Green Growth

Roadmap:

Adoption of circular economy in construction VET centres

Green Growth

No. 2020-1-ES01-KA202-083246

Erasmus+ Programme of the European Union, call 2020.

Key Action 2 of the Cooperation for innovation and the exchange of good practices within the Strategic Partnerships for Vocational Educational and Training.

FUNDACIÓN LABORAL DE LA CONSTRUCCIÓN

CENTRE IFAPME Liège-Huy-Verviers

BZB Bildungszentren des Baugewerbes e.V.

SCUOLA COSTRUZIONI VICENZA Andrea Palladio

Gospodarska zbornica Slovenije
Zbornica gradbeništva in industrije gradbenega materiala

SUSTAINUM INSTITUT

Armadillo Amarillo

INDEX

VET Training Center's Managers

ACTION 1 | Stablish a global strategy internally

Challenge

- Resistance to change
- Limited social awareness
- Regulatory framework for training
- Lack of experts
- Lack of funding
- Lack of expertise and resources

Barriers

- Economic Costs
- Training in Circular Economy not Included in Official Programs
- Finding expert trainers
- Modification of training documents
- Lack of business interest

Indicator

Number of realized actions:
This measures the implementation of the defined strategy and the actual actions taken.

Description

- Define a global strategy to raise awareness and train the different actors of their training centre.
- Incorporate circular economy principles into the curriculum.
- Develop practical training opportunities.
- Provide training for trainers and VET managers.
- Establish an internal working group.
- Create guidelines for action.
- Encourage exemplary practices.
- Foster participation and involvement.
- Continuous training of trainers.
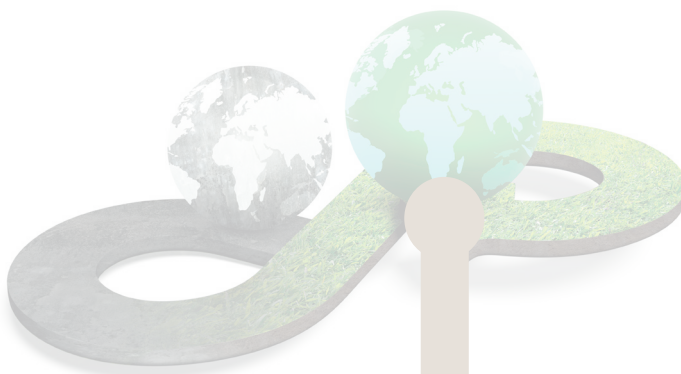
Short term - within 1 year

Timing

7,5/10

Feasibility

8,8/10

Expected impact

ACTION 2 | Promote the exchange of good practice internally

Challenge

- Lack of dedicated training programs
- Resistance to Change
- Finding Materials Experts
- Finding Environmentally Conscious Suppliers

Barriers

- Cultural shift
- Train the trainers
- Time to develop trade-specific content

Indicator

Carbon emission calculation tool integrated into daily work and travel as logistics:

This indicator tracks the integration of a tool to calculate carbon emissions associated with daily work and travel, helping to monitor and reduce the environmental impact.

Description

Promote the exchange of good practice internally between trainers and staff:
- Foster peer learning and exchange.
- Collaboration with external experts.
- Establish action sheets for each trade with guidelines on materials and reuse.
- Demonstrate good practice to learners through action.
- Disseminate evaluation practices in the network of training centres.

Medium term - between 1 and 5 years

Timing

7,7/10

Feasibility

8,5/10

Expected impact

VET Staff

ACTION 3 | Establish trade-specific courses on the circular economy

Challenge

- Limited awareness and understanding.
- Resistance to change.
- Lack of resources and support.
- Limited integration in existing programs.
- Economic considerations.

Barriers

- Train the trainers.
- Showcasing good practices
- Altering established habits
- Addressing the cost implications
- Lack of interest and engagement

Indicator

Number of training actions: This measures the frequency and extent of training initiatives implemented.
Number of training sources and their variety: This indicates the diversity of sources and perspectives incorporated into the training programs.

Description

This action ensures that staff members receive specialized training on the circular economy, equipping them with the knowledge and skills to incorporate circular principles into their teaching.
Develop training materials adapted to the different levels creating training materials that are tailored to the specific needs and levels of the learners, ensuring effective learning and understanding of circular economy.
Utilize resources from the GREEN GROWTH project (https://greengrowthproject.eu/) to enhance understanding and engagement.

Short term - within 1 year

Timing

7,7/10

Feasibility

8/10

Expected impact

VET Trainers

ACTION 4 | Enhance personal knowledge and understanding of the circular economy

Challenge

- Resistance to change.
- Limited social awareness
- Regulatory framework for training.
- Lack of expertise and resources.
- Finding Environmentally Conscious Suppliers.

Barriers

- Economic Costs
- Training in Circular Economy not Included in Official Programs
- Finding expert trainers
- Modification of training documents
- Lack of business interest.

Indicator

Number of training actions:
- This measures the frequency and extent of training sessions conducted by trainers.

Description

Trainers should actively educate and train themselves on circular economy principles, ensuring they are well-equipped to teach and integrate these concepts into their training sessions effectively.

Medium term - between 1 and 5 years
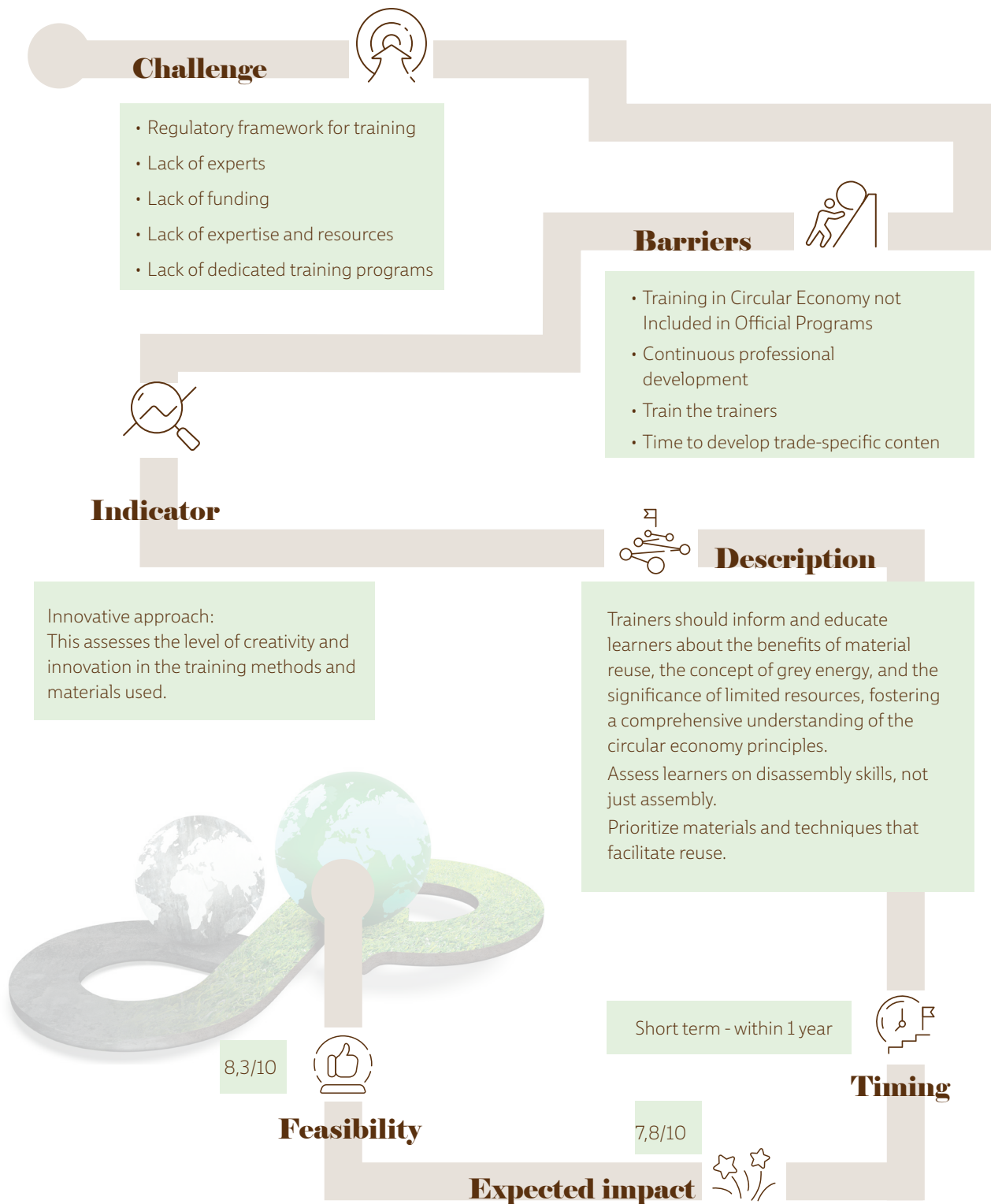
Timing

7,7/10

Feasibility

7,7/10

Expected impact

ACTION 5 | Educate learners about the circular approach

Challenge

- Regulatory framework for training
- Lack of experts
- Lack of funding
- Lack of expertise and resources
- Lack of dedicated training programs

Barriers

- Training in Circular Economy not Included in Official Programs
- Continuous professional development
- Train the trainers
- Time to develop trade-specific conten

Indicator

Innovative approach:
This assesses the level of creativity and innovation in the training methods and materials used.

Description

Trainers should inform and educate learners about the benefits of material reuse, the concept of grey energy, and the significance of limited resources, fostering a comprehensive understanding of the circular economy principles.
Assess learners on disassembly skills, not just assembly.
Prioritize materials and techniques that facilitate reuse.

Short term - within 1 year

Timing

8,3/10

Feasibility

7,8/10

Expected impact

ACTION 6 | Prioritize materials and techniques that facilitate reuse.

Challenge

- Regulatory framework for training
- Lack of experts
- Lack of funding
- Lack of expertise and resources
- Lack of dedicated training programs

Barriers

- Training in Circular Economy not Included in Official Programs
- Continuous professional development
- Train the trainers
- Time to develop trade-specific content

Indicator

Number of training modules followed by trainers: This tracks the professional development of trainers in acquiring circular economy knowledge. Number of realized material sheets: This tracks the development and implementation of material reuse strategies.

Description

Trainers should inform and educate learners about the benefits of material reuse, the concept of grey energy, and the significance of limited resources, fostering a comprehensive understanding of the circular economy principles.
Assess learners on disassembly skills, not just assembly.
Prioritize materials and techniques that facilitate reuse.
Incorporate materials and reuse practices into training: Trainers should pay attention to the materials used in training and actively encourage techniques that promote reuse, such as choosing appropriate adhesives and fixings.

Medium term - between 1 and 5 years

Timing

8,3/10

Feasibility

7,3/10

Expected impact

VET Students

ACTION 7 | Engage with supervisors and tutors to raise awareness of circular economy principles.

Challenge

- Educating students
- Showcasing good practices
- Altering established habits
- Addressing the cost implications
- Lack of interest and engagement

Barriers

- Limited awareness and understanding.
- Lack of resources and support.
- Limited integration in existing programs.
- Economic considerations

Indicator

Conducting surveys to measure impact: Surveys can be used to assess the level of awareness and understanding among students, as well as their ability to apply circular principles in their work.

Description

Students should proactively communicate with their bosses and tutors, highlighting the importance of circular actions and encouraging the adoption of sustainable practices within the company.
Students should actively seek knowledge about the benefits of circular practices, emphasizing the importance of conserving resources and protecting the environment.

Short term - within 1 year

Timing

7,3/10

Feasibility

8,2/10

Expected impact

VET Buildings

ACTION 8 | Implement a material and resources consumption map.

Challenge

- Installation of a control and monitoring system.
- Reduce resource consumption.
- Reduce water consumption. Use of rainwater (e.g. mortar)

Barriers

- Effective maintenance management.
- Implement systems to reduce consumption.
- Selection and correct use of recycled materials.

Indicator

Example of a business circularity measurement tool:
https://ellenmacarthurfoundation. org/resources/circulytics/overview

Description

Track the use of materials throughout the building's lifecycle, from construction to maintenance and renovation, with the goal of reducing waste and promoting efficient material usage.

Implement strategies to reduce resource consumption throughout the building's lifecycle, such as using sustainable materials, implementing efficient systems, and adopting circular economy principles.

Medium term - between 1 and 5 years

Timing

7,2/10

Feasibility

7,3/10

Expected impact

VET Waste

ACTION 9 | Optimise waste separation (value recovery). Implement and control waste sorting.

Challenge

- Establish an effective policy that everyone can understand.
- Less packaging, products, and consumption.

Barriers

- To achieve waste segregation in all areas of the VET centre.
- Lack of space to store waste.

Indicator

- Generic waste reduction (kgs/year.).
- Waste reduction (kgs/year.).
- Compost production (kgs/year.).

Description

Implement and control waste sorting in the building, with special attention to hazardous waste (batteries, etc.). And at the same time avoid consumption of products that generate waste (e.g. coffee machines with capsules).

Encourage the use of digital archives and systems. And reduce of waste and creation of natural fertilisers (composting system).

Timing

Medium term – between 1 and 5 years.

Feasibility

7,2/10

Expected impact

8,5/10

ACTION 10

Implement and control waste sorting.

Challenge

- Optimize waste separation (value recovery)
- Waste reduction and creation of natural fertilizers

Barriers

- Proposal of an effective policy that everyone understands.
- Lack of space to store waste.

Indicator

Waste reduction (kgs/year.).
Compost production (kgs/year.).

Description

Implement and control waste sorting in the building, with special attention to hazardous waste (batteries, etc.). And at the same time avoid consumption of products that generate waste (e.g. coffee machines with capsules).
And reduce of waste and creation of natural fertilisers (composting system).

Medium term - between 1 and 5 years

Timing

6,8/10

8,3/10

Feasibility

Expected impact

Green Growth