



fli^{er}

The Future of Furniture:
Circular Furniture Designers for a sustainable industry

Grant Agreement Number

FLIER - KA220-VET-DF79E06A

Deliverable D-2.1 T2.4 New curriculum profile definition



Document version:	v.2
Date of submission:	25/10/2024
Type of document:	R = Report
Dissemination level:	☐ CO (Confidential, only for members of the consortium and Commission Services) ☒ PU (Public)
Author(s):	Piroska Kocsis
Project Leader:	AMBIT
Task leader:	ATU

TABLE OF CONTENTS

New Circular Furniture Designer Curriculum Profile Definition	4
1. Executive Summary.....	4
2. Curriculum of Circular Furniture Designer - Definition (T2.1)	4
3. Proposed content.....	6
4. Fine-tuning Survey (T2.2).....	11
5. International experts' validation workshop (T2.3)	11
6. Conclusion	11
7. Appendices.....	12
Appendix I. Survey Report.....	12
1. Company profile.....	13
2. Feedback from the survey	13
2.1 Circular Design Process	13
2.2 Legislative Framework	16
2.3 Voluntary Organisational Instruments	19
2.4 Effective Environmental Communication.....	20
3. Summary	22

New Circular Furniture Designer Curriculum Profile Definition

1. Executive Summary

This report presents the findings of the research and survey phases of the FLIER Erasmus+ project, which aimed to define the curriculum profile for a Circular Furniture Designer. The data was collected from 50 international experts across Europe and validated in an international workshop.

2. Curriculum of Circular Furniture Designer - Definition (T2.1)

For the purpose of the FLIER project, we define a Circular Furniture Designer as a professional who applies principles of sustainability and circularity in the design and production of furniture. They are responsible for facilitating the transition of traditional furniture manufacturing processes towards more sustainable and circular practices.

The following are the skills, knowledge, and competencies (SKC) of the Circular Furniture Designer, which have emerged from the EU ESCO profile list and the previous Erasmus+ projects SAWYER, Furn360 and WOODCircle. These SKCs were validated by the FLIER partners in advance of the fine-tuning survey.

Skills:

1. **Understanding of Circular Economy Principles:** Ability to apply the principles of circular economy in the design and production of furniture.
2. **Design Skills:** Proficiency in designing furniture that minimizes waste and maximizes the use of renewable or recyclable materials.
3. **Knowledge of Sustainable Materials:** Expertise in identifying and using sustainable or recyclable materials in furniture design.

Knowledge:

1. **Furniture Sector Trends:** Awareness of current trends and requirements in the furniture sector, particularly in relation to sustainability and circularity.
2. **Legislative and Voluntary Instruments:** Understanding of the main legislative and voluntary instruments that facilitate the transition to a circular economy.
3. **Occupational Health and Safety Risks:** Knowledge of the potential health and safety risks associated with the transition to a circular economy in the furniture sector.

Competences:

1. **Forecasting and Scenario Planning:** Ability to forecast future sector scenarios and understand the potential impact of circular economy principles on the furniture sector.
2. **Stakeholder Engagement:** Competence in engaging with various stakeholders, including legislators, regulators, and vocational education and training providers, to facilitate the transition to a circular economy.

3. **Implementation of Circular Economy Initiatives:** Ability to implement successful circular economy initiatives in the furniture sector.

Based on the findings from the research phase, and the validated SKCs, ATU created the Curriculum Profile to be validated through a Fine-tuning survey and an international workshop. Based on these findings, partners proposed the following lessons:

LU1	Circular Design Process
	Introduction to Circular Design
	Sustainable Product Lifecycle
	Practical Applications and Waste Minimisation
LU2	Legislative Framework for Furniture Industries
	Reporting and Transparency
	Product Requirements and Consumer Rights
	Raw Materials and Waste Management
LU3	Voluntary Instruments
	Green Public Procurement
	Certificates and Standards
	Environmental Management Systems and Ecolabels
LU4	Effective Environmental Communication
	Transparent Communication
	Stakeholders Collaboration
	Behavioural Change

The project offers a training course designed for the Circular and Sustainable Woodworker. This course is aimed at young workers in the woodworking and furniture sector, particularly those aged 18 to 35.

The training is dual vocational, combining activities in both training centres and on-the-job experiences. This approach ensures that participants gain practical skills and theoretical knowledge relevant to the circular economy and sustainable production.

Duration: Approximately 25 hours

Format: Self-directed, online learning

Level: Level 4 on the European Qualifications Framework (EQF)

3. Proposed content

LU1 - Circular Design Process

This learning unit equips furniture designers with essential skills for circular economy practices. It covers circular design principles, sustainable product lifecycles, and practical applications for waste minimisation. Learners will gain insights into eco-friendly materials, market trends, and innovative packaging solutions, fostering a comprehensive understanding of sustainable furniture design.

Lesson 1.- Introduction to Circular Design

This lesson examines the circular design process, highlighting key principles and steps. It explores the benefits for woodworkers and furniture makers, and includes an environmental impact analysis of materials. Learners will also study tools and methods for analysis, along with case studies on sustainable material use in woodworking and furniture making.

Learning outcomes

Understand and articulate the key principles and steps of the circular design process.
Understanding an environmental impact analysis of materials used in woodworking and furniture making.

Topics

Circular Design / Environmental Impact Analysis / Sustainable Materials / Woodworking benefits

Lesson 2.- Sustainable Product Lifecycle

This lesson examines the sustainable product lifecycle, focusing on the cradle-to-cradle concept. It covers designing for longevity and recyclability, with industry examples. Learners will also explore current market trends in sustainable design, consumer demand for eco-friendly products, and strategies to stay updated and incorporate these trends into their designs.

Learning outcomes

Explain the cradle-to-cradle concept and its application in designing sustainable products.
Identify and integrate current market trends in sustainable and circular design into their own work.

Topics

Cradle-to-Cradle / Longevity / Market Trends / Sustainable products

Lesson 3.- Practical Applications and Waste Minimisation

This lesson examines practical applications and waste minimisation in furniture design. It covers selecting and applying sustainable finishes, strategies for reducing waste, and reusing materials. Learners will explore case studies on waste minimisation and innovative packaging solutions that align with circular economy principles, enhancing product lifecycle and recyclability.

Learning outcomes

Select and apply environmentally friendly finishes to woodworking and furniture products.
Develop and implement strategies for waste minimisation and sustainable packaging design.

Topics

Deforestation / Chemical use / Packaging / Waste

LU2 - Legislative Framework for Furniture Industries

The European legislative framework on environmental and social matters is evolving rapidly, driven by the European Green Deal and the Circular Economy Action Plan. Key regulations include ecodesign requirements on products and directives addressing raw materials and waste management. Environmental, Social, and Governance (ESG) requirements are also expanding, with frameworks such as the Corporate Sustainability Reporting Directive (CSRD), demanding greater transparency and clearer information to customers.

Lesson 1.- Reporting and transparency

This lesson will explain the main regulations associated to reporting and transparency on ESG, namely: Corporate Sustainability Reporting Directive (CSRD), Taxonomy Regulation, and Green Claims Directive. These regulations cover aspects such as the obligations of companies to disclose information on ESG, the classification of activities as environmentally sustainable and how to avoid greenwashing practices.

Learning outcomes

Know the basic regulations on sustainability and ESG reporting and transparency.
Understand the impact of these regulations (Corporate Sustainability Reporting Directive (CSRD), Taxonomy Regulation, and Green Claims Directive) on your organisation.

Topics

Sustainability reporting / Sustainable finance / Greenwashing / Informed decisions

Lesson 2.- Product requirements and consumers rights

This lesson will explain the main regulations related to products requirements and customer rights to information and repair, namely: Ecodesign for Sustainable Products Regulation (ESPR), Right-to-repair (or R2R) Directive, and Empowering consumers for the green transition - Directive. These regulations cover aspects such as ecodesign product requirements (performance and information requirements), obligations to guarantee the repair of products and consumer rights in product selection.

Learning outcomes

Know the basic regulation on product requirements and consumer rights in relation to sustainability. Understand the impact of these regulations: Ecodesign for Sustainable Products Regulation (ESPR), Right-to-repair (or R2R) Directive, and Empowering consumers for the green transition – Directive) in your organisation.

Topics

Ecodesign requirements / Empowering consumers/ Right-to-repair/ Sustainable products

Lesson 3.- Raw materials and waste management

This lesson explains the main regulations related to the use of raw materials and waste management, namely: Deforestation free products Regulation (EUDR), the Chemicals Strategy, Packaging and packaging waste - Regulation, and the Waste Framework Directive – Revision. These regulations cover aspects such as wood origin and traceability, use of chemicals, packaging requirements and waste management.

Learning outcomes

Know the basic regulation on Raw materials and wastes management. Understand the impact of these regulations Deforestation free products Regulation (EUDR), the Chemicals Strategy, Packaging and Packaging Waste - Regulation, and Waste Framework Directive – Revision) in your organisation.

Topics

Deforestation / Chemical use / Packaging / Waste

LU3 - Voluntary Instruments

This learning unit examines the voluntary instruments in the furniture sector including eco-labels, certifications, and sustainability standards. These tools encourage manufacturers to adopt environmentally friendly practices, reduce waste, and use sustainable materials. Examples include the Forest Stewardship Council (FSC) certification and the EU Ecolabel, which help consumers identify products that meet high environmental and social responsibility standards.

Lesson 1.- Green Public Procurement

This lesson examines Green Public Procurement (GPP), a process where public authorities purchase goods, services, and works with reduced environmental impacts throughout their lifecycle. This approach promotes sustainability by considering environmental factors alongside price and performance, aiming to minimize the ecological footprint of public sector activities.

Learning outcomes

Understand sustainable practices and eco-friendly certifications.

Develop the ability to identify and implement voluntary instruments in real-world scenarios.

Topics

Sustainability / Lifecycle Assessment / Environmental Impact / Eco-friendly Procurement

Lesson 2.- Certificates and Standards

This lesson explores key certifications ensuring sustainable, quality, and safe products: FSC and PEFC for responsible forestry, ISO 9001 for quality management, ISO 14001 for environmental management, Oeko-Tex Standard 100 for textile safety, Greenguard for low chemical emissions, and CE mark for EU compliance. Students will understand their importance and application in various industries.

Learning outcomes

Develop the ability to evaluate the environmental impact of furniture production and consumption.
Know of key certifications and standards like FSC and EU Ecolabel.

Topics

Sustainability / Quality Management / Environmental Standards / Product Safety

Lesson 3.- Environmental Management Systems and Ecolabels

This lesson explores Environmental Management Systems (EMS) and Ecolabels for improving environmental performance and various ecolabels that certify eco-friendly products. Students will learn how these tools promote sustainability, reduce environmental impact, and enhance marketability by ensuring products meet high environmental standards.

Learning outcomes

Understand consumer preferences for sustainable and ethically produced furniture.
Develop the ability to innovate and design furniture that meets high sustainability standards.

Topics

Sustainability / Certification / Eco-friendly / Standards

LU4 - Environmental Communication for Sustainable Design

This Learning Unit focuses on enhancing transparent communication, education, stakeholder collaboration, and behavioural change to promote sustainable consumption and circular design practices. By integrating these elements, learners will be equipped to engage effectively with diverse audiences and inspire a shift towards more environmentally responsible behaviours and practices.

Lesson 1.- Transparent Communication

Transparent communication is much more than marketing to incentivize a purchase. It's the whole of all the information, ideas, data, and advice that is conveyed with the goal of not just selling, but also improving the use of a product, so that it has less impact and is also more efficient and affordable for the consumer.

Learning outcomes

Communicate the environmental performance and trade-offs of circular products and services with clarity. Develop compelling narratives and multimedia content that engage stakeholders and drive interest in sustainable choices.

Topics

Environmental Data / Sustainable Consumption / Greenwashing / Green Marketing

Lesson 2.- Stakeholders Collaboration

Develop strategies for fostering collaboration and dialogue among key stakeholders in the circular economy by identifying and engaging key players (designers, manufacturers, consumers, waste management) by facilitating workshops and platforms for knowledge sharing and problem-solving and encouraging co-creation and collaboration between industries and communities.

Learning outcomes

Facilitate collaboration between different stakeholders to promote sustainable practices. Raise awareness and training of involved actors for continuous knowledge transfer.

Topics

Stakeholders engagement / Co-creation / Knowledge sharing/ Capacity building

Lesson 3.- Behavioural Change

Create communication strategies that inspire behavioural change towards sustainable consumption and circular practices by understanding consumer behaviour and barriers to sustainable choices, developing messages that motivate sustainable consumption habits, providing guidance on product use, maintenance, and end-of-life management, and incentivizing consumer participation in circular programs (e.g., recycling, take-back schemes).

Learning outcomes

Design communication strategies that influence consumer behaviours toward circularity and sustainability. Boost an incentives-based system to drive the shift towards sustainable choices.

Topics

Consumer behaviour / Sustainable choices / Incentives / Product-Service model

4. Fine-tuning Survey (T2.2)

The purpose of the fine-tuning survey was to validate the curriculum proposed by ATU, and involved collecting responses from 51 international experts from companies in the EU. The survey was designed by ATU, and responses were collected online using the EU network of all partners. The survey design included questions that measured the degree of agreement 28% of the companies were micro, the majority, 52% were small, while 20% of them were medium. The survey aimed to consolidate the skills, knowledge, and competences necessary for a Circular Furniture Designer in the current market and collect any additional suggestions. The key outcomes from the survey are in line with the findings of the initial profile created during task T2.1 of WP2 of the project.

In addition to rating the importance of the proposed topics, the experts provided recommendations of additional topics that have been taken into consideration for the Curriculum Profile.

Appendix I.: Survey report

5. International experts' validation workshop (T2.3)

The international workshop provided a platform for experts to discuss and validate the findings from the research and survey phases. 12 external experts and 8 project partners participated in the workshop, that validated the proposed SKCs and the proposed structure of the Curriculum.

6. Conclusion

The FLIER Erasmus+ project has successfully defined a comprehensive curriculum profile for a Circular Furniture Designer, which is expected to provide up-to-date training for Circular Furniture Designers.

7. Appendices

Appendix I. Survey Report

The survey is the second step of the WP2, dedicated to fine tuning the Curriculum for a Circular Furniture Designer by collecting information from at least 50 industry experts.

The first draft of the curriculum was created by ATU and have been improved based on the feedback of all partners.

After creating the curriculum, the survey was created by ATU and improved based on the feedback of all partners.

The survey has been circulated by all partners so that data could be collected in every country to ensure that the new curriculum responds to sector stakeholders' needs and next sector challenges and opportunities in Europe.

The questionnaire was addressed to woodworking and furniture representatives, such as:

- 1) Woodworking and furniture company employers
- 2) Woodworking and furniture company employees
- 3) Woodworking and furniture business representatives (Associations / Clusters / Chambers of Commerce / Informal networks)
- 4) VET (Vocational Education and Training) / HE (Higher Education) operators (teachers, trainers, tutors) with training offer for woodworking and furniture industry
- 5) Sustainability and Circular economy experts

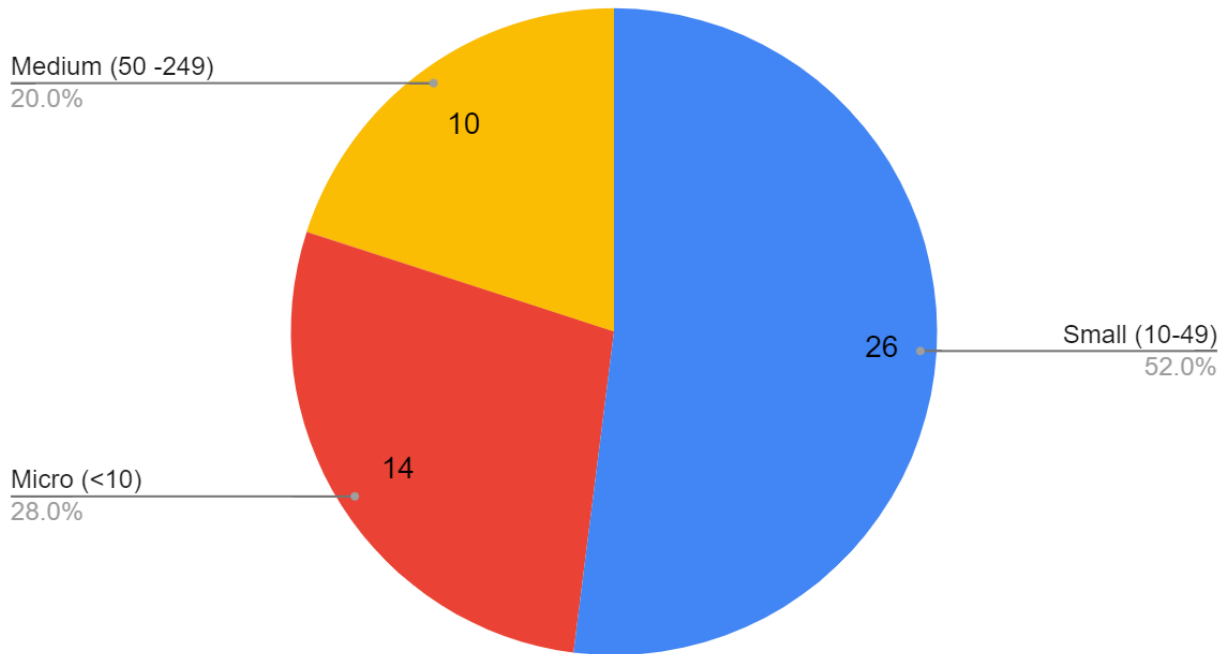
The survey was drafted in English, and was also translated to Spanish and circulated by partners via web (Google form) among their contacts and social networks.

The questionnaire was anonymous but participants had the opportunity to express their interest in participating in the project at a later point.

There have been 51 responses collected.

1. Company profile

Size of the company



The majority of the companies, 52% were small, 28% were micro, 20% were medium and there were no companies with more than 250 employees.

2. Feedback from the survey

The survey was structured according to the proposed curriculum, allowing feedback to be collected separately for each proposed Learning unit.

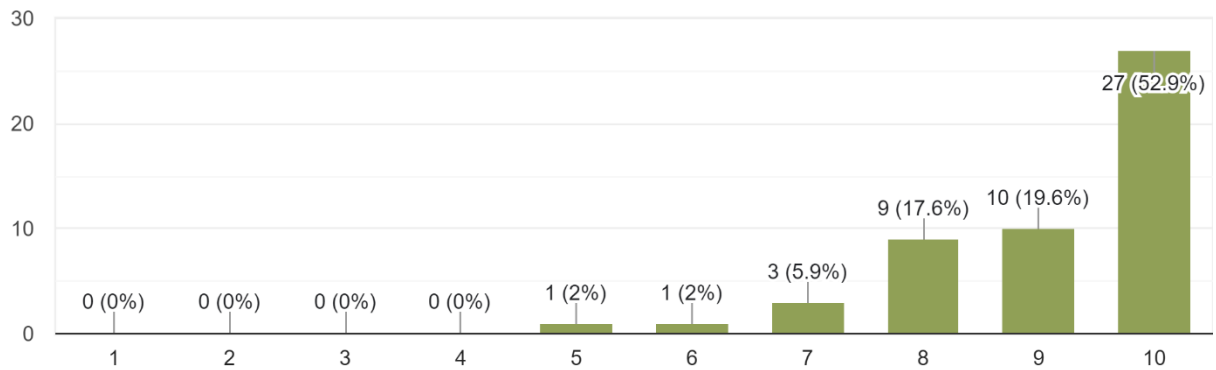
2.1 Circular Design Process

All proposed topics received high marks, and there were written recommendations for additional topics to be included:

- Examples of good practices
- Modular design
- Grey energy evaluation
- User centered design
- Ecodesign strategies

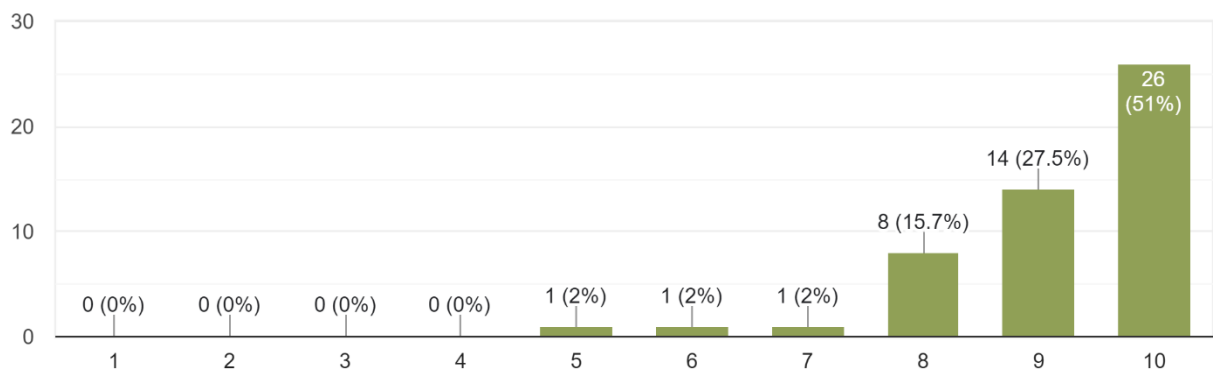
Circular design process and product lifecycle

51 responses



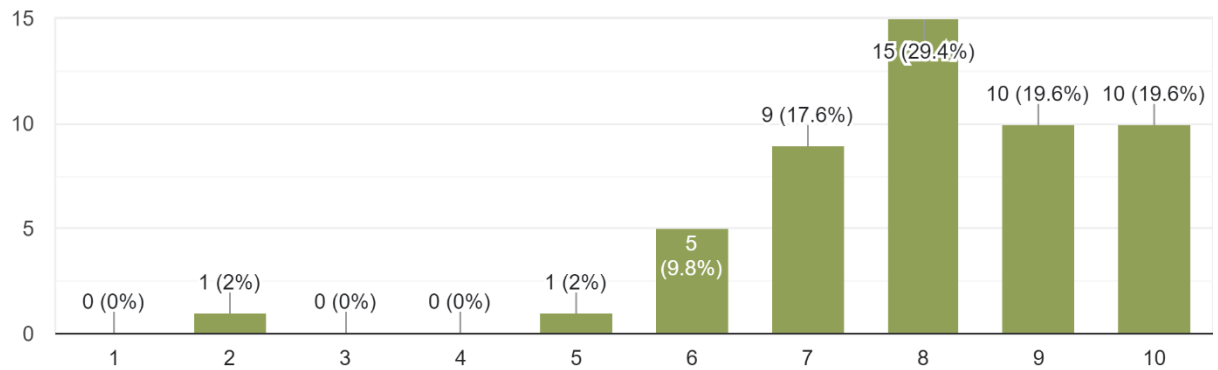
Material use, environmental impact analysis

51 responses



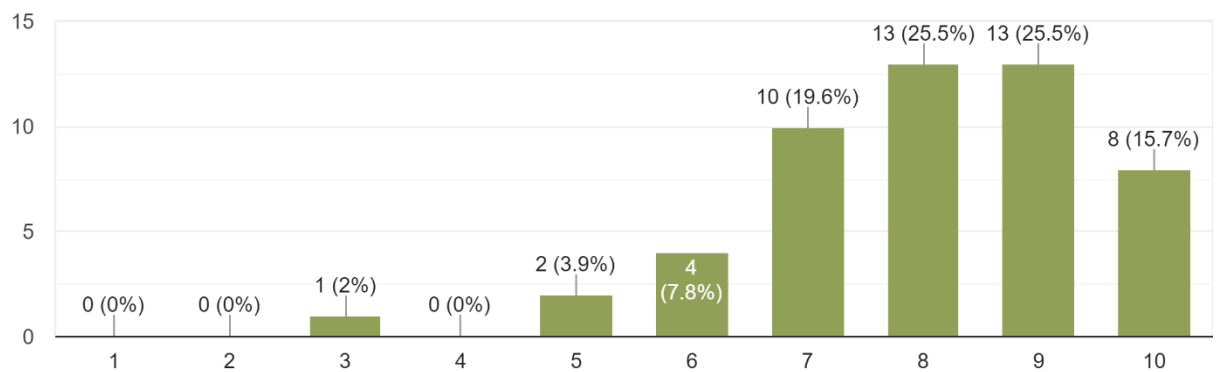
Awareness of market trends

51 responses



Packaging design and EU packaging waste regulation

51 responses



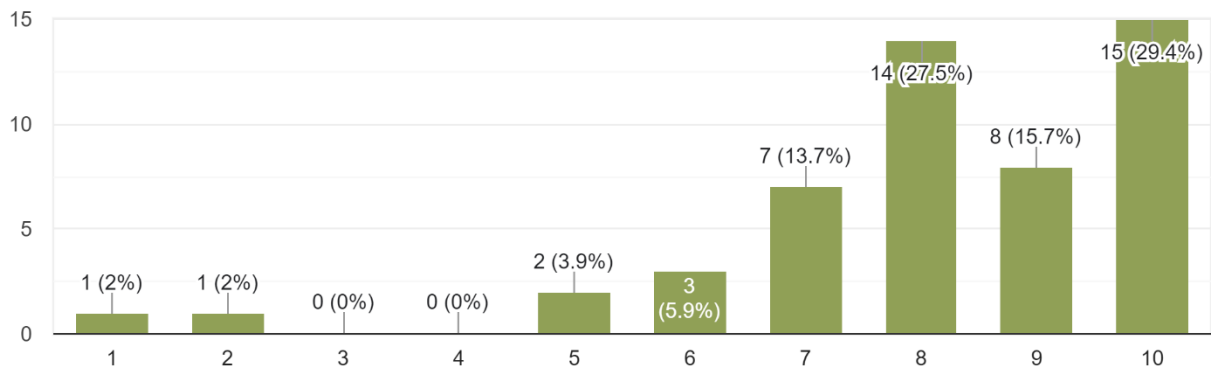
2.2 Legislative Framework

All proposed topics received high marks, and there were written recommendations for additional topics to be included:

- Green New Deal
- Global Goals
- Industry benchmarks, such as BREEAM, WELL, LEED
- European ecodesign and circular economy frameworks

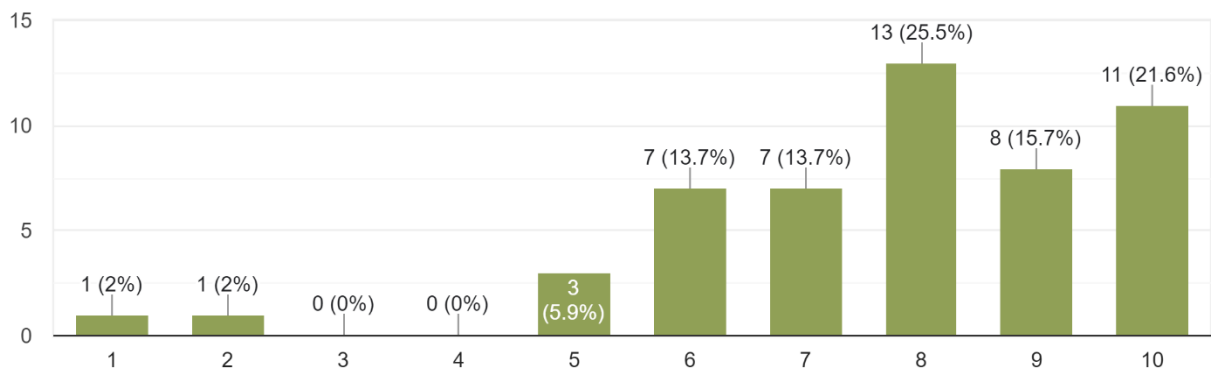
Eco-design for Sustainable Product Regulation (ESPR)

51 responses



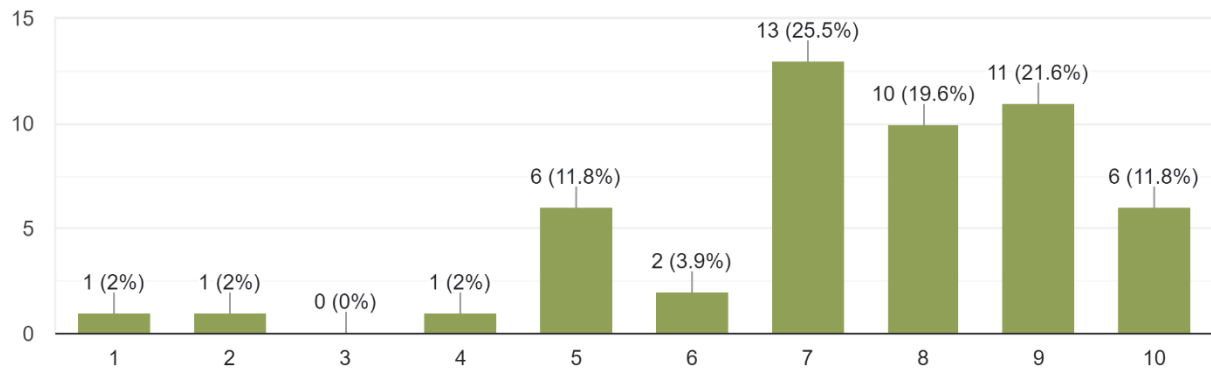
EU Right to Repair legislation

51 responses



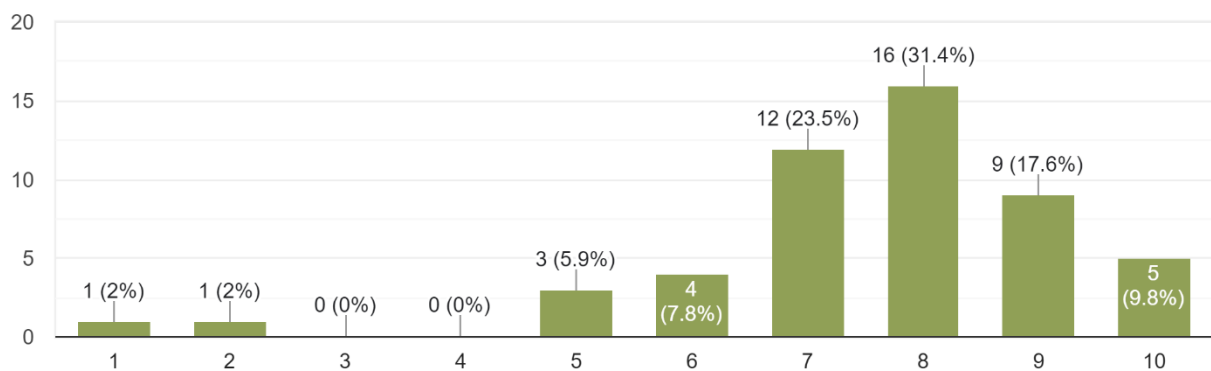
EU Ecolabel criteria for furniture

51 responses



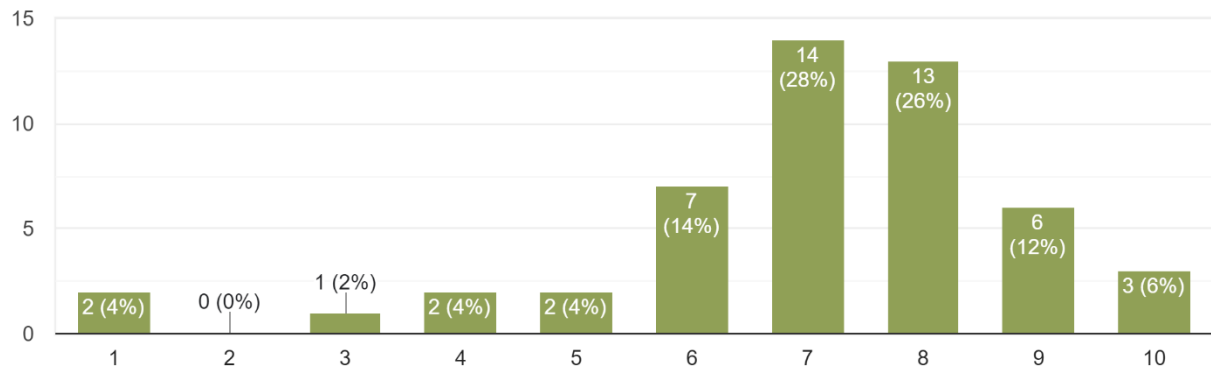
EU waste framework

51 responses



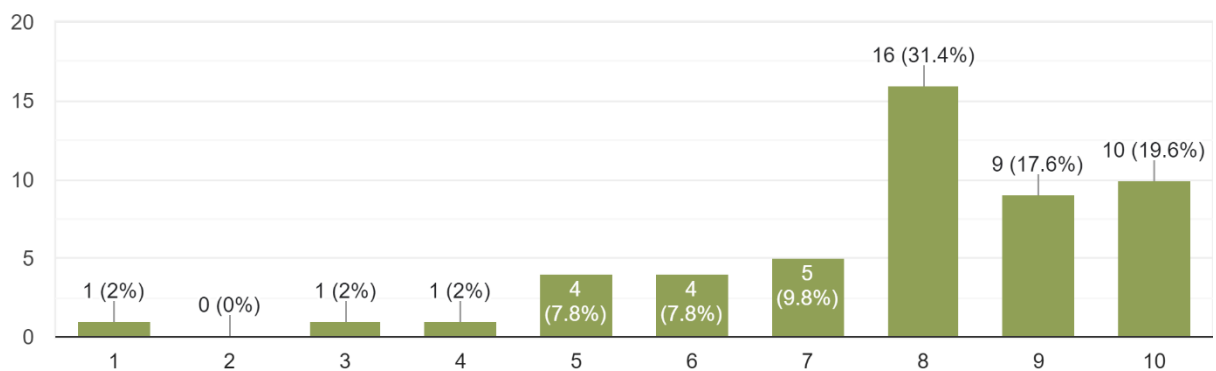
Corporate Sustainability Reporting Directive (CSRD)

50 responses



EU Restriction on Formaldehyde

51 responses

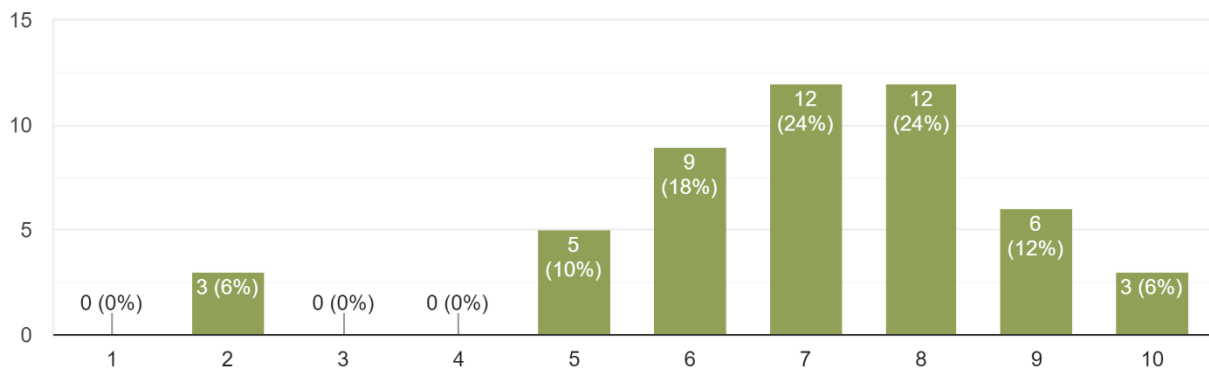


2.3 Voluntary Organisational Instruments

All proposed topics received high marks, there were no written recommendations for additional topics to be included.

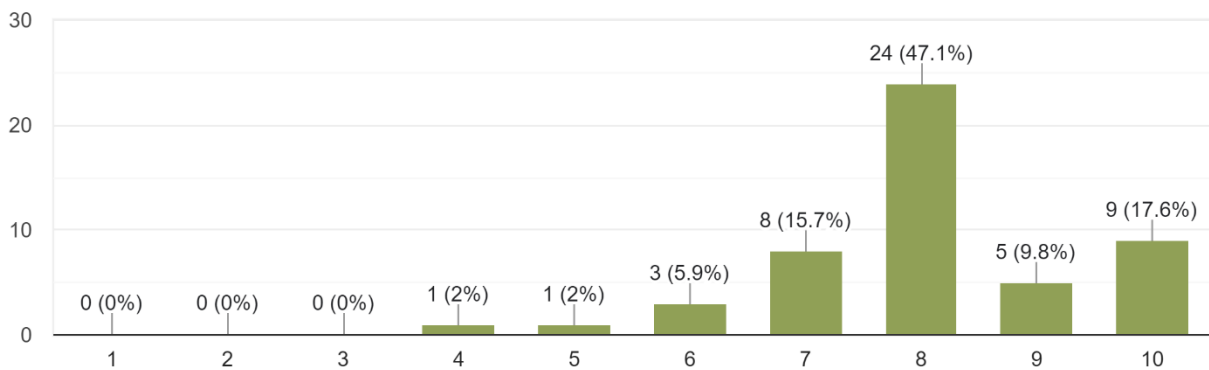
Voluntary corporate instruments

50 responses



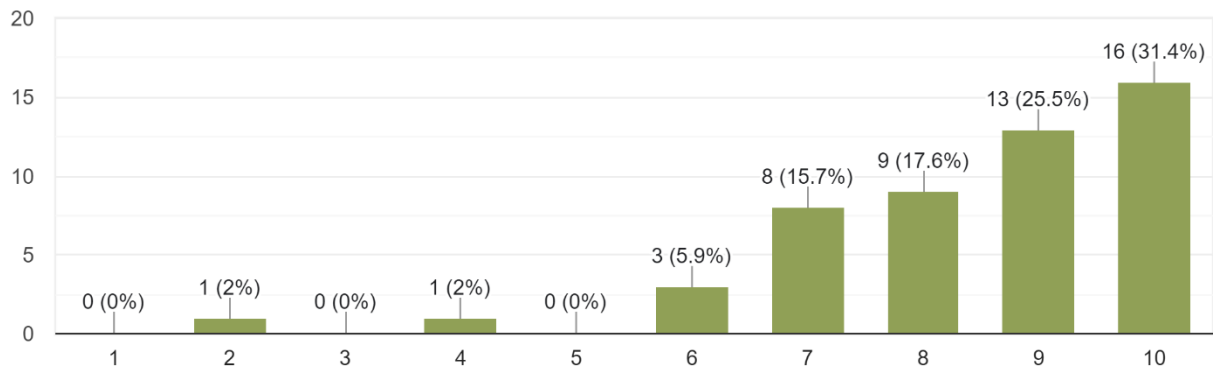
Certification and labelling

51 responses



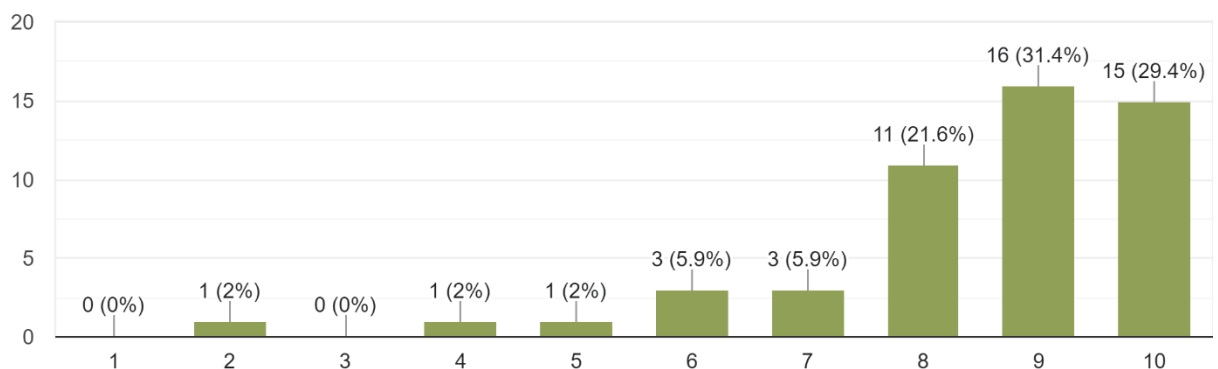
Ethical procurement of materials

51 responses



Traceability

51 responses



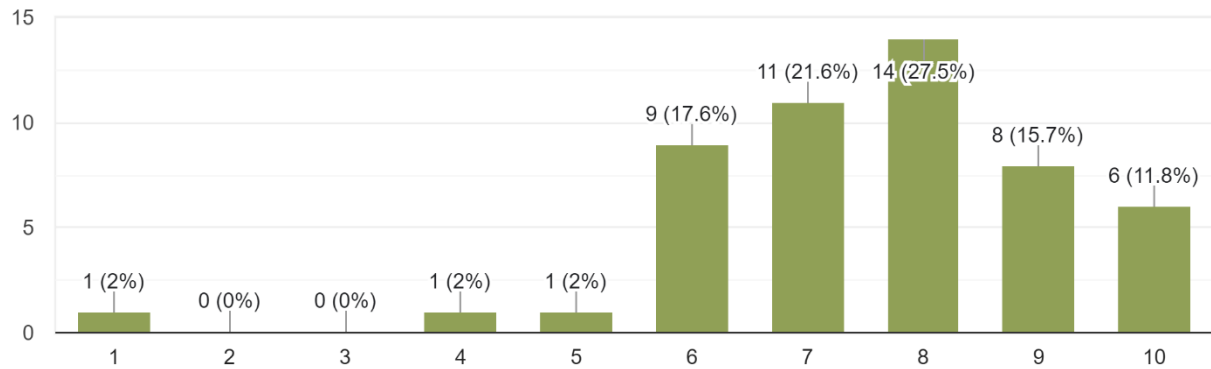
2.4 Effective Environmental Communication

All proposed topics received high marks, and there were written recommendations for additional topics to be included:

- Carbon negative/positive impact
- The importance of internal communication and interdepartmental collaboration (within companies) for the acceleration of change and the generation of more ambitious proposals (related to internal policies)
- In the question "Marketing and greenwashing", the term "greenwashing" appears. It is important to communicate well the actions and efforts made to minimize the impact and sustainability virtues of the product.

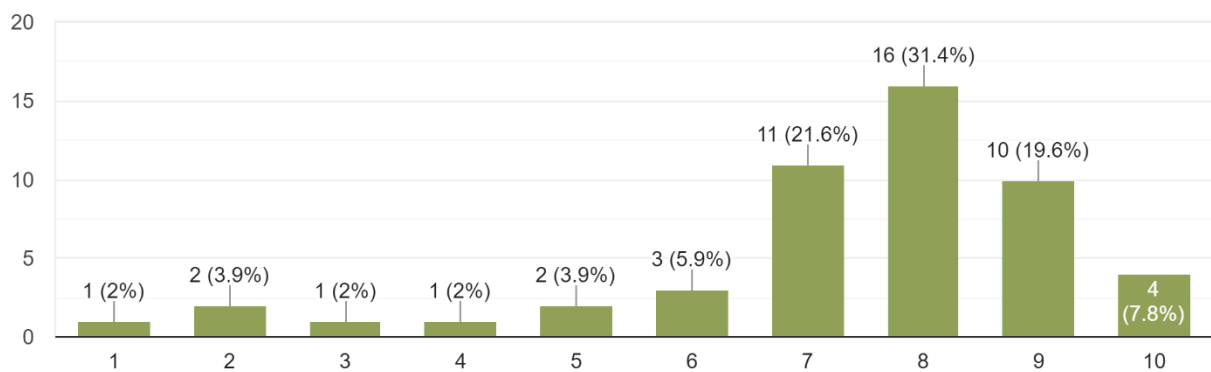
Organisational Certification - self-declarations and internal policies

51 responses



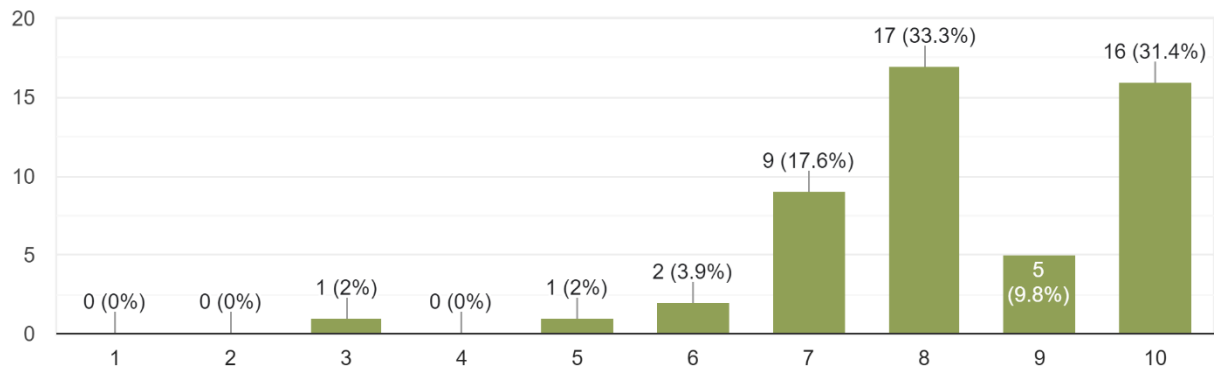
Marketing and greenwashing

51 responses



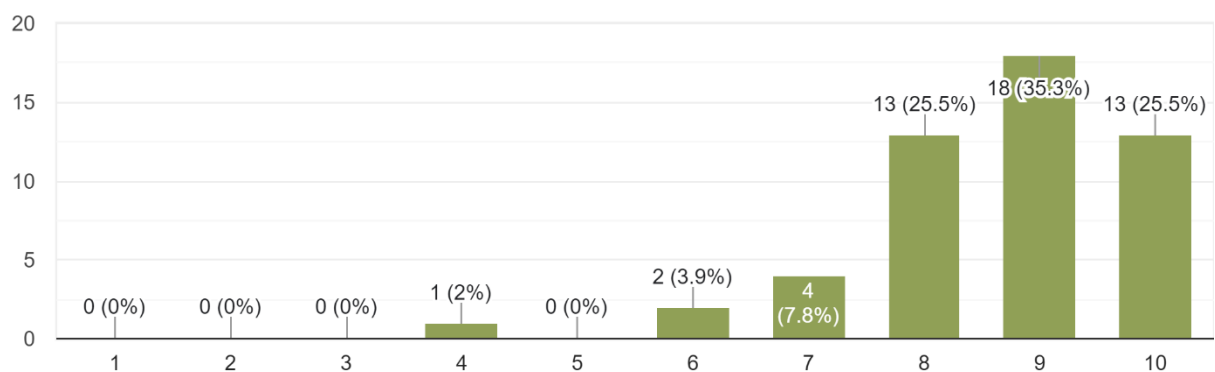
After-sales service

51 responses



Product material specifications

51 responses



3. Summary

Based on the feedback from the participating companies, the curriculum can be considered relevant, up-to-date and comprehensive.

The results of the survey will be discussed during the international workshop.

The present work, produced by the FLIER consortium, is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/)



flier



Co-funded by
the European Union

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.