intuitively navigable from all devices, to allow students to immersively and interactively visit some locations that are **symbols of their daily lives (home, park, school)** to accompany them in a precocious cultural leap to face the challenge of the circular model with awareness.



In support of the OER, we will also produce in the different partnership languages:

- ✓ **Teachers' handbook** containing the useful guidelines to perform activities in the classroom better, providing teachers with technical and didactic support to guide students in the use of the virtual tours
  - ✓ **Student's Handbook** to allow students to learn about the learning course and to be guided in the use of the virtual tour stops.
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- the creation of the **CIRCLE Game: Circular Learning Evaluation Game** to train the target skills and evaluate the achievement of the Learning Outcomes that respond to the training objectives programmed by the virtual tours, in a playful-didactic learning context

- the design of **the CiCLE - Circular Creativity Labs for Entrepreneurship Methodological Manual**, to allow teachers to hold educational workshops designed to develop students' creativity, inventiveness and entrepreneurship
- the **methodological alignment** of a group of partnership teachers through **transnational mobility** to be carried out at the **Istituto Suor Orsola Benincasa** di Napoli, on the "**CiCLE**" **model**, to hold the **Circular Creativity Labs for Entrepreneurship**, in the role of **learning facilitators**
- the **testing**, by the students of the partner schools involved, with the support of the teaching staff, of the **OER**, **the further in-depth materials**, **the handbooks and the CIRCLE Game** process.

# Expected results



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1. the adoption of a **new educational path**, centred on entrepreneurship and on circular economy skills, configured as an international, integrated and permanent educational framework that will allow the development of target skills, experimenting innovative interactive, gamified and laboratory teaching forms, that are flexible and adaptable to the needs of the younger generations and future European societies

- 2. digital integration in learning**, favouring access to a plurality of **OERs**, developed in the form of consisting of **360° virtual tours**, intuitively navigable from all devices, to allow students to make an immersive visit to some locations that symbolize their everyday life (home, park, school, etc.), accessing **additional educational information and materials** (e.g.: videos, pdfs, links to websites, etc.) developed and/or sought online by the partnership, to consciously face the challenge of the circular model, passing from the concept of disvalue inherent in waste, to that of value, and, therefore, learn the process of transformation of each material they encounter along the virtual path. The OERs will be used online for at least **2 years after the project end** to allow a wider audience of students to acquire emerging skills in the field of the circular economy.



3. the adoption of a **European model** of innovative school education, based on advanced forms of interactive, gamified and laboratory teaching, to raise the level of circular and entrepreneurial culture of children
4. the construction of **stable links between schools, economic and institutional actors and territorial Policy Makers** to ensure the development of integrated approaches to generate positive effects on the diffusion of behaviours oriented towards the circular economy, experimenting and producing new creative ideas in the field of reuse and recycling of resources and materials, creating knowledge sharing systems for the value co-creation of a European pedagogical and cultural surplus value.

5. the **development of forms and opportunities** for **social/collaborative learning**, favoured by the confluence of the products made in the "**F.ED.R.O. - Financial Educational Resources and Opportunities**", available at <http://fabula.conform.it/fedro/>, created in the FABULA good practice project, enriching the contents foreseen by the didactic internationalization and content innovation strategy and methodology of the FABULA C-Plus project.
6. the **creation**, through online socialization spaces, of **networking opportunities**, to aggregate ideas, experiences, skills



7. the involvement of a panel of at least **45 students (15IT, 15ES, 15GR)** in the **testing of the OER, the further in-depth materials, the handbooks and the CIRCLE Game**. As part of the testing actions, meetings will also be organized with entrepreneurs and representatives of the sustainable business world, who make recycling their critical success factor
  
8. the **methodological alignment of a pool of teachers** of the partnership through a **transnational mobility** to be carried out at the **Suor Orsola Benincasa Institute in Naples**, on the **CiCLE model** to conduct the **Circular Creativity Labs for Entrepreneurship**, in the evolved role of **learning facilitators**, facilitating discussion, individual and group work, to enable young students to apply the knowledge learned and translate it into Re-CiCLE ideas.

9. the **design and implementation of the CIRCLE Game: Circular Learning Evaluation Game**, to train target skills and evaluate the achievement of Learning outcomes that meet the planned training objectives of virtual tours in a playful-didactic learning context.
10. the **identification of the opportunities** provided by regional, national and EU calls, to implement and transfer the results into new contexts.

# The partnership



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The partnership involves **7 partners** from **3 countries**, from the EU, Italy, Spain and Greece, that are an expression of:

- **Schools**

 **Istituto Suor Orsola Benincasa** (Lead partner)

 102 Dimotiko Scholeio Athinon

 Colegio Caude

- **the Public Administration at local/Regional level**

- 🇮🇹 Regione Campania, Assessorato all'Istruzione, Politiche Giovanili e Sociali

- **Education and Vocational, training**

- 🇮🇹 CONFORM

- 🇬🇷 AKMI S.A

- 🇪🇸 Formación y Education Integral (FEI)

# Partnership Meetings



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**MONTH 2:** Naples (IT), to:

- share the work plan and the **Project Management tools**,
- validate partners roles',
- agree and share the project communication and awareness raising actions,
- evaluate and validate the project monitoring and quality control activities and,
- **initiate the activities to be carried out for Output 1 STUDY COURSE TO DEVELOP ENTREPRENEURIAL AND CIRCULAR ECONOMY SKILLS**

**MONTH 8:** Athens (GR) to:

- validate the **STUDY COURSE**,
- define and plan transversal awareness and communication activities,
- plan the MOBILITY at the **Suor Orsola Benincasa institute** for **partnership teachers**,
- plan the actions necessary to implement the **I.O. 2 Development of OER contents**, the **I.O. 3 Creation of the CIRCLE Game: Circular Learning Evaluation Game** and the **I.O. 4 Methodological Manual of the Circular Creativity Labs for Entrepreneurship - CiCLE**

### MONTH 13: Madrid (ES) to:

- evaluate the results of the teachers' mobility,
- evaluate the state of the art of OER production and the **CIRCLE Game Teachers' and Students' handbooks and the Methodological Manual of CiCLE - Circular Creativity Labs for Entrepreneurship**,
- define the criteria and methods to select the participants for **piloting**,
- define the criteria and methods to carry out piloting where students will be engaged in proposing new "**Re-CiCLE**" **ideas**, intended as emerging business opportunities in the circular economy,
- define the criteria to collect contents, (also multimedia) that will aliment project communication to narrate participants' experience

**MONTH 18:** Athens (EL) to:

- evaluate and validate all the didactic materials (**IO2; IO3; IO4**) created to be used in the piloting phase
- **start piloting** activities in all partner countries
- define the programme and methods to organize the **dissemination seminars** to:
- present the **Study Course** to develop entrepreneurial skills and circular economy skills
- present the **CIRCLE Game and the Methodological Manual of the Circular Creativity Labs for Entrepreneurship**
- encourage the use of the **F.ED.R.O. - Financial Educational Resources and Opportunities Learning environment** available at <http://fabula.conform.it/fedro/> created during the FABULA good practice project, where the products made by FABULA C-Plus will converge
- present and valorise the new "**Re-CiCLE**" ideas proposed by students
- agree on the multimedia solutions to narrate the salient moments and experiences achieved by the project

## MONTH 24: Naples (IT), to:

- evaluate and validate the **results of piloting** conducted in the partnership countries
- validate the new **Re-CiCLE** ideas, intended as emerging business opportunities in the circular economy created by the target groups, resulting from the testing of the **OER**, other didactic and operational resources contained therein, together with the **CIRCLE Game**
- implement all the formalities necessary to close the project
- participate in the **final Conference** with the presentation of:
  - a) the results achieved (quality indicators of the initiative)
  - b) the products created
  - c) the new Re-CiCLE ideas proposed by the students

# The Intellectual Outputs



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# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

The IO creates a **European educational model dedicated to entrepreneurial and circular economy skills characterized** by the following elements of innovation:

- Centred on the **generation of ideas and solutions: the competence based model and the logic of the CiCLE-Circular Creativity Labs for Entrepreneurship**, will allow us to stimulate an ideational and solution oriented approach
- **Valorisation of team working**: working together to create new **"Re-CiCLE"** ideas
- **Innovative approaches** that surpass the classroom dimension and transmission of knowledge, promoting interactive, gamified and laboratory teaching, to develop critical thinking, creativity and entrepreneurial skills

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

- Interdisciplinarity. The course promotes the relationship between disciplines, exploiting the transversal nature of circular economy skills and entrepreneurial skills
- **Heterogeneity of learning:** with the **alternation of didactic actions in the classroom, game based solutions, e-learning and creative and laboratory activities** to generate new "**Re-CiCLE** " ideas as emerging business opportunities in the circular economy

The detailed, turnkey structuring of the **STUDY COURSE**, together with its multicultural characteristics, the result of the integration of the experiences and sensitivity of the partners, makes it transferable to other territories which, after linguistic and cultural adaptation, will be able to adopt the approach generating long-term impacts on a large audience of European children



# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

The **didactic programme** will contain:

**THE AIMS** declined respecting the taxonomies of the possession and exercise of the elements of cognitive, operational and behavioural competence

The didactic **OBJECTIVES** recalling the target skills in terms of cognitive, enabling and behavioural elements, taken as the output of the training process, observable, measurable and documentable.

The partnership will use a declination of learning outcomes that define the boundaries of the expected transformation improvement

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

### THE ARCHITECTURE OF THE TRAINING INTERVENTION

The Study Course will contain the design of the learning path consistent with the objectives, with the target group and be articulated in a sequence of didactic actions, guaranteeing a progressive course logic and equilibrium in the integration of the cognitive, operational and verification / control path

### THE EVALUATION PLAN OF THE LEARNING OUTCOMES

containing:

- the objects and the expected process / product standard to be evaluated
- the criteria and methods for assessing and certifying learning outcomes
- the tools for collecting information in relation to:
  - a) knowledge acquired
  - b) skills developed

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

- c) products developed
- d) behaviours adopted
- the times of administration, compilation and return
- the learning outcomes evaluation plan, accompanied by measurement tools

**THE LEARNING COURSE**, a didactic palimpsest with a learning plan divided into 3 integrated learning strands:

- **cognitive**, to develop knowledge, environmental sensitivity and awareness of entrepreneurial behaviour;
- **operational**, where the participants will be called, with the assistance of the teachers and the laboratory activities, to guarantee the results of the elaboration of work phases;
- **regulation/evaluation**, within which the didactic activities and the learning outcomes achieved must be controlled.

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

**EDUCATIONAL SUPPORTS** to facilitate learning, correlating them with the reference context, with the type of participants and with the objectives formulated, also providing instructions on the aims, methods and times of use of the materials, explaining the choices.

### THE SELECTION CRITERIA OF PARTICIPANTS

**THE INSTRUMENTAL LOGISTIC RESOURCES** to implement the training project, ensuring consistency with the context, the type of participants and the objectives.

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

**THE IMPLEMENTATION** of the Output will be coordinated by **SOB Schools (IT)**, which will be responsible for:

### TASK 1.1 REALIZE THE STUDY COURSE

- the definition of the aims, training objectives, methodologies and methods of carrying out and evaluating the educational programme
- the macro design of the Study Course structure
- coordination of co-working sessions to definition and share the Study Course

**ALL PARTNERS** will share and validate the methodological framework, the aims and the tools prepared

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

**TASK 1.2 DEFINITION OF THE TYPE OF TEACHING MATERIALS SUPPLIED WITH THE TRAINING PROGRAMME**, to develop entrepreneurial skills and circular economy skills, illustrating the benefits and critical issues of the transition from a linear production system to a circular production system.

The online and offline materials will actually be made in IO 2-3-4

**ISOB** will conduct a brainstorming action to collect information and ideas from the partners to be shared in order to then define the shared characteristics of the didactic resources to be developed.

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

### TASK 1.3 PILOTING

**ISOB** will:

- define the access requirements and the selection criteria for participants
- define and prepare the set of monitoring questionnaires
- define classroom actions, outlining the characteristics of the training sessions to be delivered, to supplement what is provided in interactive e-learning **(IO2)** and game-based learning **(IO3)**
- guarantee online/offline tutorship for its testing activities
- coordinate remote and classroom piloting actions for **45 students (15IT, 15ES, 15EL)**
- ensure online/offline technical support to generate creative ideas on recycling, reuse **(IO4)**
- evaluate creative ideas on recycling, reuse
- prepare a **compendium of the piloting** carried out with the contribution of partner reports

# Intellectual Output 1:

## Study course to develop entrepreneurial and circular economy skills

### TASK 1.3 PILOTING

**ALL PARTNERS** will have to:

- share, validate and apply the access requirements and the selection criteria of participants, as well as the set of questionnaires for monitoring the testing action
- Implement their own testing activities, ensuring online/offline tutorship and online/offline technical support in drafting creative ideas on recycling and reuse **(IO4)**
- share and validate the classroom actions to be delivered to children, to supplement what is made available online and that will be uploaded in the **FEDRO learning environment**
- participate in the evaluation of creative ideas on recycling, reuse **(IO4)**
- draw up the report of the testing undertaken



# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

In line with the Study Course, the partners will define the **OER**, dividing the research and content processing work.

By way of example, but not exhaustively, the **thematic areas of the OER** with the related contents are:

**Entrepreneurial skills**, articulated in **soft skills**, divided into:

- **cognitive**: analysis, problem solving, creativity, global vision, spirit of initiative
- **managerial**: planning, organization, decision-making, result orientation
- **relational**: communication, team working

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

**CIRCULAR ECONOMY SKILLS**, referring to the following areas:

- basic principles of the circular economy
- reference scenarios and new market models
- business circularity, product, materials and resources
- circular economy supply chain
- waste management
- primary and secondary materials
- closing of cycles
- circular economy opportunities and strategies with respect to different business models.

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

The **OER**, which can be used for **2 years after project end**, will be realized in the form of **360° virtual tours, using storytelling** models and assembly and editing software, professional tools, with the use of 360 ° 8K video cameras, to create videos that can be navigated from a desktop, by moving the cursor, and from a Tablet/Smartphone using the gyroscope, as well as with "**cardboard**" and "**VR Viewers**", which allow users to have an all-embracing experience.

The **360° Virtual Tours** will involve students in a new experience, capable of stimulating their senses and producing an emotional impact such as to amplify their interest and their "**circular**" sensitivity towards the resources and materials and spaces in which they are immersed. Thus, stimulating the desire for knowledge.



# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

The Tours can be accessed at any time, thus, breaking down the spatial and temporal limits in favour of a new promotion of the friendly environmental culture, which brings the younger public closer to it by involving them even more in the experience thanks to the addition of INTERACTIVITY, i.e. of "gate" objects that will allow them to access numerous multimedia items:

- by opening an image, a personalized information sheet, a website, etc.
- downloading a file (doc, pdf, excel, ppt, etc.)
- reproducing an audio and / or a video file, etc.

A fascinating subjective journey, in which environments, further investigation materials and environmental resources come together in **a single communication channel.**

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

Some settings (home, school, park) will be reconstructed using panoramic solutions, where one or more actors, in the role of teacher/expert, filmed using the **Chroma Key technique**, can move and speak to present or narrate, thus, increasing the level of engagement with students.

Furthermore, through **3D animated transitions**, it will be possible to visit the various environments by moving from one point to another in such a way as to give the user the natural impression of movement forwards or backwards, to the right or to the left, towards the chosen position.

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

Accompanying the **OERs**, the following will be produced in the different partnership languages:

- a **Teachers' Handbook** containing useful **guidelines** to carry out activities in the classroom in the best possible way by providing teachers with adequate technical and didactic support to guide students in the use of virtual tours and to stimulate reflection and learning on individual materials, in order to allow students to get to know the world of valorisation of waste, also through recreational and educational exercises
- A **Students' Handbook** which will represent an **easy-to-consult booklet to** allow young students to get to know the learning path in all its phases, in order to be guided in the use of both the various stages of the virtual tour, and in joint reflection sessions in the classroom and individual experimentation with game-based-didactic exercises conducted by the teacher in the classroom.

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

Realization of the Output will be coordinated by **FEI** (ES), that will be responsible for:

- planning times and methods
- checking the progress of activities
- detecting problems and requesting their correction
- activities related to the following TASKs

### 2.1 DESIGN OF THE CONTENT OF THE 360 ° INTERACTIVE VIRTUAL TOURS

**ALL PARTNERS** will have to:

- validate the storyboard and the feasibility study prepared by CONFORM as technical manager for the realization of the virtual tours
- elaborate their contents using the storyboard elaborated by CONFORM
- search/develop their multimedia items (images, informative tables, websites, files in different formats, etc.)
- translation of tour texts and navigation labels for subsequent translation into national languages

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

**FEI**, as coordinator:

- will harmonize the contents developed by the Partners, for the definitive version in English of the text of the tours and of the navigation labels for the subsequent translation into national languages

**CONFORM (IT)**, as technical manager, will have to:

- draw up the feasibility study to create the **OER** in the form of virtual tours
- draw up the storyboard to create the contents and facilitate the search/development of multimedia items



# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

### 2.2 REALIZATION AND RELEASE OF 360 ° INTERACTIVE VIRTUAL TOURS

This activity will be carried out by **CONFORM** due to its expertise gained in the creation of interactive 360 virtual tours.

In particular, it will be responsible for:

- shooting of different locations using 360 ° 8K video cameras, creating navigable videos and/or using the Chroma Key technique, if applicable
- editing of tours using editing software
- adding interactivity to access the multimedia items sought/developed by the partners
- subtitling in the different partnership languages and in English of the navigation texts and labels
- release of the **OER** in English and in the different languages of the partnership i.,e. IT, EL, ES for testing

**ALL PARTNERS**, coordinated by **FEI** (ES) will have to **test the prototype** with a view to fine tuning before the final release

# Intellectual Output 2:

## Elaboration of contents, design and creation of OER

### 2.3 DESIGN OF THE SUPPORTING EDUCATIONAL TOOLS

FEI, acting as coordinator will:

- ask **CONFORM** to elaborate a technical note containing the technological specifications and the use/access methods
- conduct a VIRTUAL BRAINSTORMING action with the schools and training bodies of the partnership: ISOB, Colegio Caude, 102 Dimotiko Scholeio Athinon and AKMI to collect and share ideas, information of a content and methodological nature useful for standardizing the models of the **Teachers' handbook** and **Students' Handbook** that accompany the 360 interactive virtual tours to:
  - offer teachers a pedagogical guide to using the Tour
  - generate a motivated and conscious adhesion of children to the pedagogical game by making them more autonomous and facilitated in using the tours
- prepare a draft of the two handbooks, which, after validation by the partnership, will be uploaded in the **"FEDRO"** environment as accompanying material for the OER

# Intellectual Output 3:

## Design and creation of the **CiRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME**

The **CIRCLE Game** will draw inspiration from snakes and ladders, as a traditional board game, and will stimulate direct participation in a recursive process of activation, verification and feedback to "train" the target skills and evaluate achievement of Learning outcomes corresponding to the training objectives of virtual tours in a gamified learning context that will be created:

1) both in **DIGITAL VERSION, AVAILABLE ONLINE** from different devices to offer greater interactivity, playing with images and sound effects and gamification solutions such as:

- **Points /Credits:** i.e. immediate rewards for actions
- **Levels/ Status:** progressive objectives that, if achieved, allow access to new content
- **Badges/Achievements:** establish a goal by stimulating the collectionism of a player profile
- **Rankings:** subdividing and ordering the performance of users, favouring competition
- **Challenges/Missions/ Objectives** that raise levels of engagement

## Intellectual Output 3:

### Design and creation of the CIRCLE GAME- CIRCULAR LEARNING EVALUTAIION GAME

2) and in **PAPER VERSION, DOWNLOADABLE AND PRINTABLE** from the project site with the dual objective of:

- involving children in the **creation of a real game**, from the cutting of the individual constituent elements (the cards, the pawns, the board) to its assembly, allowing them to rediscover the pleasures of a board game
- increasing the experience factors in learning, thanks to the use of **AUGMENTED REALITY**, of issues related to the circular economy and access to additional second level training content, sought by partners online, thus, allowing young students to discover and learn to use new technologies. By framing the boxes on the board with their device (smartphone and tablet) the user can in fact benefit from audio files, videos, 3D objects, captions, links and documents integrated into the reality and visible through the camera of one's device.

# Intellectual Output 3:

## Design and creation of the **CiRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME**

The children will, thus, be able to learn from direct experience in a virtual, contextualized, symbolised, gamified, augmented reality, with obvious advantages over traditional learning, as the **CiRCLE Game**:

- sets a more natural way of learning the disciplines of the circular economy, because it presents the problem instead of the solution and leads you to ask yourself questions instead of immediately providing answers
- allows a greater level of activity / interactivity, because it is the learner who leads the game and does it by applying his/her own personal style
- involves emotional aspects as well as purely cognitive ones
- allows you to make mistakes and to learn from your mistakes
- renders visible the cause-effect relationships of your behaviour and of the choices you make

# Intellectual Output 3:

## Design and creation of the CIRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME

These aspects characterize the product for strong **ELEMENTS OF TRANSFERABILITY** in different territorial and educational contexts to **GENERATE SYSTEMIC IMPACTS** aimed at:

- activating circular economy and entrepreneurship education programmes with long-term goals, offering students new forms and opportunities for learning concepts,
- specific methods and behaviours to teach them the fundamentals of culture, sustainability as a value and initiative as a drive to get involved (in the game).
- promoting the inclusion of education on the circular economy and entrepreneurship as an integral part of school curricula, to promote the dissemination of the culture of recycling, reuse, essential for the growth of future European citizens

# Intellectual Output 3:

## Design and creation of the **CiRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME**

**AKMI (EL)**, as the coordinator of the IO will:

- verify compliance with the implementation times of the individual activities planned per TASK
- check compliance of the solutions adopted with the needs shared with the partnership
- solve any problems

### **TASK 3.1 CIRCLE GAME DESIGN**

Design and implementation will be carried out by **CONFORM (IT)**, in agreement with the IO coordinator IO, due to its expertise.

As technical manager **CONFORM** will:

a )prepare the feasibility study

- study the constraints and estimate realization times
- analyse the solutions to be adopted to facilitate the learning process
- identify possible construction problems, with analysis of alternative solutions

# Intellectual Output 3:

## Design and creation of the CiRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME

b) design the Elements of the Game

- presence of a goal to be achieved
- system of rules
- feedback system
- voluntary participation

c) develop the Game Design Model regarding

- mechanics - Set of rules, possibilities, algorithms and structures
- dynamics - Flow of events / actions in compliance with the mechanics
- aesthetics - Emotional participation in dynamics

d) prepare the storyboard to allow partners to process the contents and search/develop further in-depth materials to be uploaded in the game, in the online version, to be made accessible through augmented reality and in the paper version



# Intellectual Output 3:

## Design and creation of the CiRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME

e) identify methods to verify/evaluate learning outcomes through play (question - answer - formative feedback)

**ALL PARTNERS** will have to:

view and validate the feasibility study and the storyboard and propose any changes

### TASK 3.2 CONTENT DEVELOPMENT OF THE CIRCLE GAME

**ALL PARTNERS**, coordinated by AKMI will:

- divide the work of elaborating contents, structured according to the recursive logic of question- answer-formative feedback, and of the additional materials in English, using the storyboard.



# Intellectual Output 3:

## Design and creation of the **CiRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME**

This subdivision will take place on the basis of the expertise and budget of the individual partners.

- validate the contents developed in EN by the single partners
- translate the contents into their own language, making any adjustments to make the language more consistent with the culture of their respective countries

### **TASK 3.3 DIGITAL REALIZATION OF THE CIRCLE GAME**

CONFORM will develop the game from a multimedia point of view assembling contents, creating the interface and the individual graphic parts and developing the individual parts of the game: Graphics; Coding; Sounds

ALL PARTNERS, coordinated by AKMI, will test the prototype with a view to fine-tuning before final release

# Intellectual Output 3:

## Design and creation of the CIRCLE GAME- CIRCULAR LEARNING EVALUTAION GAME

### TASK 3.4 CREATION OF THE PAPER VERSION OF THE CIRCLE GAME

- graphic creation and printing of cards, pieces and board
- addition of the AR through tags on the board and/or some cards to access audio/video/doc integrated into the game.

AR will be activated framing the tags printed on the board/cards with one's device.

**All Partners, coordinated by AKMI**, will **test the prototype** with a view to fine-tuning before final release.

**TASK 3.5 RELEASE OF THE GAME IN PAPER AND DIGITAL VERSION in IT, EN, ES, EL** for testing  
Individual partners will print the game for testing in the classroom and use it for dissemination purposes.

## Intellectual Output 4:

### CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

The partners will collaborate to create **THE CICLE-CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP METHODOLOGICAL MANUAL** to allow teachers to hold educational workshops aimed at developing the creativity, inventiveness and entrepreneurship of young students.

The Manual will guide teachers in the operational steps to **EVOLVE TOWARDS THE ROLE OF FACILITATOR**, This approach will allow children to participate in a practical, entrepreneurial experience, where they can develop ideas and transform them into action thanks to teamwork and sharing, maximizing learning by doing, to put ideas into practice, and produce a tangible result.

The use, from an educational point of view, of multiple "zero environmental impact" recycled materials will stimulate young people's imagination searching for and proposing new **Re-CiCLE ideas**, intended as emerging business opportunities in the circular economy.

# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

The manual will contain **A CASE HISTORY OF BEST PRACTICES** of circular business, to stimulate and put together successful ideas and projects.

The Manual's methodological cornerstones will refer to the following key concepts:

- **Simplification:** the facilitator teacher is able to alternate teaching with learning, managing to modulate different moments and phases of teaching and relations with the class, following a fil rouge that sees him/her as "guiding "and" being guided". In addition to technically managing his/her own subject, he/she works on himself/herself and works on the relationship with learners, to increase communication effectiveness, group dynamics and consequently learning for the class
- **Propensities:** leaving room for creativity, for the solution of real tasks, but also making children re-appropriate themselves with gestures



# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

- **Languages:** discovering children's languages to learn about the reality that surrounds them
- **Skills:** understood as behavioural qualities between autonomy and relationships to aim at a growth in the personality of the students by valorising their personal attitudes
- **Methods:** process and product- taking care of the educational process without neglecting the concrete final product necessary for motivation and self-assessment
- **Knowledge:** disciplines and transversal meeting points-setting up horizontal, vertical, collaborative curricula linked to disciplinary laboratory work, but also to civic skills linked to the culture of recycling and reuse.



# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

- **Discovery and research:** observation/research and experimentation/invention- children will be able to experience, through real and virtual, immersive discovery paths, but also become researchers, "craftsman" and "put into practice" knowledge
- **Techniques and tools:** craftsmanship and technology - the use of multiple recycled materials with zero environmental impact will stimulate young people's imagination in searching for and proposing new "Re-CiCLE" ideas,
- **Materials:** The use of multiple recycled materials with zero environmental impact will stimulate the imagination of young people in searching for and proposing new "Re-CiCLE" ideas

# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

The implementation of this IO will be coordinated by **Colegio Caude (ES)**, that will be responsible for planning, guiding and controlling the following TASKS:

### 4.1 MACRO-DESIGN OF THE METHODOLOGICAL MANUAL OF CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP with the indication of the following guiding principles:

- Increase the training of teachers on the use of laboratory teaching methods **IN THE ROLE OF LEARNING FACILITATOR** to develop a culture and an early, mature and conscious environmental sensitivity, educating them on the theme of the circular economy to overcome the disposable culture and practice with regeneration of resources.
- Provide suggestions and tools to design, manage and evaluate the **CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP**



# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

- Understand the mission of the Learning Facilitator
- Implement a research-action path, in which the individual experiences discussed in class are reworked and obtain indications on how to improve or consolidate one's methodologies
- Acquire the psycho-pedagogical basis of the communicative relationship in the classroom Training techniques for listening, managing negativity, active and engaging methods for effective lessons.
- Innovate the teacher-student relationship as a dynamic of motivation to learn.



# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

### 4.2 MICRO-DESIGN OF THE CICLE MANUALS

Definition of the purposes, objectives, operating methods, contents, timing, human, logistical and organizational resources to be engaged assuming as didactic drivers of the methodological model the following phases:

- Coordinate: task and relationship combination
- Organize the context and teaching
- Construct the context, consisting of a double orientation that valorises actions (the task) and relationships (the person)
- Both directive and participatory teachers, know how to lead and be guided
- Appreciation, constructive criticism, setting skills, study climate, cases
- Involve: self-other commuting
- Involve and include
- Negotiate words and facts, communicate in class

# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

- Circular communication system based on negotiation feedback
- Effective interpersonal communication
- Introductory principles of group dynamics
- Negotiation, methodology
- Help to overcome complexity
- Help in negativity
- Take care of oneself, others, the group
- Conflict management, theories and methods
- Teacher stress management
- Reception, containment of difficult behaviours, ability to help, emotional intelligence
- Activate from below
- Activate to actions

# Intellectual Output 4:

## CICLE - CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP Methodological Manual

- Motivate people to learn about knowledge and results of laboratory teaching based on experience and concreteness of creative ideas of reuse and recycling
- Creativity and entrepreneurship as forms of dynamic mobilization
- Kolb's wheel for experiential learning
- Laboratory teaching methods and tools
- Action and implementation plans

**ALL PARTNERS** will have the task of sharing and validating the Manual  
**ISOB, COLEGIO CAUDE AND 102 DIMOTIKO SCHOLEIO ATHINON** will adopt the Manual in the **PILOTING** phase (IO1) with the involvement of the teachers of the partnership who have benefited from a short-term joint staff training event (MOBILITY) at ISOB where they will acquire the methodological references of teaching workshop and the mission of the role of learning facilitator.

# Project Management



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# Work Package 1:

## PROJECT MANAGEMENT (M 1-24)

- Coordination of activities
- Financial Management
- Organisation of 5 partner meetings
- Governance of the information system
- Monitoring and evaluation of results



# Work Package 2:

## CO-ELABORATION OF A STUDY COURSE (M 1-6)

A shared educational programme that integrates the training offer of the European network of partner schools containing:

- thematic nuclei to develop entrepreneurial skills and digital storytelling skills
- general and specific training objectives
- target skills to be acquired by the students declined in knowledge, skills and behaviour
- modular articulation of the course
- blended methods adopted
- criteria and tools to evaluate learning outcomes
- planning of learning activities to be accessed through gamified and laboratory teaching

# Work Package 3:

## EDUCATIONAL DESIGN (M6-18)

This WP foresees:

- design and implementation of the "**CIRCLE GAME: Circular Learning Evaluation Game**" and the **OER**, in the form of virtual tours, consistent with the educational programme contained in the STUDY COURSE.
- co-design of the following didactic tools accompanying the OER:
  - "**Teachers' handbook**" containing useful guidelines to carry out activities in the classroom and technical and educational support to guide students in using the virtual tours
  - "**Students' Handbook** to allow young students to learn about all the phases of the learning path
  - **CREATION OF THE CICLE-CIRCULAR CREATIVITY LABS FOR ENTREPRENEURSHIP METHODOLOGICAL MANUAL**



# Work Package 4:

## MOBILITY FOR PARTNERSHIP TEACHERS (M8)

**Full immersion** of **5 days** aimed at generating the **methodological alignment** of a **pool of partnership teachers** through a transnational mobility to be carried out at the **Suor Orsola Benincasa institute in Naples**, based on the "**CiCLE**" **model** for conducting, as facilitators, the Circular Creativity Labs for Entrepreneurship, facilitating discussion, individual and group work, to enable students to apply the knowledge learned and translate it into "Re-CiCLE" ideas.



# Work Package 5:

## PILOTING (M 16-23)

This phase includes **PILOTING** that will allow 45 students of classes IV and/or V of Primary Schools (**9-11 year olds**) in **Italy, Spain and Greece** (15IT, 15ES, 15EL) to test all the didactic and instrumental resources provided.

To this end, the CONFLUENCE of the products created in WP4 will be carried out, in the **F.ED.R.O. - FINANCIAL EDUCATIONAL RESOURCES AND OPPORTUNITIES** environment available at <http://fabula.conform.it/fedro/>, implemented in the FABULA good practice project, thus enriching the contents as foreseen by the internationalization of teaching and the content and methodological innovation strategy conducted by the **FABULA C-Plus partnership**.

The piloting will allow the partnership to verify the learning levels achieved by the beneficiaries and to evaluate the strengths/weaknesses of the model for its implementation.

# Work Package 6:

## COMMUNICATION AND DIFFUSION OF RESULTS (M 2–24)

with transversal actions of:

- Website
- Fabula C-Plus Story
- Newsletters
- Social environment
- Territorial seminars
- Final conference



# GANTT chart

Activity	Start date	End date
IO1: STUDY COURSE	11-2020	04-2021
<i>IO1: Piloting</i>	02-2022	09-2022
Kick-off meeting	12-2020	
IO2: OERs	05-2021	12-2021
2 <sup>nd</sup> Transnational Meeting	06-2021	
Learning mobility	06-2021	02-2022
IO3: CIRCLE Game	09-2021	
3 <sup>rd</sup> Transnational Meeting	11-2021	
IO4: CIRCLE Labs Manual	01-2022	04-2022
4 <sup>th</sup> Transnational Meeting	04-2022	
Multiplier Events	09-2022	
Final meeting + Final Event	10-2022	

# Communication



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The **communication** between the partners will be structured so as to favour the exchange of information necessary for the smooth functioning of the partnership, which could be undermined by misunderstandings, due to the different geographical location, linguistic and cultural difficulties.

Communication will be facilitated by online cooperation systems with the sharing of documents and operational tools, the exchange and comparison of data.

To ensure a profitable circulation together with a timely communication/information flow between the partners, the **periodic holding of Skype/Meet** conferences at bilateral and multilateral level is foreseen to align the partnership on the evolution of the project and guarantee a homogeneous and uniform implementation of the work

# Dissemination



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The overall action will be supported, thanks also to the coordination of the Campania Region - Department of Education, Social Policies and Youth by the use of the following (media and non-media) channels for each of which a brief description of the objective has been provided and the target groups we intend to address for actions on information and dissemination of results.

## MEDIA

### COORDINATED GRAPHIC LINE

Objective: to identify the project in a clear, immediate and communicative way

Target groups:

- Education and Vocational Training Bodies
- Schools
- Administrators and political decision makers in the field of education policies at regional/national / European level
- Authorities / Institutions responsible for planning, direction and control of the school system in



## WEBSITE

Objective: to provide specific and updated information on the project and its progress

## ELECTRONIC BROCHURE

Objective: to provide a presentation of the project in a clear, concise and easily understandable way

## TELEMATIC NEWSLETTERS

Objective: to provide timely updated information on the development of the project

## PRESS RELEASES

Objective: to disseminate information on the project, in order to raise awareness among the different parties involved

### Target groups:

- Education and Vocational Training Bodies,
- Schools;
- Administrators and political decision makers in the field of education policies at regional/national / European level;
- Authorities/Institutions responsible for planning, direction and control of the school system

## SOCIAL ENVIRONMENTS

Objective:

To convey the OER in the form of Interactive 360 Virtual Tours, the CIRCLE Game: Circular Learning Evaluation Game, the teaching materials and operational tools catalogued in the FEDRO learning environment to exchange and share experiences, to allow a wide audience of users to collect notions and opinions.

### Target groups:

- young people
- teachers
- partners
- stakeholders

## FABULA C-PLUS STORY

Objective: to illustrate and narrate in a cross-media digital book the behind the scenes, the salient moments, the stories, the people and the experiences made by the children who are the real protagonists of the project

### Target groups:

- Education and Vocational Training Bodies
- Schools
- Administrators and political decision makers in the field of education policies at regional / national / European level
- Authorities / Institutions responsible for planning, direction and control of the school system in the area

## OER - INTERACTIVE 360 VIRTUAL TOUR and CIRCLE Game

Objective: To develop a conscience, knowledge and ability to adopt behaviours oriented towards the circular economy, experimenting and producing, at the same time, new creative ideas for an early entrepreneurial vision in the field of reuse and recycling of resources and materials

### Target groups:

- General public

## NON MEDIA

### TERRITORIAL SEMINARS

Objective: to disseminate the results and products developed

### FINAL CONFERENCE

Objective: to disseminate the results achieved and reflect, together with the partnership and the different stakeholders, on their sustainability and follow-up actions

### Target groups:

- Education and Vocational Training Bodies,
- Schools;
- Businesses
- Administrators and political decision makers in the field of education policies at regional / national / European level,
- Authorities / Institutions responsible for planning, direction and control of the school system in the area

# Awareness Raising



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The project foresees organising **6 national seminars**:

- **2 in Italy** held by the **Istituto Suor Orsola Benincasa** and **Conform**
- **2 in Spain** held by **Formación y Education Integral (FEI)**, and **Colegio Caude**
- **2 in the Greece** held by **102 Dimotiko Scholeio Athinon** and **AKMI S.A**

The following **Target groups** will participate in the seminars:

- Education and Vocational Training Bodies,
- Schools,
- Administrators and policy makers in the field of education policies at regional/national/European level,
- Authorities/Institutions in charge of planning, guiding and controlling the school system in the area.

The **Seminars** will be an opportunity to present the results of the project:

- the **Study Course**, a shared educational programme that integrates the training offer of the European network of partner schools in the field of circular economy and entrepreneurial education
- **Open Educational Resources** in the form of 360 ° virtual tours, intuitively navigable from all devices, to allow students to make an immersive and interactive visit to some locations that symbolize their everyday life (home, park, school, etc.) to face the challenge of the circular model with awareness
- the **CIRCLE Game: Circular Learning Evaluation Game** to train the target skills and evaluate the achievement of the Learning outcomes corresponding to the training objectives programmed by the virtual tours in a playful-didactic learning context
- the **Methodological Manual of CiCLE - Circular Creativity Labs for Entrepreneurship** to allow teachers to hold educational workshops aimed at developing creativity, inventiveness and entrepreneurship of young students to give waste a "second life", transforming it into something artistically and entrepreneurially new



# Administrative and accounting aspects



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The **administrative** and **accounting** aspects will be communicated to partners following the drawing up the contact between the lead partner (**Istituto Suor Orsola Benincasa** - IT) and the **Italian National Agency** (INDIRE).

On this matter, a specific technical note will be prepared that, on the basis of what the National Agency foresees, will discipline the relationship with the lead partner and the individual partners in the methods to prepare and provide documentation, to prepare the calculation tables and for each partner to create reports/products/documents