New Training Contents and Joint VET Qualifications on Ecodesign for Creative and Cultural Industries

2020-1-MT01-KA202-074249

TRAINING MODULES

For Intellectual Output 2:

ECODesign4EU Virtual Campus

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

Contents

INTRODUCTION

ECODesign4EU. *New Training Contents and Joint VET Qualifications on Ecodesign for Creative and Cultural Industries* main objective is to address the common challenge of supporting the transition to a Circular Economy in Cultural and Creative Industries (CCIs) by applying Ecodesign principles to these sectors through innovative VET.

These Training Modules have been elaborated as part of the implementation process of ECODesign4EU project (No. 2020-1-MT01-KA202-074249) – a project funded by the European Commission, under Erasmus+ Programme, Strategic Partnerships for Vocational Education and Training.

The ECODesign4EU project team has gathered a multi-stakeholder partnership of experts in Circular Economy and Cultural and Creative Industries from seven European countries, Malta, France, Greece, Italy, Ireland, Spain and UK, including VET providers, HEI, companies, intermediary bodies and R&D&I centres, supported by key sectorial associated partners.

The project coordinator is MCAST - Malta College of Arts, Science and Technology (Malta) and the project partners involved in project development are INFODEF – Institute for the Promotion of Development and Training (Spain), RINOVA Ltd. (UK), Pôle Eco-conception Performance du Cycle de Vie (France), DIMITRA Education & Consulting (Greece), Consorzio MATERAHUB Industrie Culturali e Creative (Italy), FIP – Future in Perspective Ltd. (Ireland) and INQS – InnoQuality Systems Ltd. (Ireland).

The Training Modules are part of the **ECODesign4EU Virtual Campus (IO2),** which includes three main elements:

1. **Online Instructional Guide on Digital Competencies for Virtual Learning:** Aimed at improving the digital skills and facilitate the interaction with virtual learning environments of VET and in-company teachers and trainers.
2. **Training Modules:** A structured set of innovative training contents and practical activities on applying Ecodesign principles for sustainable Creative and Cultural Industries that will be organized in areas, levels and units and developed based on the European ECVET Curriculum of reference. The Training Modules have been designed as a pedagogical tool providing a proposal of training contents and practical activities with which VET and in-company teachers and trainers can work to develop and implement the European ECVET Curriculum of reference on Ecodesign for sustainable Creative and Cultural Industries (CCIs).
3. **VOOC on applying Ecodesign principles for sustainable CCIs:** Vocational Open Online Courses to be developed based on the IO1 and the Training Modules.

The Training Modules follow the structure as in the European ECVET Curriculum of reference on Ecodesign for sustainable Creative and Cultural Industries (IO1):

Module A: Ecodesign Strategies & Sustainability	**Unit A.1**: Basic components of Ecodesign principles
	Unit A.2: Strategic Foresight in the CCIs market
	Unit A.3: Sustainable Strategic Business Plan in CCIs
	Unit A.4: Implementation of Sustainable Design concepts
Module B: Business & Sustainability	**Unit B.1**: Circular supply chain system
	Unit B.2: Lifecycle assessment methodology
	Unit B.3: Sustainable digital transformation of CCIs
Module C: Production & Sustainability	**Unit C.1**: Sustainable Resources & their selection
	Unit C.2: Adaptation of the concepts of circular economy to the CCI sector

A.1. BASIC COMPONENTS OF ECODESIGN PRINCIPLES

Aims of the Learning Unit

This unit focuses on providing learners with an overview of the basic components of Ecodesign principles and how they can be applied in Creative and Cultural Industries.

This unit provides learners with an understanding of Ecodesign and the role and responsibilities of an Ecodesigner, the ten principles of Ecodesign, and emerging trends related to sustainability like the Five Biospheric Rules, Intentional Design and Biomimetic Design.

The main aims of this unit are based on the learning outcomes identified in the curriculum of reference, which are summarised as follows:

- Define the meaning, the context, and the principles of Ecodesign.
- Discuss emerging trends related to sustainability.
- Describes the ten unifying principles of nature as identified in Biomimicry.
- Outline the three essential elements of Biomimicry.

The main objective of the unit is to train learners to critically consider how the application of Ecodesign in Creative and Cultural Industries can support the provocation of more sustainable biophilic human behaviour.

Suggested contents

Creative and Cultural Industries can support the critical need for the provocation of more sustainable biophilic human behaviour through an understanding of Ecodesign, presenting and becoming a flagship for where Ecodesign is headed.

Ecodesign for Creative and Cultural Industries

This topic focuses on the meaning, origin, context and the behind of Ecodesign. It examines the ten key principles of Ecodesign and how they support more sustainable human behaviour via Creative and Cultural Industries.

Connecting Ecodesign and Intentional Design in Creative and Cultural Industries

This topic focuses on the relationship between Intentional Design and Ecodesign in Creative and Cultural Industries. It will cover the 5 Elements of Intentional Design: Radical Simplification, Deep Understanding, Extreme Focus, Personal Connection and Direct Communication.

Ecodesigning to provoke Biophilia in Creative and Cultural Industries

This topic focuses on new sustainability trends by examining Biophilia and how to provoke it. It will cover the Five Biosphere Rules: Materials Parsimony, Value Cycling, Power Autonomy, Sustainable Product Platforms and Function Over Form and their potential applications in Creative and Cultural Industries.

Applying Biomimetic Design principles through Ecodesign in Creative and Cultural Industries

This topic expands on new sustainability trends by focusing on what Biomimicry is and the three essential elements that underpin a biomimetic approach: Emulate, Ethos and (Re)Connect. It will cover and connect Biomimetic Design's ten unifying principles of all sustainable and mature ecosystems which remain in place. It will also explain the difference between Biomorphism and Bioutilisation, and Biomimicry. And relate the ten unifying principles of all sustainable and mature ecosystems which remain in place to the application of Ecodesign in Creative and Cultural Industries.

Methodology

This unit contains theoretical and practical activities to build the learner's knowledge of Ecodesign. Learners will gain a solid theoretical background in the fundamental aspects of an Ecodesign approach for Creative and Cultural Industries and consider three emerging trends in sustainable Ecodesign: Intentional Design, Biophilic Design and Biomimetic Design. Each design discipline will be delivered with theoretical knowledge and supported by practical examples and case study discussions to reinforce knowledge and understanding. Learners should be encouraged to research other current trends to enrich the learning experience.

This unit will be delivered through a mixture of theoretical sessions, hands-on practical sessions, case study discussions, online forum discussions, and online guided tutorials. Learners need to be fully engaged in the sessions and have hands-on practical sessions to acquire the necessary skills in applying Ecodesign in Creative and Cultural Industries.

Throughout the unit, learners should be encouraged to develop critical and evaluative thinking. Learners should be encouraged to take responsibility for initiating and completing tasks and should be encouraged to carry out individual research to consolidate and enhance their knowledge, understanding and skills in an enterprise solution context.

Assessment

The assessment for this unit will consist of the following components:

A continuous assessment component in the form of an online forum whereby learners will discuss several topics/threads. Learners will be assessed based on their continuous contributions and participation in each topic/thread created.

Provide learners with several Ecodesign case studies to evaluate to help them develop critical thinking. The learner should provide written reports about their work, including a review of current approaches to solving similar use-cases, the approach taken to solving the learner's use-case, and an evaluation of results obtained. In the end, the learner will need to present their solution and findings in the form of a presentation.

Tips for teachers, trainers and educators

- Teachers, trainers and educators must begin discussing the environmental challenges we face as a species by guiding learners to be in the most regulated nervous state possible to receive this important message. Start your lessons with a grounding warmer like meditation or breathing exercises.
  https://www.youtube.com/watch?v=K4YoQHjaziI
  https://www.youtube.com/watch?v=PmBYdfv5RSk
- Encourage learners to become more intentional by requesting they each define a private intention for their learning in each class.
- To give learners a clear idea of the difference between Biomimicry, Biomorphism and Bioutilisations, pre-select some real-world examples to help learners discern the difference.
- It is recommended to use use-case studies, illustrative examples, and interactive material to engage and motivate participants throughout the sessions.
- Encourage discussion and participation to create a dynamic and stimulating environment.

References

- What is Eco Design?
- Cradle to Cradle Design - William McDonough
- Resource Abundance and Design - William McDonough
- Ecodesign in product and service development
- Encyclopedia Brittanica - Biophilia Hypothesis
- EU Ecodesign Directive
- The Biomimicry Institute
- Biomimicry, Bioutilization, Biomorphism: The Opportunities of Bioinspired Design by Allison Bernett

Practical Activities

Practical Activity 1

Name of the Activity
Levels of Ecodesign
Aims of the Activity
This activity is aimed at understanding that Ecodesign is not a binary concept, you can do it at different levels depending on the need of the market, the technical feasibility and the objectives of the project
Description of the Activity
▪ Let the class choose one product/CCI to work with. ▪ Start a brainstorming session to find Ecodesign solutions for the chosen product/CCI, the idea is to have vastly different solutions ▪ Organise these ideas on a scale from "Improving the system" up to "Eco innovation" ▪ Once the solutions are organised you present de differences between the 4 levels of Ecodesign "Improving" – "Redesigning" – "Functional innovation" and "Product/service system innovation"
Resources
Overview of the meaning of ecodesign and the levels An Investigation into the Impacts of Sustainable Development on Shifting Product Design Paradigms
To find out more
Envisioning Ecodesign

Practical Activity 2

Name of the Activity
Biophilic Design
Aims of the Activity
The aim of this activity is to reconnect learners with their own sense of biophilia. Learners are invited to share details of a time when they felt a sense of biophilia and to reflect on what caused them to feel a sense of biophilia. And to notice the regulating effect of nature on their physical body and mental health.
Description of the Activity
Step 1: Write the word "*Biophilia*" on the whiteboard. Step 2: Ask the learners if anyone knows what the word means and can give a definition of it. Step 3: Now write the definition of the word "*Biophilia*" on the whiteboard Biophilia - (according to a theory of the biologist E. O. Wilson) *An innate and genetically determined affinity of human beings with the natural world*. Step 5: Next, distribute pens and paper to learners and allow them 10 - 15 minutes to make notes about a time in their life when they felt an affinity with the natural world. Step 6: Next, write the following prompts to help learners consider their own experience of Biophilia. *A time I felt a sense of biophilia was…..* *I was (place)…..* *I was with (person)…..* *I felt a sense of biophilia because…..* *Anything else…..?* Step 7: Now place learners in groups of 4 and ask one learner to take note of any similarities in the group's answers. Step 8: Instruct each group to share their experience of Biophilia with the group. Step 9: Invite each group's note-taker to share what were the commonalities in the group's shared experience of Biophilia. Step 10: Write all the experiences that the class group have in common about Biophilia. Step 11: Swap 2 learners from each group of 4. Step 12: Tell learners they will now consider how human engagement with the biosphere can either regulate or dysregulate the human nervous system.

Step 13: Next, distribute pens and paper to learners and allow them 10 - 15 minutes to make notes about what they did yesterday and decide which activities were regulating and which were dysregulating for their nervous system and why.

Step 14: Tell learners to share their notes with the group and ask a learner who has not taken notes before to record the group discussion.

Step 15: Ask the note-taker from each group to report on the group's discussion to the ask.

Step 16: Clear the whiteboard and draw a line down the middle. Write the word *Regulating* on one side and *Dysregulating* on the other.

Step 17: As the note-takers give their reports, fill the board with what activities were nervously Regulating and Dysregulating.

Step 18: Invite the class to reflect and share any new insights they may have gained into the transformative power of nature.

Resources

Whiteboard

Whiteboard markers

Paper

Pens

To find out more

- Biophilic Residential Regeneration for the Green New Deal
- Biophilia, the future of architecture

Practical Activity 3

Name of the Activity
Mimicking nature
Aims of the Activity
The aim of this activity is to help learners begin to consider how to adapt the products and processes conducted in their respective Creative and Cultural Industries to be more in harmony with the biosphere by looking at them through a biomimetic lens.
Description of the Activity
Step 1: Tell the learners that in this class they are going to learn to consider a selection of products and processes in everyday use in their respective Creative and Cultural Industries through a biomimetic lens. Step 2: Divide learners into groups of 4. Step 3: Write a definition of Biomimicry on the whiteboard. *Biomimicry is a biologically inspired design process where the end result functions like nature.* Step 4: Ask each group of 4 to work together to select two ecologically unsustainable products and processes found in their Creative and Cultural industries. Step 5: Once learners have decided upon their ecologically unsustainable products and processes write the following question on the whiteboard. *Is there a product or process already in existence in nature which is similar to those your group have selected? Write down details of what they are.* Step 6: Allow learners a minimum of 15 minutes to consider the aforementioned question. Step 7: Now distribute printed handouts, project or write on the whiteboard the ten unifying principles of all ecosystems which are able to survive in place. 1. *Use waste as a resource* 2. *Diversify and cooperate to fully use the habitat* 3. *Gather and use energy efficiently* 4. *Optimise rather than maximise* 5. *Use materials sparingly* 6. *Don't foul their nests* 7. *Don't draw down resources* 8. *Remain in balance with the biosphere* 9. *Run on information* 10. *Shop locally*

Step 8: Invite learners to work together to make suggestions for a redesign of the ecologically unsustainable products and processes they have selected to be biomimetic in consideration of the ten unifying principles of ecosystems which have the capacity to help ecosystems remain in place.

Step 9: Instruct each group that they must now work together to select their best product and process redesigns.

Step 10: Tell the learners each group will present their biomimetic redesign of the product or process to the class group.

Step 11: Write the following guide headings for the presentations on the whiteboard:

What are you redesigning?

Where is this product or process located in your Creative or Cultural Industry?

When you applied the ten unifying principles of all ecosystems that stay in place to this product or process what aspects of this product or process are in disharmony with the biosphere?

What are your group's suggestions for a redesign?

Step 12: Once learners have identified their answers ask learners to each assume responsibility for presenting one question on behalf of the group.

Step 13: Allow learners ten minutes to practice their presentations.

Step 14: Invite each group to present their product and process biomimetic redesigns.

Step 15: After all the presentations invite the class group to reflect on what new insights they have gained from the process.

Resources

Whiteboard

Whiteboard markers

Internet access

A projector or access to a photocopier

Paper

Pens

To find out more

- The Biomimicry Institute
- Bio-Inspired Buzzwords: Biomimicry and Biomimetics by Denise DeLuca
- Biomimicry, Bioutilization, Biomorphism: The Opportunities of Bioinspired Design by Allison Bernett
- Check out this video more about Biomimetic Redesign

A.2. STRATEGIC FORESIGHT IN THE CCIS MARKET

Aims of the Learning Unit

The aim of this unit is to provide the learner with an understanding of the characteristics of the Craft and Creative Industries and an appreciation of the trends and changes that are facing the sector. Set against this understanding, the learner is introduced to the concept of Strategic Foresight and why it is important in the context of their operations. Through a series of practical activities, the learner will be able to examine the internal and external factors driving change within CCIs markets and develop a sustainability strategic vision to manage these changes and take advantage of emerging trends.

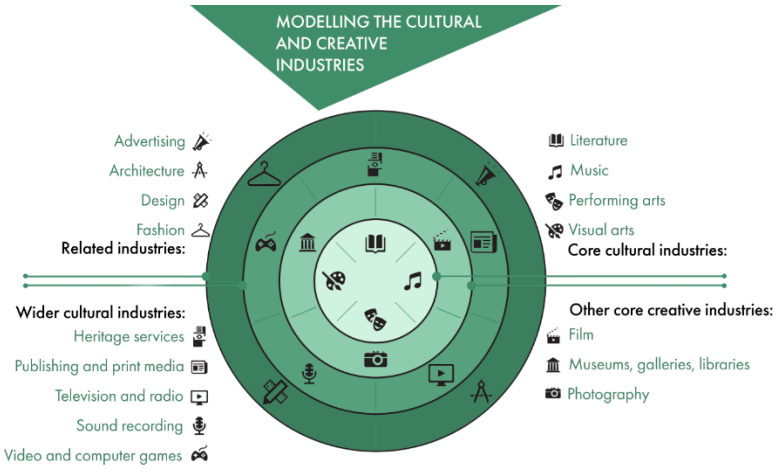
Suggested contents

What are CCIs?

Cultural and Creative Industries (CCIs) are comprised of all sectors whose activities are based on cultural values, or other artistic individual or collective creative expressions and are defined in the legal basis of the Creative Europe Programme (European Commission, 2018). Cultural and creative industries are vital to society's long-term growth as they generate significant economic benefit because they are knowledge-intensive and based on individual innovation and talent. They are also vital for a shared sense of European identity, culture, and values. In terms of economic growth, they outperform the national average, creating jobs, particularly for young people, while also boosting social cohesiveness.

Who is Part of CCIs?

The theatre, visual arts, cinema, TV, radio, music, publishing business, computer games, new media, architecture, design, fashion, and advertising are all part of the cultural and creative industries.



Source: Culture and Creativity EU Eastern Partnership Programme, *Lecture 5 Cultural and Creative Industries: Modelling the Cultural and Creative Industries*

Retrieved from: https://www.culturepartnership.eu/en/publishing/course/lecture-5

The cultural and creative industries contribute to 4.5% of the world's GDP and are forecast to grow 10% annually. The industry is the third biggest employer in the EU and is also the leading sector for growth and employment in the EU currently providing 8.3 million jobs and €558 billion in revenue. Entrepreneurship in these sectors means to have creative ideas and pursue them in a commercial way however the profit alone is not the driving factor; it is the creativity and possibility to build something, the self-fulfilment or being able to pursue your own creative interests. However, the Cultural and Creative Industry operators face some difficulties and often need the following characteristics to overcome them and continue in business. It is important that regardless of which part of the cultural and creative sector you represent be it theatre, fashion, or architecture, success and survival can often depend on having the following characteristics:

Ideas Oriented: People who can come up with unique and entertaining ideas, whether it's for next year's innovative calendar of events or for alternative funding or income streams. The ability to think laterally is highly valued.

Good Communication Skills: People who can convey their ideas, persuade their team that their ideas are viable, or persuade external partners or funding organisations that their ideas are viable and worth investing in.

Budget Oriented: Most creative businesses operate on a limited budget. They have a lot of wonderful ideas but not a lot of money. As a result, being able to efficiently cost ideas and spend funds is critical.

Diplomatic: Many creatives work in groups. Diplomatic personalities must be able to get on board with creative partners or financial bodies, as well as keep their own team on board and passionately committed to their ideas. Creatives are frequently hosts to guests and industry professionals at events, exhibitions, and premieres.

Organised: Creative teams may work on a project-by-project basis, according to strict budgets and deadlines. To secure a successful end, creative and cultural leaders must plan for all possibilities, anticipate potential hazards, and hire the right people at the right time.

Perseverance: Probably the most important characteristic needed in the sector. There are many others who are attempting to turn their passion into a career. As a result, there is typically more demand for jobs than supply. If you are trying to make a living as an artist, it could take years to establish a name and produce work of a specific standard. Something that you also will need to be successful in the CCIs industry and creative knowledge. Knowledge of key funding bodies, influential organisations and significant technology or policy changes are crucial to surviving in the market. Some questions to ask yourself may be: Do you keep up with the current trends and technological advancements in the computer game industry if you're interested in making them? If you wish to work as a visual arts curator, you'll need practical or academic understanding of major artists or movements in your industry - are you keeping up with current movements locally and worldwide by reading the latest journals and attending exhibitions on a regular basis?

Trends and changes within the CCIs Market

COVID-19 and national lockdowns had a dramatic effect on employment for many. However, it hit the cultural and creative industries particularly hard, with a total of 10 million jobs lost in these sectors worldwide in 2020, according to a new report from UNESCO. Nevertheless COVID-19 is not the only factor posing a challenge to the CCIs; rapid changes caused by the digital shift and globalisation, market fragmentation relating to linguistic diversity, the climate crisis, and difficulty accessing finance all posed significant challenges for the sector and represent emerging trends that operators must take account of.

Technology has given a new direction to the interaction of human creativity, ideas, and knowledge. This relationship drives knowledge-based economic activities, upon which the creative economy thrives. Furthermore, the role of automation to support creative work is increasing productivity while improving energy and resource efficiency. Museums, exhibitions, concerts, and theatres are being offered online. As a result of lockdowns and physical distancing, festivals have also created hybrid alternatives, including innovative drive-in outdoor screening venues for people to enjoy. There is a growing awareness within CCIs of the urgency to address climate change and appreciation of the need for more action. CCIs are being called on to deliver on sustainability goals requiring people working in the Creative Industries to become more engaged with citizens, regional and local organisations, and policy makers. Finally, trends in relation to innovative design specially to address the needs of products, services, and experiences in a decarbonised and more Circular Economy will be a feature of the CCIs markets for years to come. It is against this backdrop, that we introduce and explore strategic foresight.

Strategic Foresight

Strategic Foresight helps us to anticipate and better prepare. Strategic foresight is a structured and systematic way of using ideas about the future to anticipate and better prepare for change. It is about exploring different plausible futures that could arise, and the opportunities and challenges they could present. Strategic foresight typically has six steps as follows:

1. **What future**: The first step in strategic foresight is to define the future you want to explore and the time horizon, that usually would be 5 to 10 years; what specific areas do you want to look at? An example may be shifting business dynamics like distribution methods and technology.

2. **Scan for forces and trends**: It is recommended to use the STEEP approach to identify trends; **S**ocial trends, **T**echnology trends, **E**conomic Trends, **E**nvironmental Trends and **P**olitical trends

3. **Forecast scenarios**: Building multiple scenarios based upon a set of selected trends will help you identify the spectrum of possible futures your business could face. After you have completed your scenarios, does the future begin to come into view in terms of the issues or factors emerging in multiple scenarios? Can we influence them?

4. **Envision the Future**: Ask yourself what outrageous successes would look like in 5 years, 10 years, 15 years, and 20 years' time?

5. **Back casting**: Working backwards to today, create a list of milestones you would need to reach each time-period in the previous step.

6. **Implement**: When all steps are complete, you are ready to implement; don't put it on the backburner, get started while you have momentum.

To understand the trends and changes within CCIs Markets, operators in the sector need a shift in mindset and a way that will break through common barriers to foresight thinking including group think, fear of the unknown, conformity, short-termism, and resistance to change.

According to Futurist Betty Ferreira "*we are living in an era that is Volatile, Uncertain, Complex and Ambiguous (VUCA). Strategic foresight provides a rigorous structured methodology that helps companies manage in these times of 'VUCA' by providing them with the tools to better understand possible, plausible, and probable futures and to strengthen their capacity to be resilient in this ever-changing world*." (LinkedIn, 2019)

Methodology

This unit can be delivered through a combination of self-directed learning (content and theory) and small group sessions (completing the activities). It is important when facilitating the practical activities that the trainer taps into the real-life and practical experiences of the learner group to make the learning authentic, relevant, and contextualised to the CCIs. There should be a balance between trainer input, discussion, and feedback in delivering this module.

Assessment

Assessment will be carried out in the form of a practical group activity to encourage creative group thinking and come up with strong Ecodesign concepts:

- Educators/teachers should put learners into small groups and task them with designing a new product/service concept with strong Ecodesign principles. The product or service should be something in the CCIs sector with sustainability central to its development.
- Learners will need to collaborate with each other in their groups to first decide which industry and product they are going to focus on and how they are going to include strong Ecodesign principles into their concept.
- Once they have designed their concepts, the groups should present their ideas to the whole group and share the ways in which they have successfully incorporated Ecodesign into their product idea.
- Marking of the assessment should be weighted in favour of the relevance of their new CCI product concept to Ecodesign principles and thus their understanding of how long-term sustainability can be incorporated into every day CCIs practices.

Tips for teachers, trainers and educators

- Use the participants' existing knowledge and build on it to develop their new product concept.
- Ensure an appropriate balance between trainer input and allowing for discussion amongst participants.
- Support participants to conduct the activities in small group sessions – sharing and exchanging ideas and experiences and building their own sustainability strategic visions.
- We propose assessment of the product concepts should be based on at least some of the following criteria and on a scale of 1-5, where 5 is very good and 1 is very poor:
    - How much consideration has been made to sourcing raw materials locally where possible?
    - Are the raw materials/components renewable/recyclable?
    - How much consideration has there been to minimise the energy consumption during the creation of the product?
    - Is there a plan in place for the re-use of the product at the end of its initial life cycle?
    - How much thought has been put into packaging and limiting or eliminating the need for non-recyclable materials?
    - How well has the group presented their new product concept and its sustainability credentials?

References

- A Notion about Cultural and Creative Industries
- Cultural and creative sectors
- What does it take to have a Creative Career?
- Framing the future: A guide to Strategic Foresight
- What is Strategic Foresight?
- What is Strategic Foresight and why is it important?

Practical Activities

Practical Activity 1

Name of the Activity
PESTLE Analysis
Aims of the Activity
A PESTLE analysis is a highly effective analysis tool that helps in the process of developing a strategic plan for your business. PESTLE analysis is, in effect, an audit or external scan of an organisation's environmental influences that helps guide the planning and strategic decision making. It is often referred to as providing a 'big picture' of the environment in which a business operates. The assumption is that, if a business can audit its current environment and assess potential changes, it will be better placed than its competitors to respond to changes.
Description of the Activity
Type of work Individual work – everyone representing their own business/project **Time** 60 Minutes **Material** - 6 sheets of paper per person (one per factor) - Pens, markers **Instructions** - Explain what PESTLE stands for: **P**olitical, **E**conomic, **S**ocial, **T**echnology, **L**egal and **E**nvironmental. - Have the participants list external PESTLE factors for their business/creative project. - Then get them to identify the implications of each PESTLE factor on their business/creative project. Normally this involves assessing their impact over time (short/medium/long term). - They should then rate the potential impact it could have on their business/creative project from High to Low. - Then should rate the likelihood of it happening from High to Low. - Once completed, participants should focus mainly on the factors with ratings of high impact and high possibility of happening and set out a plan of action accordingly.
Resources
▪ How to effectively conduct a PESTLE & SWOT Analysis

To find out more
▪ Why use PESTLE? ▪ The advantages of PESTLE analysis

Practical Activity 2

Name of the Activity
How to develop a Sustainability Strategic Vision
Aims of the Activity
Making sustainability an intrinsic part of your creative business strategy and putting a robust sustainability vision or plan in place is key to ensuring a business can adapt to the requirements and demands of the economy of the future; one that will require the adoption of more eco-friendly, sustainable, and circular economy principles.
Description of the Activity
Type of work Individual work **Time** 60/90 Minutes **Material** - Sheets of paper - Pens, markers **Instructions** - Discussion time: Ask the group do they know what a sustainability strategy is? Do they believe it's important? - Hand out paper and pens to participants and ask the following questions, have them write down the answer, there is no correct or incorrect answer. It is what matters to them as individuals. - Start Personal: Have the participants look at themselves. Ask them if they are motivated by preserving the earth's natural habitat and what business do they look up to and what are the values they hold that speak to them? - Then get them to write about their customers. Is the vegan lifestyle becoming more popular among their customers? Is the issue of plastic a worry for them? Are they motivated by personal stories about making a good difference in communities? What do they read, watch, and listen to?

- Pivot the values their business already holds, get the participants to acknowledge what they pride themselves on even if it doesn't directly relate to sustainability. Some examples may be outstanding customer service, great design or treatment of staff.
- The next step is to have the participants look at how the values intersect with sustainability issues; can they make any changes that will not affect the quality of the values but improves their sustainability status?
- It is then time to take all the information written down and come up with a statement; usually one or two sentences which sums up what their business will strive to do to be more sustainable.
- Showcase some examples like below, for example:

  Starbucks: *We are committed to offering high-quality, ethically purchased and responsibly produced products. We are committed to investing in paths to opportunity through education, training, and employment. We are committed to minimising our environmental footprint and inspiring others to do the same.*

  Patagonia: *"Build the best product, cause no unnecessary harm, use business to inspire and implement solutions to the environmental crisis".* Patagonia uses this statement as a foundation and describes their reason for being in much more detail on their corporate web site on the Patagonia Sustainability Mission webpage. Here's an excerpt: *At Patagonia, we appreciate that all life on earth is under threat of extinction. We aim to use the resources we have—our business, our investments, our voice, and our imaginations—to do something about it.*

  Nike: *Our mission is to do everything possible to expand human potential. We do that by creating ground-breaking sport innovations, by making our products more sustainably, by building a creative and diverse global team and by making a positive impact in communities where we live and work in.*

Who is leading the way in the Cultural and Creative Industries?

Resources

- How to start creating a Sustainability Vision

To find out more

- How to write sustainability statements
- 8 ways to make business more sustainable

A.3. SUSTAINABLE STRATEGIC BUSINESS PLAN IN CCIS

Aims of the Learning Unit

This unit is built upon the key learning outcomes identified within the overall training modules' structure, which can be summarised as follows:

- Identifying sustainable business goals and impacts on the environment based on appropriate business plans and impact indicators.
- Developing skills to define the need for business adaptation to sustainability assuring Ecodesign activities and processes within CCIs.
- Being able to apply sustainability policies to CCI businesses based on a sustainable design to manage and minimise the impact of activities of CCIs on the environment.

Suggested contents

In this unit learners will acquire knowledge and skills to:

I. Set ***sustainable business goals*** through a sustainable business strategy to develop key Ethic and sustainable thinking entrepreneurial skills outlined in the EU EntreComp framework and the Envisioning sustainable futures competence outlined in the EU GreenComp framework.

To reach this goal, we will refer to the Corporate Social Responsibility (CSR) of enterprises that self-regulate the environmental, economic and social impacts of their products and services.

The two competences identified in the two EU frameworks refer respectively to the abilities to:

- "Recognise the impact of one's choices and behaviours, both within the community and the environment" as well as "to act and be driven by ethics and sustainability when making decisions" (EntreComp: The Entrepreneurship competence framework)
- "Visualise alternative future scenarios and identify actions to achieve a sustainable future and to foster a circular society" (GreenComp: The European sustainability competence framework)

To this end, CSR refers exactly to the way in which businesses regulate themselves to ensure that all of their activities positively affect society as a whole.

According to the European Commission understanding (EC Communication 2011), CSR is the process whereby enterprises integrate social, environmental, ethical, and human rights concerns into their core strategy, operations, and integrated performance, in close collaboration with their stakeholders.

CSR and sustainable development are two closely interrelated concepts covering the same spheres of business impact related to social, ecological, and economical goals based on ethical standards, even more important in an era of crucial scientific advancement and economic growth on one hand and ecological threats on the other. By planning, and practising social responsibility, entrepreneurs

can set sustainable goals and standards to achieve not only profits, but also to protect the environment, to promote social inclusion and human capital in terms of human knowledge and skills.

To integrate social, economic, and environmental concerns within businesses' decision-making policies, CSR shall represent companies' core values, vision and mission.

Mission and vision are key to communicate a business' purpose and values to all key stakeholders including customers, investors, suppliers, employees, and institutions such as governments. For this reason, they are brief written statements answering questions about one's business, such as "who you are", "what you value" and "where you are going".

In particular, the Mission statement communicates the business' reason for being and how it aspires to serve its key stakeholders ("why your business exists") and the vision statement is a future-oriented declaration of a business' purpose and aspirations ("where your business wants to be to reach its goals").

In the first activity, learners will approach the design of a mission and vision statement.

As a second goal of this unit, learners will acquire knowledge and skills to:

II. Define the need for business adaptation to sustainability through an ***effective sustainable business plan*** to develop ***key Planning and management*** entrepreneurial skills outlined in the EU EntreComp framework and the Embracing complexity in sustainability competence outlined in the EU GreenComp framework.

To reach this goal, in this unit we will refer to the innovative ***Eco Creative Project Canvas*** as an entrepreneurial tool implemented by Materahub to visualise and build a creative/cultural business based on the Circular Economy.

The two competences identified in the two EU frameworks refer respectively to the abilities to:

- "Define the goals for a simple value-creating activity, create an action plan, which identifies the priorities and milestones to achieve the goals and to further refine priorities and plans to adjust to changing circumstances" (EntreComp: The Entrepreneurship competence framework)
- "Formulate current or potential challenges as a sustainability problem in terms of difficulty, people involved, time and geographical scope, in order to identify suitable approaches to anticipating and preventing problems, and to mitigating and adapting to already existing problems" (GreenComp: The European sustainability competence framework)

Making an entrepreneurial idea or project into a living sustainable enterprise requires abilities to set clear goals, to plan what you want to achieve, how, when and with / for whom because "*a goal without a plan is just a wish*". In other words, it is necessary to PLAN how to shape an idea or project to solve a problem or meet a need.

The abilities to plan, coordinate and organise help controlling the degree of accountability reducing time-wasting indecision. By setting clear goals and objectives and assessing one's own project, you will see what the chances are there to actually achieve them.

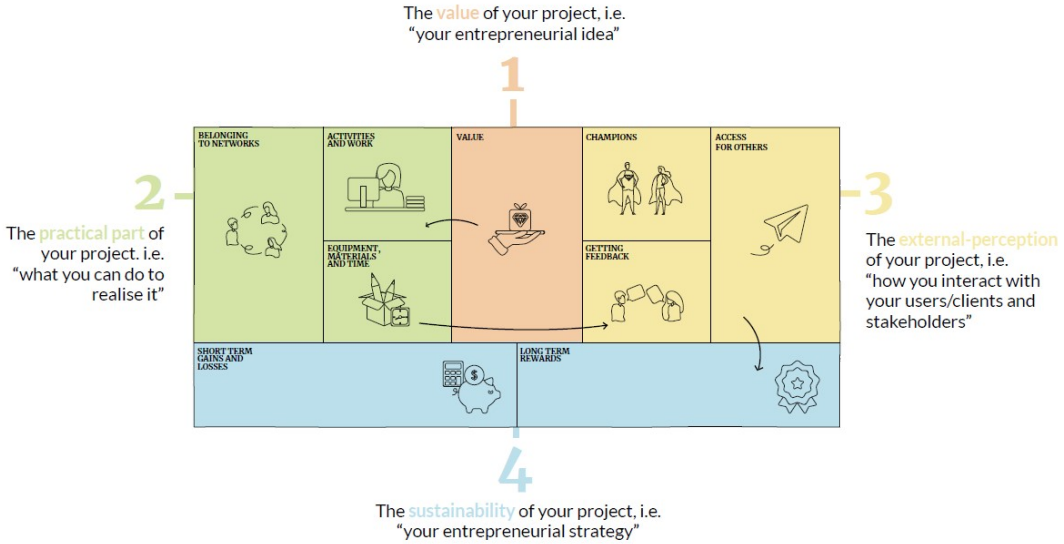
In this stage, when it is crucial to visualise and reflect upon one's own entrepreneurial project idea within CCIs with a clear and effective sustainable, environmental, and economic concrete approach, a business model can be a key reflective strategic management and entrepreneurial tool to make it become a living project.

The tool presented in the second activity is just tailor made to guide learners through a reflection pathway on how to visualise and design a circular business action plan within CCIs, by implementing planning and management skills towards a wider sustainable perspective of one' own project idea.

The ***Eco-Creative Project Canvas***, based on the traditional Business Model Canvas implemented by Materahub, is an entrepreneurial reflection tool for aspiring, new and existing CCIs entrepreneurs with an additional "sustainable" approach providing further reflection points and guidance to integrate sustainability and a systems-focused approach (circular economy) in the core product/service.

It consists of 9 key themes or blocks, and it helps:

- mapping, developing, and planning different ideas,
- finding out how to connect with people's needs and products/services that have a positive sustainable impact on the environment and society,
- connecting the big picture with the finer detail of each of project's potential stages,
- considering the potential impact of the project from different perspectives.



Further insights, explanations and instructions are provided in the second activity.

Methodology

The key characteristics of the methodological approach applied in this unit are as follows:

- Practical and engaging, based on learners' centred activities to support them in achieving the learning goals and put into practice tools and processes delivered.
- Collaborative where applicable, as students can work in groups to exchange knowledge, ideas, and concepts to increase their awareness and competencies related to social, environmental and business sustainable impacts of their activities.
- Peer-to-peer to allow learners interacting and supporting each other throughout the learning process without a constant direct intervention from trainers.
- The activities presented support learners in improving skills in collecting, analysing, interpreting, and presenting findings and data as well as practising a wide range of personal and transferable skills such as problem solving, team working, and managing resources (including time).

The trainer has a key role as facilitator too in supporting and guiding learners through practical activities and exercises introduced by a brief presentation of the theoretical contents to explore the practical applicability and usefulness of the unit contents.

Assessment

An online diagnostic test assessing sustainable skills and knowledge of entrepreneurs

This test is based on the ***Entrecomp Competences*** related to ***Circular Economy*** developed by the "Sustrainy" EU project partnership including Materahub.

Tips for teachers, trainers, and educators

- Make research to broaden the knowledge about the topics and prepare relevant presentations.
- Refer to the theoretical part of the topics by recalling the most important terms, definitions and issues discussed.
- Provide the materials and information sources (literature, website, project), including the worksheets of this unit.
- Set an engaging learning environment and effective communication among learners by encouraging them to share ideas, doubts, and opinions with the trainer.
- Provide information about the ultimate goals and achievements of this unit and the assessment tool to use, which can be submitted before and at the end of the unit.
- Try to set small working discussion groups as this can be very useful during practical works to build up effective project groups.

References

- EntreComp framework
- GreenComp framework
- Corporate Social Responsibility (CSR)
- Sustrainy EU project partnership including Materahub
- What is a vision statement
- What is a mission statement
- Creative Project Canvas implemented by Materahub

Practical Activities

Practical Activity 1

Name of the Activity
Design a Vision and Mission statement
Aims of the Activity
This activity aims at supporting learners in the development of a business' Vision and Mission statement by reflecting on: ▪ Why the business exists, which are its core values, purposes and plans and how the company wants society to view the business within a time frame (3 – 10 years or more in the future) (**VISION**). ▪ What the company does, how it does it and why it does it (**MISSION**) Some examples and specific steps will support learners in completing this activity.
Description of the Activity
Type of activity Groups of about 5 people or individually, starting from one's own business / project. **Time** 60 minutes including discussion time. **Material:** Ppt presentation including instructions below. - If F2F, prepare worksheets according to the instructions below.

- If online use the ppt interactive presentation, jam board or any other interactive boards and share the case study scenario below.

Case study scenario

Imagine that you are a young 30-year-old artisan creating original handmade décor items (lamps, vases etc.) made with local raw materials.

You have been running your business for 5 years with your fiancée who takes care of admin, economic and sales issues mainly. You have a small laboratory-shop where you produce and sell your products, but you also cooperate with local shops. You also have a FB profile and your own professional website.

You have strong beliefs towards social and ethical concerns, and you are committed to being more sustainable for your community, the environment and yourself. Now it is time to create and share your business' vision and mission statements.

Instructions

- Prepare a ppt presentation including the VISION and MISSION concepts:

MISSION	VISION
Today: what your business represents *What you do (products and services)* *Who you do it for (customers)* *Why you do it (purpose)*	**Tomorrow: what your business wants to become** *What you want to be going forward* *What problems you want to solve for the greater good* *Who and what you are inspiring to change / make better*

- Present about 6 examples of famous companies' VISION and MISSION statements.
- Ask learners to choose 3 vision statements that particularly moved them or stayed in their minds.
- Ask them to write down at least 1 reason why those 3 statements were selected.
- If they work in groups, tell learners to read the case study and write a Vision statement and a Mission statement of it (see "Material" section) or if they work individually, ask them to write a vision statement and a mission statement of their business / project.
- If f2f, distribute the worksheets below and if online, arrange the contents as interactive online activity (see "Material" section).
- Tell learners that they have about 30 minutes to complete the statements and then they will present it to their peers (if in groups, ask them to choose a spokesperson).
- Allow all participants to discuss and share ideas and opinions on the activity outcomes.

WORKSHEET TO DEVELOP A VISION STATEMENT ***Tips:*** *You can use the following worksheet to generate your business Vision Statement. Write down your answers to the questions, then synthesise these ideas and weave them into your business Vision Statement.*		
What would you like your business to become? (*The best in* …or *a leader in* … or *nationally recognized for*…)	What would you like your business to strive for? (What reputation? What level of excellence?)	What would you like your business to look like in the future?
Integrate the above information and compose your business Vision Statement:		

WORKSHEET TO DEVELOP A MISSION STATEMENT ***Tips:*** *You can use the following worksheet to generate your business Mission Statement. Write your answer to the questions, then synthesise your ideas and weave them into your business Mission Statement.*		
What are the primary functions and activities that your business performs?	Why do you perform these activities/What is the purpose of your business?	For whom does the business conduct the activities?
Integrate the above information and compose your business Mission Statement:		

Resources

- How to write a vision statement for your business
- How to write a mission statement

To find out more

Further readings:

- ECONOMY – Topic n°4 Corporate Social Responsibility
- What is a vision statement
- What is a mission statement

Practical Activity 2

Name of the Activity

Eco-Creative Project Canvas

Aims of the Activity

This activity aims at introducing and using the Eco-Creative Project Canvas, an entrepreneurial reflection tool implemented by Materahub for aspiring, new and existing CCIs entrepreneurs with an additional "sustainable" approach providing further reflection points and guidance to integrate sustainability and a systems-focused approach (circular economy) in the core product/service.

Description of the Activity

Type of activity

Group of about 5 people each with a case study scenario (see below) or individually starting from one's own business / project challenge.

Time

60-80 minutes including discussion time.

Material

- Eco-Creative Project Canvas
  - If F2F, print the Eco-Creative Project Canvas ppt presentation.
  - If online, use the ppt interactive presentation, jam board or any other interactive boards

For group activity

- Case study scenario

  Imagine that you are a young 30-year-old artisan creating original handmade décor items (lamps, vases etc.) made with local raw materials.

You have been running your business for 5 years with your fiancée who takes care of admin, economic and sales issues mainly. You have a small laboratory-shop where you produce and sell your products, but you also cooperate with local shops. You also have a FB profile and your own professional website.

Your financial assets are quite good, and you have heard that your regional government has made some funds available to young entrepreneurs wishing to introduce innovative processes / materials / tools to make their businesses environmentally and socially sustainable.

Since you have strong beliefs towards social and ethical concerns, you are committed to being more sustainable and your new mission is to make your packaging more sustainable and the transport of your products less impactful on the environment too.

This is your challenge that you may analyse and reflect upon by using the Eco-Creative Project Canvas.

Instructions

Tell learners that they have 45 minutes for this activity and give the following instructions:

- If they work in teams, tell them to read the case study scenario and work with their teammates to build their Eco-Creative Project Canvas for this or if they work individually, tell them to reflect upon their own business / project and build their own Eco-Creative Project Canvas.
- Remind them to start from the Value theme, read the questions guiding them to complete it and write down 3 main answers (on a post-it note if f2f, or in the online board if online) and repeat this for each theme.
- Tell them that at the end, one spokesperson per team or each learner will present their Eco-Creative Project Canvas to their peers.
- Allow all participants to discuss and share ideas and opinions on the activity outcomes.

Resources

This tool is implemented by Materahub.

The original Creative Project Canvas and relevant guidelines are available at https://www.creativeprojectcanvas.com/

To find out more

Visit https://www.creativeprojectcanvas.com/

A.4. IMPLEMENTATION OF SUSTAINABLE DESIGN CONCEPTS

Aims of the Learning Unit

This unit is built upon the key learning outcomes identified within the overall training modules' structure, which can be summed up as the learner will be able to:

- Recognize that specific improvements to design/production processes reduce the environmental impact of the products and resources they use.
- Measure the environmental impact of a design/production concept.
- Demonstrate improvements in the use of sustainable materials and resources in the production process.

Suggested contents

An introduction to the Unit summarises the following contents that form part of the learning outcomes described in the curriculum:

- Discussing the primary concepts of sustainability.
- Defining the meaning of reducing the environmental impact of the products and the resources used.
- Understanding the differences in the use of the materials in terms of environmental impact.
- Discovering the relevant tools that measure environmental impact.

The unit will also consist of an introduction and an assignment to the learners concerning main knowledge and ideas on carbon footprint covering the respective learning outcomes developed in the European ECVET Curriculum of reference:

- Naming tools that measure the carbon footprint of a design/production/project.
- Calculating the carbon footprint of a design or production.
- Measuring the environmental impact of a design/production concept.

The first activity is an introduction of the most relevant topics of the unit that include the primary concepts of sustainability, the meaning of reducing the environmental impact of the products and the resources they use, the differentiation on the use of the materials in terms of environmental impact and the relevant tools that measure carbon footprint. Sustainability concepts are presented for the learners to be acquainted with the meaning of sustainability and why education for sustainability is required.

Environmental impact is also presented as a concept and provides a positive aim of reducing its impact. After that, material efficiency in environmental impact is also stressed and the main tools

that it could be used to measure it. Along with the presentation, learners are encouraged to lead a discussion through a set of questions that are developed at the end.

The second activity involves an introduction to the meaning of **carbon footprint**, how reducing the carbon footprint cuts the business costs, what does it mean to small businesses and a methodology for calculating the carbon footprint of the business and how to use it.

After the presentation and the introduction to the carbon footprint measurement, the learners are encouraged to participate in an exercise where they practice the measurement of the carbon footprint of a supposed creative enterprise and discuss ways it could be reduced.

Methodology

The methodology followed during the specific unit are:

- **PBL learning**. (Problem based learning) PBL learning allows students to acquire key knowledge and skills through the development of projects that respond to real-life problems. Starting from a concrete problem, instead of the traditional theoretical and abstract model, there are notable improvements in students' ability to retain knowledge as well as the opportunity to develop complex competencies such as critical thinking, communication, collaboration, and problem solving.
- Where applicable, **collaborative methodology** should be used, as students can work in groups to exchange knowledge, ideas, and concepts to increase their awareness and competencies related to social, environmental, and the business sustainable impacts of their activities.

Assessment

The assessment for this unit will consist of the following:

- Formative continuous assessment throughout the module with open questions and discussion in alignment with the topics discussed.
- Summative assessment with a quiz of closed questions, multiple choice questions, true or false questions with regards to the topics of the module.
- A report based on the carbon footprint calculation of a small creative enterprise.

Tips for teachers, trainers, and educators

- Be prepared for the theoretical concepts and notions, by reviewing the material and researching the available resources on the internet.
- Use the suggested material and enhance it with more useful information where needed.
- Adapt the suggested material with more specific information if needed.

- Encourage the learners to express their own experiences and consider their thoughts to develop a productive discussion.

References

- A Sustainable Europe by 2030
- Environmental Assessment
- The four pillars of sustainability
- The Role of Material Efficiency in Environmental Stewardship
- Two Tools to Assess Environmental Impacts of Products
- Sustainable Product Policy

Practical Activities

Practical Activity 1

Name of the Activity
Introduction to the Unit
Aims of the Activity
This activity aims at introducing the learners to **sustainable design concepts** focusing on: - The primary concepts of sustainability. - The meaning of reducing the environmental impact of the products and the resources they use. - The differentiation of the use of the materials in terms of environmental impact. - The relevant tools that measure environmental impact.
Description of the Activity
Type of activity The activity concerns a presentation of PPT with the relevant information instructed by the trainer. **Duration** 40 minutes including discussion time. **Group size** 15-20 trainees **Steps to be followed.** The instructor:

1. Presents the PPT.
2. During the presentation he/she may develop the mentioned topics further.
3. Towards the end the instructor discusses the analysed topics based on the suggested questions.

Resources

The required resources include:

- Laptop
- Projector
- Working document: *Implementation of Sustainable Design Concepts. Activity 1. Introduction*

To find out more

- A Sustainable Europe by 2030
- Environmental Assessment

Practical Activity 2

Name of the Activity

Carbon Footprint Calculation

Aims of the Activity

This activity aims at introducing the learners to **Carbon Footprint** focusing on:

- Tools that measure the carbon footprint of a design/production/project.
- Calculating the impact of measures to reduce energy consumption.
- Calculating the carbon footprint of a design or production.

Description of the Activity

Type of activity

It includes a presentation and a case study scenario.

Duration

60-80 minutes including discussion time.

Group size

Group of about 5 people each with a case study scenario (see below) or individually starting from one's own business / project challenge.

Steps to be followed.

The instructor:

1. Firstly, presents the PPT concerning the introduction to carbon footprint and calculation options.
2. Discusses relevant experiences the trainees may have.
3. Presents the following exercise as an instruction.
4. Passes the handout to the trainees.
5. The trainees work independently.
6. A discussion is followed among the participants.

Instructions

The trainer presents the following PDF file to introduce the trainees to reducing carbon footprint of their business and what does this mean.

Working document: *Implementation of Sustainable Design Concepts*
Activity 2. Intro to Carbon Footprint & calculation

After finishing the presentation, which is enhanced through examples, the trainer encourages the participants to discuss personal experiences.

After that, the trainer passes the following handout to the trainees while he is presenting it.

The trainees read the assignment, work on it, and discuss the conclusions with the group and the trainer.

Working document: *Assignment – Carbon calculation & reduce of environmental impact.*

Resources

The required resources include:

- Laptop
- Projector
- Working documents: *Assignment – Carbon calculation & reduce of environmental impact.*
  Activity 2. Intro to Carbon Footprint & calculation

To find out more

- How to calculate your business carbon footprint
- Product Carbon Foot-printing for Beginners

B.2. LIFECYCLE ASSESSMENT METHODOLOGY

Aims of the Learning Unit

The aim of the unit is to be able to use or effectively read a Lifecycle Assessment (LCA) to find solutions in an Ecodesign4EU project. There are two ways of doing that:

- Doing the LCA by oneself to find environmental hotspots: in this case, it is necessary to be able to understand the methodology and how to use a simplified LCA tool.
- Finding LCA literature to gain perspective about the environmental hotspots of the product or service: in this case it is necessary to be able to read and understand a LCA report, how it is made, as well as the applications and limits of this kind of methodology to take out good interpretations.

The final aim of the unit is also to show ways of doing an environmental assessment without using only LCAs, through other tools like checklists.

Suggested contents

What is an LCA? Its link with Ecodesign4EU

Life Cycle Assessment is a lot of things: a methodology (ISO 14040-44), a tool (SimaPro, Ecolizer, etc.), a way to communicate (environmental footprint, Ecoprofiles) or to make design choices (Ecodesign). It is important to know the basics of what it is and its applications (difference between a simplified LCA and an expert LCA).

Overview of LCA Tools

There are a lot of different LCA tools, from expert ones that are quite expensive, to simplified ones that are cheaper, even free. The trainer will need to give an overview of some LCA tools and recommendations of tools that can be used for the CCIs.

Overview of an LCA project: Objectives and Scope

The first step of the LCA methodology is the one with the most influence over the results of the assessment. The trainer must explain how different objectives can orient a study. The functional unit: what it is, how to construct it, and its importance for comparative assessments and for Ecodesign as a whole. The scope of the study will be the last part of the first step; the trainer will show the link between objective and scope, the importance of determining a scope before starting the search for information, elements to be considered when adding or removing information from the scope and the effects of the end result.

Overview of an LCA project: Life Cycle Inventory

The second step of an LCA project. The trainer will teach how to construct an inventory. The type of information needed for each life cycle step (mass, placement of the supplier, distances, energy consumption, etc). How to make hypothesis when there isn't any information and how to construct scenarios (usage scenarios, end-of-life scenarios, etc.) to assess different concepts and consumption styles.

Overview of an LCA project: Environmental assessment

The third step of an LCA project. The trainer will teach what type of environmental criteria is possible to assess with LCA tools and how to pass from a life cycle inventory to the use of tools to find the results. This step is more practical when an LCA tool is used.

Overview of an LCA project: Interpretation

The final step of an LCA project. The trainer will teach how to conduct sensitivity analysis. How to read the results and the type of interpretation we can make to apply them in Ecodesign. At this step, the trainer will also explain what an LCA report is, its applications and what to look for when reading and writing one.

Environmental assessments without LCAs

LCA is the strongest tool in an Ecodesign project, but it needs a lot of resources. It is possible to find hotspots and ideas for design changes through other tools. Using checklists, Ecodesign wheels, Ecodesign guides, ecolabels, etc. The trainer will show a way to identify when LCA is the correct tool to be used and when it is better to have a different approach.

Methodology

The best way to work this subject is with practice. It is best if the trainers create case studies within the CCI sector to do an overview of an LCA project. Since CCIs are very varied, it would be good to have multiple case studies of different types of CCIs, to show how each type would have its own challenges to be considered when conducting LCA projects.

It would be best if the trainer also shows examples of LCA reports, for example multiple reports of the same product, to show how different objectives and scope affect the results and interpretation.

It would be useful to have available simplified LCA tools so the participants can use them in the case studies. Tools like Bilan produit (FR) or Ecolizer, that will let the participants quantify impacts directly.

Assessment

It will be based on competences assessment:

- **Assess interpretations skills**: Give the participants different reports and ask them what Ecodesign indicators that can be taken from them. The teacher will have to analyse how the student has considered the scope, the objectives, and the limits of the study to identify the best indicators for the project.
- **Assess the inventory construction**: For an LCA project, the student must develop the lifecycle inventory of a product with minimal information from the company. The teacher will assess the students' capabilities to construct hypothesis, scenarios, and the sources to justify the choices they made.
- **Evaluate an impact assessment**: with a lifecycle inventory, the student uses an LCA tool to quantify the impact and to determine the environmental hotspots of Ecodesign indicators. The teacher will assess how the student used the tool to help in an Ecodesign project.
- **Usage of other tools**: The student has several different tools (LCA, checklist, guides, others). The context is explained, and students have to choose and then use one or more tools to determine the hotspots of Ecodesign strategies for the project. The teacher will assess the justification for choosing one tool or another, the usage itself and its usefulness for the Ecodesign project.

Tips for teachers, trainers, and educators

- LCA is a difficult tool to use, but there are ways to simplify the work and still have worthwhile results (simplified LCA).
- LCA isn't always the best tool for every Ecodesign project.
- The interpretation of an LCA result is the most important part for the Ecodesign project.

References

- ISO 14040
- ISO 14044
- ILDC handbook: General guide for Life Cycle Assessment

Practical Activities

Practical Activity 1

Name of the Activity
Case study: LCA project
Aims of the Activity
Going through an LCA project with the help of a practical case study on the CCI sector.
Description of the Activity
The teacher will present an objective (Ecodesign a product) and context. With the students they will go through each step of the methodology to determine: The best scope for the objective, the lifecycle inventory, the usage scenarios, and the quantification with a simplified tool. Students can form groups, with different case studies for each group. They will follow the same steps (of the LCA methodology) and will have specific problems (lack of information, not enough resources, etc.) The teacher will assess at the end of the activity the type of interpretations the students made and how they responded to the objectives presented at the start of the activity. Duration: 2-3 hours.
Resources
▪ Internet / Computer to use the tool. ▪ Case studies ▪ Ecolizer ▪ OpenLCA
To find out more
▪ LCA case study in OpenLCA : Scooters ▪ LCA case study in OpenLCA : Beer bottle ▪ LCA case study in OpenLCA : Viticulture ▪ LCA case Study in OpenLCA : Comparisont of PET bottles

Practical Activity 2

Name of the Activity
Environmental Assessment without LCA
Aims of the Activity
To find ways to identify hotspots without using a quantification tool. Check simplified ways to find solutions and easy access ways to engage in an Ecodesign project.
Description of the Activity
Students are divided in groups and each group chooses a different tool to assess the product. At the end of the exercise each group talks about the process used for the assessment and the results. The class will discuss about the positives and negatives of each tool and the usefulness in an Ecodesign project. Duration: 20min to do the assessment. 20 min of debriefing with all groups together. 3-4 groups of 3 students each with different tools to use.
Resources
▪ Guides / checklist / LCA reports / internet and computers for the students
To find out more
▪ Eco-innovation Tools

B.1. CIRCULAR SUPPLY CHAIN SYSTEM

Aims of the Learning Unit

This unit focuses on sustainable and green circular supply chain systems in the context of Ecodesign in the Creative and Cultural Industries. This unit provides learners with an understanding of green circular supply chain systems and management, an overview of the environmental issues that impact supply chains, and strategic methods of addressing environmental issues within an organisation's supply chain. The main aims and objectives of this unit are based on the Learning Outcomes identified in the curriculum of reference, which are summarised as follows:

- Identify green circular supply chain systems for organisations that are environmentally sustainable.
- Develop skills to design, plan, analyse and manage green circular supply chain systems.
- Measure the environmental impact of a circular supply chain system.
- Apply design techniques to minimise environmental impact.

Suggested contents

Organisations, to most effectively manage the environmental burdens caused by industry and commerce, need to revisit and reconsider their supply chain systems to minimise environmental impact. This unit provides learners with an overview of green supply chain systems and management. Learners will be provided with an understanding of the main concepts and terminology for the overall adoption of corporate greening and environmental management efforts within corporate circular supply chains in the Creative and Cultural Industries.

Environmental Concerns: External Environmental Factors for Adopting Corporate Greening

This topic focuses on the importance of corporate greening and enable learners to identify the external factors that have an impact on the environment which drive organisations to adopt strategies to minimise adverse and harmful effects that cause environmental degradation. Several external factors drive corporate strategies for organisations to gain a competitive advantage over other market participants whilst satisfying client demands and increasing shareholders value. Factors originating from political, social, technological, market and economic activities have an impact on an organisation's life cycle that force organisations to evolve and undergo revolutionary changes for organisational maturity and growth. However, these factors have caused organisations to seriously consider their impact on the natural environment which in turn force organisations to redesign their supply chain systems to minimise environmental impacts. This topic covers several environmental factors which enable the learners to gain an awareness of which factors can be beneficial and adversarial to the environment with respect to supply chains.

Supply Chains and Supply Chain Management

This topic provides learners with an understanding of supply chains and supply chain management. Supply chains have evolved from Michael Porter's (1985) value chain which include primary activities such as inbound logistics, operations, outbound logistics, marketing, sales and services. Supply chains and supply chain management extend Porter's value chain by also incorporating other core activities such as procurement, organisation's infrastructure, information technology and human resources. Moreover, supply chains also focus on the interorganisational characteristics of supply chains incorporating partner firms and a network of customers and suppliers. Learners will also gain an understanding of traditional linear supply chains to current 'closed loop' circular supply chains which are in-line with Ecodesign principles and minimise environmental degradation. Supply chains depend on the nature of the organisation and in the end, learners will gain an understanding of supply chains of different organisations within the creative and cultural industries.

Stakeholders of Circular Supply Chains

This topic focuses on identifying different stakeholders within supply chains. The stakeholders include suppliers of materials and services, delivery and logistics, customers and consumers, governments, local bodies, and even competitors. Learners will gain an understanding at identifying different stakeholders of supply chains of different organisations and outline how these stakeholders can have an impact on environmental factors and the organisation's life cycle.

Corporate Environmental Management

This topic focuses on understanding some of the major activities of green supply chains by understanding the major internal corporate environmental practices that have evolved over time. Traditional corporate environmental management activities include filing environmental reports, acquiring environmental information required by law, and complying with environmental regulations. Traditional activities are reactive activities required by law. However, for organisations to gain competitive advantage, several practices, tools and technologies have been utilised by organisations that go beyond meeting regulatory policies. In this topic, learners will gain an understanding of major corporate environmental elements that impact supply chains which include environmental management systems, life cycle analysis, and designing supply chains for the environment and Ecodesign.

Measuring Environmental Impact of Circular Supply Chain Systems

This topic focuses on understanding the tools and techniques in measuring the environmental impact of circular supply chain systems.

The measures include measuring emissions to air, emissions to water and emissions to land. These measures will provide better insights on how an organisation's supply chain is impacting the

environment and aid management to change corporate strategy in their supply chain to minimise harmful impact on the environment. Learners will also be provided the necessary skills to understand how to redesign supply chains based on the outcome of the environmental impact measures.

Methodology

This unit contains both theoretical and practical activities. Learners should gain a strong theoretical background on the fundamental aspects of green circular supply chain systems applied to various use-cases in the creative and cultural industries. It is important that theoretical knowledge is backed-up with practical examples and case study discussions to reinforce knowledge and understanding. Learners should be encouraged to do their own research about current trends and use cases in the different applications of green circular supply chain systems within the different sectors of the creative and cultural industries.

This unit will be delivered through a mixture of theoretical sessions, hands-on practical sessions, case studies discussions, online forum discussions through open-source online forum platforms setup by the moderator/trainer, and online guided tutorials. It is essential for learners to be fully engaged in the sessions and it is important for them to have hands-on practical sessions to acquire the necessary skills in green circular supply chain systems.

Throughout the unit, learners should be encouraged to develop critical and evaluative thinking. Learners should be encouraged to take responsibility for initiating and completing tasks and should be encouraged to carry out individual research to consolidate and enhance their knowledge, understanding and skills in an enterprise solution context.

Assessment

The assessment for this unit will consist of the following components:

- A continuous assessment component in the form of an online forum whereby learners will discuss several topics/threads. Learners will be assessed based on their continuous contributions and participation to each topic/thread created. The online forum will be setup by the moderator/trainer through open-source online forum platforms such as Discourse and Forem, or open-source online learning environments such as Moodle, or open-source social platforms such as Discord, or any other software preference chosen by the moderator/trainer.
- Several use-case study components to engage learners to apply their knowledge develop critical and evaluative thinking to designing and analysing green circular supply chain systems for organisations within the Creative and Cultural Industries.
- The learner should provide written reports about their work, including a review of current approaches to solving similar use-cases, the approach taken to solving the learner's use-case, and evaluation of results obtained. In the end, the learner would need to present his/her solution and findings in the form of presentations.

Tips for teachers, trainers and educators

- It is recommended to use use-case studies, illustrative examples, and interactive material to engage and motivate participants throughout the sessions.
- Encourage discussion and participation to create a dynamic and stimulating environment.
- Explore the provided references and further readings to reinforce the contents and get inspiration on the development of the lessons.
- It is important for the teachers/trainers/educators to let the learners explore by themselves the knowledge provided by the course without interfering.

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Practical Activities

Practical Activity 1

Name of the Activity
Identify external factors that affect circular supply chains and the environment
Aims of the Activity
The aim of this activity is to learn, discover and identify the various external factors that affect circular supply chains which have an impact on the environment.
Description of the Activity
External environment factors play a key role in supply chains, and green circular supply chains focus on minimising negative effects that the supply chain has on the environment. In this activity, learners brainstorm and discuss how the factors that affect circular supply chains effect the environment. Type of activity and methodology: - **Presentation** – learners are provided with an overview of external factors and how these can affect supply chains. - **Use-case scenarios** – learners are provided with real life use-case scenarios in which external factors affecting supply chains have drove organisations to impact negatively on the environment. - **Discussion** – learners discuss the use-cases presented in this unit and identify the negative effects on the environment. - **Brainstorming activity** – learners brainstorm how the supply chains could be redesigned to minimise environment degradation. Duration: 90 minutes
Resources
▪ Presentation ▪ Use-case scenarios description
To find out more
▪ Cardoso de Oliveira, M.C., Machado, M.C., Chiappetta Jabbour, C.J.C. and Lopes de Sousa Jabbour, A.B., 2019. Paving the way for the circular economy and more sustainable supply chains: Shedding light on formal and informal governance instruments used to induce green networks. Management of Environmental Quality: An International Journal, 30(5), pp.1095-1113. ▪ Liu, J., Feng, Y., Zhu, Q. and Sarkis, J., 2018. Green supply chain management and the circular economy: Reviewing theory for advancement of both fields. International Journal of Physical Distribution & Logistics Management.

- Kazancoglu, Y., Kazancoglu, I. and Sagnak, M., 2018. A new holistic conceptual framework for green supply chain management performance assessment based on circular economy. Journal of cleaner production, 195, pp.1282-1299.
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Practical Activity 2

Name of the Activity
Designing Green Circular Supply Chain Systems
Aims of the Activity
The aim of this activity is to provide learners with the skills to design green circular supply chain systems for different organisations within the creative and cultural industries.
Description of the Activity
Learners are first provided with use-cases of real-life green circular supply chain systems to study, analyse, and understand green circular supply chain systems implemented in organisations within the Creative and Cultural Industries. Once the learners have gained an understanding of the components of green circular supply chains, learners are asked to select an organisation of their choice within the Creative and Cultural Industries. Learners would then be required to design a circular supply chain system for their chosen organisation. In the end, learners will be asked to present their supply chain systems whereby feedback is provided by the moderator and fellow learners. Duration: 120 minutes
Resources
Use-case studies of real-life green circular supply chain systems of organisations within the creative and cultural industries.
To find out more
▪ Kharola, S., Ram, M., Mangla, S.K., Goyal, N., Nautiyal, O.P., Pant, D. and Kazancoglu, Y., 2022. Exploring the green waste management problem in food supply chains: A circular economy context. Journal of Cleaner Production, 351, p.131355. ▪ Yadav, G., Luthra, S., Jakhar, S.K., Mangla, S.K. and Rai, D.P., 2020. A framework to overcome sustainable supply chain challenges through solution measures of industry 4.0 and circular economy: An automotive case. Journal of Cleaner Production, 254, p.120112. ▪ Bressanelli, G., Perona, M. and Saccani, N., 2019. Challenges in supply chain redesign for the Circular Economy: A literature review and a multiple case study. International Journal of Production Research, 57(23), pp.7395-7422.

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B.2. LIFECYCLE ASSESSMENT METHODOLOGY

Aims of the Learning Unit

The aim of the unit is to be able to use or effectively read a Lifecycle Assessment (LCA) to find solutions in an Ecodesign project. There are two ways of doing that:

- Doing the LCA by oneself to find environmental hotspots: in this case, it is necessary to be able to understand the methodology and how to use a simplified LCA tool.
- Finding LCA literature to gain perspective about the environmental hotspots of the product or service: in this case it is necessary to be able to read and understand a LCA report, how it is made, as well as the applications and limits of this kind of methodology to take out good interpretations.

The final aim of the unit is also to show ways of doing an environmental assessment without using directly LCAs, through other tools like checklists.

Suggested contents

What is an LCA? Its link with Ecodesign

Life Cycle Assessment is a lot of things: a methodology (ISO 14040-44), a tool (SimaPro, Ecolizer, etc.), a way to communicate (environmental footprint, Ecoprofiles) or to make design choices (Ecodesign). It is important to know the basics of what it is and its applications (difference between a simplified LCA and an expert LCA).

Overview of LCA Tools

There are a lot of different LCA tools, from expert ones that are quite expensive, to simplified ones that are cheaper, even free. The trainer will need to give an overview of some LCA tools and recommendations of tools that can be used for the CCIs.

Overview of an LCA project: Objectives and Scope

The first step of the LCA methodology is the one with the most influence over the results of the assessment. The trainer must explain how different objectives can orient a study. The functional unit: what it is, how to construct it, and its importance for comparative assessments and for Ecodesign as a whole. The scope of the study will be the last part of the first step; the trainer will show the link between objective and scope, the importance of determining a scope before starting the search for information, elements to be considered when adding or removing information from the scope and the effects in the end result.

Overview of an LCA project: Life Cycle Inventory

The second step of an LCA project. The trainer will teach how to construct an inventory. The type of information needed for each life cycle step (mass, placement of the supplier, distances, energy consumption, etc). How to make hypothesis when there isn't an information and to construct scenarios (usage scenarios, end-of-life scenarios, etc.) to assess different concepts and consumption styles.

Overview of an LCA project: Environmental assessment

The third step of an LCA project. The trainer will teach what type of environmental criteria is possible to assess with LCA tools and how to pass from a life cycle inventory to the use of tools to find the results. This step is more practical when an LCA tool is used.

Overview of an LCA project: Interpretation

The final step of an LCA project. The trainer will teach how to conduct sensitivity analysis. How to read the results and the type of interpretation we can make to apply them in Ecodesign. At this step, the trainer will also explain what an LCA report is, its applications and what to look for when reading and writing one.

Environmental assessments without LCAs

LCA is the strongest tool in an Ecodesign project, but it needs a lot of resources. It is possible to find hotspots and ideas for design changes through other tools. Using checklists, Ecodesign wheels, Ecodesign guides, ecolabels, etc. The trainer will give a way to identify when LCA is the correct tool to be used and when it is better to have a different approach.

Methodology

The best way to work this subject is with practice. It is best if the trainers create case studies within the CCI sector to do an overview of an LCA project. Since CCIs are very varied, it would be good to have multiple case studies of different types of CCIs, to show how each type would have its own challenges to be considered when conducting LCA projects.

It would be best if the trainer also shows examples of LCA reports, for example multiple reports of the same product, to show how different objectives and scope affect the results and interpretation.

It would be useful to have available simplified LCA tools so the participants can use them in the case studies. Tools like Bilan produit (FR) or Ecolizer, that will let the participants quantify impacts directly.

Assessment

It will be based on competences assessment:

- **Assess interpretations skills**: Give the participants different reports and ask them the Ecodesign indicators that can be taken from them. The teacher will have to analyse how the student has considered the scope, the objectives and the limits of the study to identify the best indicators for the project.
- **Assess the inventory construction**: For an LCA project, the student must develop the lifecycle inventory of a product with minimal information from the company. The teacher will assess the students' capabilities to construct hypothesis, scenarios and the sources to justify the choices they made.
- **Evaluate an impact assessment**: with a lifecycle inventory, the student uses an LCA tool to quantify the impact and to determine the environmental hotspots of Ecodesign indicators. The teacher will assess how the student used the tool to help in an Ecodesign project.
- **Usage of other tools**: The student has several different tools (LCA, checklist, guides, others). The context is explained and students have to choose and then use one or more tools to determine the hotspots of Ecodesign strategies for the project. The teacher will assess the justification for choosing one tool or another, the usage itself and its usefulness for the Ecodesign project.

Tips for teachers, trainers and educators

- LCA is a difficult tool to use, but there are ways to simplify the work and still have worthwhile results (simplified LCA).
- LCA isn't always the best tool for every Ecodesign project.
- The interpretation of an LCA result is the most important part for the Ecodesign project.

References

- ISO 14040
- ISO 14044
- ILDC handbook: General guide for Life Cycle Assessment

Practical Activities

Practical Activity 1

Name of the Activity
Case study: LCA project
Aims of the Activity
Going through an LCA project with the help of a practical case study on the CCI sector.
Description of the Activity
The teacher will present an objective (Ecodesign a product) and context. With the students they will go through each step of the methodology to determine: The best scope for the objective, the lifecycle inventory, the usage scenarios, and the quantification with a simplified tool. Students can form groups, with different case studies for each group. They will follow the same steps (of the LCA methodology) and will have specific problems (lack of information, not enough resources, etc.) The teacher will assess at the end of the activity the type of interpretations de students made and how they responded to the objectives presented at the start of the activity. Duration: 2-3 hours.
Resources
▪ Internet / Computer to use the tool ▪ Case studies ▪ Ecolizer ▪ OpenLCA
To find out more
▪ LCA case study in OpenLCA : Scooters ▪ LCA case study in OpenLCA : Beer bottle ▪ LCA case study in OpenLCA : Viticulture ▪ LCA case Study in OpenLCA : Comparisont of PET bottles

Practical Activity 2

Name of the Activity
Environmental Assessment without LCA
Aims of the Activity
To find ways to identify hotspots without using a quantification tool. Find simplified ways to find solutions and aim efforts in an Ecodesign project.
Description of the Activity
Students are divided in groups and each group choose a different tool to assess the product. At the end of the exercise each group talks about the process used for the assessment and the results. The class will discuss about the positives and negatives of each tool and the usefulness in an Ecodesign project. Duration: 20min to do the assessment. 20 min of debriefing with all groups together. 3-4 groups of 3 students each with different tools to use.
Resources
▪ Guides / checklist / LCA reports / internet and computers for the students
To find out more
▪ Eco-innovation Tools

B.3. SUSTAINABLE DIGITAL TRANSFORMATION OF CCIS

Aims of the Learning Unit

This Unit will provide an overall overview to the topic of digital transformation of the CCIs and its repercussion towards the European agendas for environmental sustainability and Ecodesign principles.

The focus will be on the following aspects according to the Ecodesign Curriculum framework:

- The advantages of digitization within the CCIs sector by defining digital transformation and its implications in the context of the European Digital Strategy, and the environmental impact of digital technologies and their use by CCIs.
- Outline how to combine digital transformation and CCIs by identifying appropriate digital solutions for CCIs businesses and develop sustainable digital transformation plans & strategies for CCI' business models which must include the development of Ecodesign iterations based on test results, including the evaluation of costs/benefits of digitalization in the CCIs.

Suggested contents

Scope of the CCIs and chances for digital transformation

Our first task as trainers will be to highlight the breadth of the CCIs and how different sub-sectors have a distinctive relationship with technology and the digital transformation.

Scope definition (European Commission, 2010).

The CCIs are generally understood as including “architecture, archives and libraries, artistic crafts, audio-visual (including film, television, video games and multimedia), cultural heritage, design (including fashion design), festivals, music, performing and visual arts, publishing and radio”.

Each one of these sub-sectors will have an initial starting point in their relationship with the digital transformation and Ecodesign principles.

- **Architecture:** The design part of the workflow is highly digitised with standardised formats like BIM, which are already included in policies and legislation (i.e., Spain). Digital transformation is starting to inform some building processes with the use of several deep tech areas related to this topic. It has its own Ecosystem of Sustainability solutions, and it is probably the sub-sector with more implications on an environmental sustainability agenda.
- **Archives And Libraries / Cultural heritage:** The digitalisation processes in this sub sector are mainly related to creating paperless workflows, whilst helping in the conservation and recovery of material. Solutions are technologically available from a long time ago and it becomes an element of digital skills of the workforce to embrace the new workflows.

- **Artistic crafts:** As per the previous one, the Artistic Crafts are by definition away from the digital environment in terms of their production pipelines, the effect of digitalisation is more related with the new ways to market and sell the creations of artists.
- **Audio-Visual**: This sub-sector has fully deployed the digital transformation nowadays, so the transformation vector is not something to consider, but the actual measurement of different technology solutions and its impact, namely cloud services, digital reuse and recycling, life cycle of the hardware products and tools etc.
- **Design:** The inner workflows of the sector are already digital, so it shares the same concepts as above with a singular difference, it is the sub sector responsible for implementing the Ecodesign strategies and advocate for the Ecodesign Mindset. It is the sector which requires an intense focus in upskilling conceptually their workers to deploy the Ecodesign agendas in the sector they interact with.
- **Festivals, music, performing and visual arts, radio:** Digital transformation in the sector started in the early 2000's with a consolidated digital workflow for the production, extensive paperless solutions and a significant technology present for measuring the carbon footprint impact of the performing actions, and environmental policies put in place both by the public authorities and the main stakeholders in the sector.

This is a first critical step to work with your participants, to know their sector and the starting point: both how much of the digital transformation is in place and what are the subsequent steps for improvement.

This research exercise will help to answer the following question:

- What are the advantages of digitalisation for your activity from an environmental point of view?
- What stages of the Ecodesign principles are relevant to be applied?

In order to then deliver the activities and plans required, this research and scoping exercise is mandatory as per the diverse nature of the CCIs.

To reference and benchmark your local results you can compare with the latest EU publication, about digital transformation:

Shaping the digital Transformation in Europe

According to the European Digital Strategy, there are 2 interconnected strains: one which starts from the Digital Transformation policies above, and one starting with the Green Deal

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

https://www.consilium.europa.eu/en/press/press-releases/2020/12/17/digitalisation-for-the-benefit-of-the-environment-council-approves-conclusions/

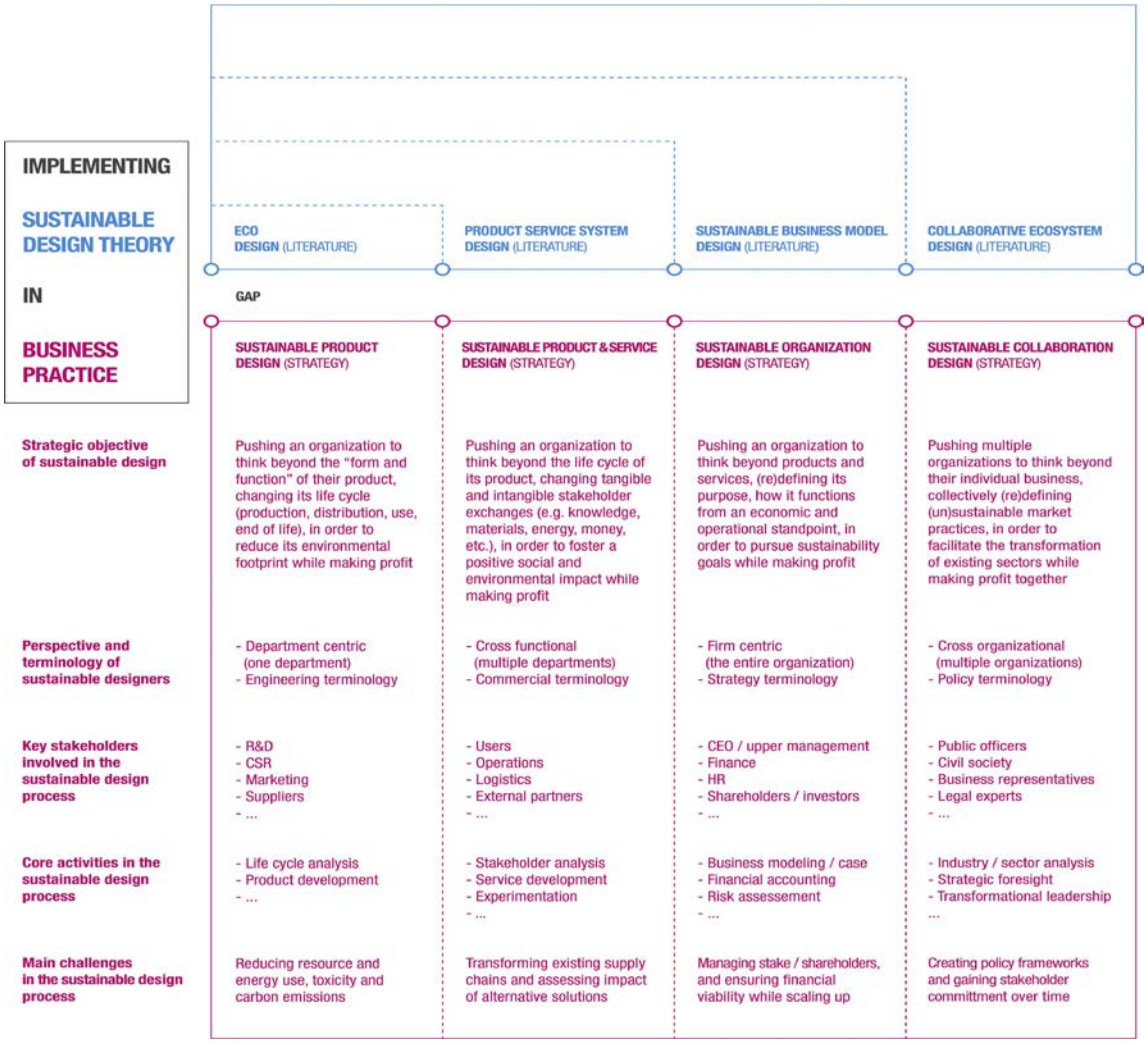
To be able to deliver a proper Sustainable Digital environment Plan for your organization or business, you will want to use the following workflow:

Identify feasible and accessible digital solutions, that might improve any element of your business cycles, either at conception, production or distribution stages.

Deliver an initial plan benchmarking the scope of your Actions (Product/Service/Company/Society).

Measure costs of the actions and iterations between the stakeholder groups identified.

Establish clear, data-based performance indicators to quantitatively measure the results of your actions. In the Eco Design Community, the qualitative narratives are less relevant than the factual measured results.



Framework visualizing the gap between sustainable design theory and its implementation in business practice. Insights are categorized according to four levels of sustainable design based on a literature review (top blue part/vertical columns) and five themes that emerged from expert interviews (bottom pink part/horizontal rows). Inspired by the work of (Adams et al., 2016; Ceschin and Gaziulusoy, 2016). (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article: https://www.sciencedirect.com/science/article/pii/S0959652620331589

Methodology

This Unit has a wider overarching approach than others and we will promote whenever is possible the Research - Dialogue – Informed Results - Action Plan iterations.

The methodology uses elements of Work Based Learning by using or simulating real cases and developing specific solutions for them.

This implies that this Unit will benefit strongly from a group setting, preferably in presence rather than online; it is highly advised not to undertake these activities alone as the peer review and peer assessment is an integral part of it.

Assessment

Peer to Peer assessment both as a validation process and a learning process, the products should be discussed and improved with at least 2 peer assessments per group work and 4 peer assessments per individual work. In the case of self-guided learners, they should be provided with the possibility of a peer review with the mentor.

In case of matching with a formal qualification framework, the discussions and peer reviews should be captured in a digital format.

Tips for teachers, trainers and educators

- Whenever possible prioritize live in-person set-ups over online ones.
- Use peer validation extensively, deliver simple assessment systems in which together the participants review each other's work in joint sessions, and iterate this process as many times as possible.
- It is important to contextualize in advance the sub-sector that your participants come from, as per stated in the content. This Unit's results will look drastically different if applied to crafts, or video games, for example.
- Some sectors won't have much penetration for digital transformation whilst others you should work backwards by improving the existing digital environment.
- Always use real cases, primarily coming from the participants' actual context or simulating real industry examples.

References

- GreenComp: the European sustainability competence framework
- Circular Economy action plan

Practical Activities

Practical Activity 1

Name of the Activity
Devise an overall plan for a sustainable digital environment in your organisation or business
Aims of the Activity
Be able to prepare and develop the ideas for a more sustainable CCI's business into a draft plan which will inform the rest of actions related to the digital infrastructure of your business.
Description of the Activity
2 x 4 hours sessions, 4 x 2 hours sessions (a total of 8 hours of group work is estimated) - Work individually, in pairs or a group and deliver a comprehensive list of available sustainable digital solutions for a given Creative and Cultural business or project. - Filter that initial list by feasibility, eliminate all solutions which are not at scale or financially viable. - Group the solution by stages of implementation as per the image of the content section Implementing in business practice. Focus on the solutions of one of the stages only (product/service/organisation/society). - Deliver a timeline for the selected actions estimating the different milestones of implementation. It must include measurement points - test – results – iterations. - Identify explicitly the stakeholders involved and their relations (mind map). - Deliver a simple balance sheet of costs of the action for the whole implementation. - Present everything. - Peer evaluates. - Improve. - Peer evaluates. - Continue loop until activity time is finished.
Resources
▪ How we're using technology to make impact personal for everyone ▪ How we're setting the pace in sustainability
To find out more
▪ From a Global perspective about Digital transformation ▪ An optimistic case study

Practical Activity 2

Name of the Activity
Exploring the boundaries of digital sustainability
Aims of the Activity
The dialogue between *Digital Transformation vs Sustainable Transformation* is recent, and still in progress. Not enough time has passed since the early bird policies have been implemented in the EU and the different approaches sometimes converge and at other times diverge. We will perform this activity to explore the actual boundaries of both agendas and how they inter-relate to properly inform the decisions about our own organisations and businesses.
Description of the Activity
Set up of the activity: - Activity to be performed in pairs. - The activity needs the result of Unit A.3 the Eco-Creative Project Canvas. - The time to perform the activity should be the same for all pairs (2 hours for delivery and 1 hour for peer assessment is advised). **Activity Steps**: 1. Use the Eco-Creative project canvas as a starting point, to develop one single idea/action that involves a new use or an improved use of a digital technology or process. 2. Research the specific quantitative indicators that can be used to measure the impact of the action from a positive environmental point of view (ie, reduction of carbon footprint, energy savings, source material consumption etc.). These indicators should be measurable before the action is taken and after. 3. Research the specific quantitative indicators that can be used to measure the action from a negative environmental point of view because of the use of those technologies. These indicators should be measurable before the action is taken and after. 4. Produce together an infographic presentation which shows both indicators applied to your Initial idea. 5. Compare your findings with other groups and peer assess each other's results and the processes to obtain the findings. The excerpt from an article below shows the expected granularity of measures and rigour of the approach to the analysis to be taken: *"Nevertheless, measuring the environmental impact of digital technology is not an easy feat. The "rebound effect" (or "take-back effect"), a renowned theory stating that technological improvements increase the efficiency of using services, and thus their energy consumption, is compelling, but very hard to measure, for several reasons.*

Firstly, because the cost of data administration has been divided by a factor of around 70,000 over the course of the last twenty years (i.e., a processing and storage system that cost a million euros in 1995 was subsequently only worth about 15 euros in 2015). This principle applies to computing, storage and transport performances (as per Moore's law), and is also found, to varying degrees, in energy efficiency. For instance, a 1990s computer like the Macintosh II consumed 230 watts, on top of 205 watts for its screen, which is a total of 435 watts. It is, of course, significantly less powerful (150,000 times less transistors) than a 2016 Samsung S8 smartphone, operating at 12 watts when in use.

In the digital world, technological breakthroughs are constant. As a result, the most sophisticated processor on the market, the Nvidia A100 tensor with its 52 billion transistors, is now in competition with the Lightmatter company's Optronic processor (which offers 1.5 to 10 times better performance, for 6 times less energy consumption). These disruptive innovations also apply to technology architectures. A recent data centre using adiabatic cooling technologies can consume 40% less energy than its predecessor using traditional digital technology."

Check the resource section below previously in order to inform your research about your specific digital action.

Resources

- Interesting initial conclusions by the World Economic Forum
- The view from the industry and its perspective
- The most comprehensive and resourced corporate approach to digital sustainability
- But not everyone is walking the walk:
  - Uncovering the environmental impact of Cloud Computing
  - The environmental impact and potential of digital technology

To find out more

Extensive report:
"Lean ICT: Towards digital sobriety". Our new report on the environmental impact of ICT.

C.1. SUSTAINABLE RESOURCES AND THEIR SELECTION

Aims of the Learning Unit

The aim of this unit is to provide students with basic knowledge on how to select sustainable resources for their design strategies in the CCIs. This unit offers concrete examples of ongoing initiatives that take into consideration the sustainability of resources and their selection. Together with the usability testing and Ecodesign prototypes that will be developed in next Unit, students will understand how sustainability plans can support the selection of sustainable resources and will develop the following skills and competences:

SKILLS

- Identify where waste and pollution occur in economic activity
- Develop a plan for use of sustainable resources
- Differentiate the resources in reference to sustainability in the CCI sector

COMPETENCES

- Selection of sustainable resources
- Development of sustainable strategies for CCI business and the use of sustainable resources

Suggested contents

Sustainability has become an increasingly critical factor that has to be taken into consideration in terms of selection of materials.

In the context of materials, sustainability takes the form of smarter production technologies, recyclability, material longevity, biodegradability, lower CO2 emissions, and a well-established circular economy.

Students will approach these concepts through the knowledge of a set of good practices that are currently in operation.

Julie's Bicycle

https://juliesbicycle.com/

A pioneering not-for-profit, mobilising the arts and culture to take action on the climate and ecological crisis.

Founded by the music industry in 2007 and now working across the arts and culture, JB has partnered with over 2000 organisations in the UK and internationally. Combining cultural and environmental expertise, Julie's Bicycle focuses on high-impact programmes and policy change to meet the climate crisis head-on.

Textile Resources

https://www.sustainyourstyle.org/en/fiber-ecoreview

The materials used for a textile not only determine the structure of the value chain and supply chain, but also the possibilities for recycling. The more different materials and chemicals are used, the more difficult recycling becomes later and the higher the consumption of resources. R&D in the textile sector is not only about optimizing resource consumption, but also about developing cleantech products that conserve resources themselves. The application of textiles as solar collectors, pollutant filters or insulation material offers great potential for innovation. In the reference, there is an analytic guide on sustainable fabrics and an eco-review.

Assessment of environmental impact of digital services

https://ecoresponsable.numerique.gouv.fr/publications/boite-outils/

The French agency for ecological transition made available a toolbox to assess different aspects of digital services. Selection of free and open-source software dedicated to the environmental impacts of digital technology.

Biomimicry, how to behave like nature

https://biomimicry.org/videos/

The Biomimicry Institute offers an extension range of videos on Biomimicry perfect for inspiring the beginning of any Ecodesign or Redesign process.

Biomimicry offers an empathetic, interconnected understanding of how life works and ultimately where we fit in. It is a practice that learns from and mimics the strategies used by species alive today. After billions of years of research and development, failures are fossils, and what remains hold the secret to our survival. The goal is to create products, processes, and systems—new ways of living—that solve our greatest design challenges sustainably and in solidarity with all life on earth.

Sustainable Fashion Toolkit

https://sustainablefashiontoolkit.com/

A series of free resources providing support for sustainable fashion in the global clothing industry. The Toolkit claims to offer "something for everyone". Resources are intended for business Worldwide that are striving for sustainability. Resources include reports, guidelines, standards, articles, podcasts, case studies and platforms, which are focussed on the following categories: chemicals, climate change, circular economy, human rights, materials, sustainable development goals, supply chain transparency and water.

Maduma

https://maduma.com.mt/

MADUMA is an organic fashion brand from the small Mediterranean island of Malta. It is Malta's first 100% organic fashion label dedicated to traditional Maltese tile patterns. The company specialises in sustainable clothing inspired and designed based on traditional Maltese floor tile patterns. "Maduma" is the Maltese word that refers to a single floor tile. Driven by the local trade of tile layering, the company is inspired by the traditional Maltese tile patterns and uses these patterns as designs on their products. Using the silk-screen method, the company brings the traditional Maltese tile patterns alive on 100% organic cotton t-shirts. Besides the environmental benefits of organic cotton, its luxurious feel and comfort captivate you. The company has dedicated MADUMA to keeping local trades alive through their range of green products whilst preserving local heritage.

Gallery Climate Coalition

https://galleryclimatecoalition.org/

The Gallery Climate Coalition (GCC) is a charity founded by a voluntary group of London-based gallerists and professionals working in the commercial arts sector as an attempt to develop a meaningful and industry-specific response to the growing climate crisis. The GCC website aims to inspire and educate, as well as provide practical tools and information. It includes an easy-to-use carbon calculator, available free of charge to all GCC members. This tool has been specifically tailored to the art world and allows users to quickly identify the main elements of their carbon footprint and take immediate action. Data collected (anonymously) via the carbon calculator will also help track progress across the sector. The website also features a video series featuring key voices in the arts and beyond.

Methodology

This Unit has been created to learn by approaching practical examples that are currently in operation. The methodology to be used is based on the joint analysis of the good practices exposed in the unit and their discussion by the group. Although some examples of leading initiatives in the selection of sustainable resources are presented here, the trainer can provide other examples that he/she knows and that can help direct the open debate on the subject.

Assessment

The case studies on which the development of the unit is based constitute in themselves a practical tool for students. This can be leveraged to provide an interactive assessment experience with students by following these steps:

1. The teacher can define a problem or a real situation with which the participants can identify (for example, the need to decide between different types of resources to produce a product for a cultural and creative business).
2. If the situation has an end (a result or solution), this should be eliminated first.
3. From there, the teacher asks the students to think of different solutions to solve the situation. Participants will have to explain why they chose a specific solution and how they could have chosen alternative paths to get to the same solution.

Engaging the audience in this way and allowing them to interact with the insights gained provides a highly personalized learning experience and boosts retention levels.

Tips for teachers, trainers and educators

- Use collaborative learning when appropriate: Collaborative learning is a type of training in which students are encouraged to interact with one another to make the learning process more effective. Students learn more by sharing their own understanding and experiences of the best practices shared in the unit. This also serves as an opportunity to improve teamwork and collaboration which is an important skill set needed in team projects. With that, conducting collaborative learning is a trainer tip that should be incorporated in training sessions.
- Use Exercises. Win the battle for audience attention by using exercises, (group, individual, paper or computer), to stimulate, educate or reinforce learning.
- Ask questions to maintain audience interest.
- Make people feel at ease with some icebreakers at the start of the session.

References

- A guide to material selection in sustainable product design
- Julie's Bicycle
- Textile Resources
- Assessment of environmental impact of digital services
- Bimimicry, how to behave like nature
- Sustainable Fashion Toolkit
- Maduma

Practical Activities

Practical Activity 1

Name of the Activity
Exploring best practices on the use of sustainable resources
Aims of the Activity
Reflect about the 4 key points in a sustainable material selection work: 1. All materials are recyclable, but some are more difficult than others. 2. Some materials are easily collected at end of life, others are not. 3. Recycling and re-use minimizes energy consumption, pollution and health risk. 4. Proper information and eco-labelling is helpful, such as Environmental Product Declarations or recycling codes. Participants will be encouraged to reflect upon those four key points based on the case studies shared in Julie's bicycle Resource Hub.
Description of the Activity
Sustainable product design is about doing the right thing for the planet. It includes picking the materials that suit the design, that support the carbon footprint target, that are not harmful during use, and that can be used again. Three out of four is not enough. Having waste materials thrown into the ocean is not good for anybody. Settling on the criteria used in material selection is an important first step. It is not about functional and cost considerations – they will always be there – but about how to minimize the impact of the product on the environment. In a sustainable design work, areas like modular design and ease of disassembly must be considered. In a sustainable material selection work, there are 4 key points to be considered: ▪ All materials are recyclable, but some are more difficult than others. ▪ Some materials are easily collected at end of life, others are not. ▪ Recycling and re-use minimizes energy consumption, pollution and health risk. ▪ Proper information and eco-labelling is helpful, such as Environmental Product Declarations or recycling codes. **Type of activity** Structured analysis of case studies in groups, reflecting about the 4 key points to be considered in a sustainable material selection work. Competences to be developed: - Teamworking.

- Oral expression, both through the debate within the group and through the presentation of the conclusions obtained.
- Environmental awareness.

Time

45 minutes:

- 5 minutes to choose a case study,
- 10 minutes to read the case study,
- 15 minutes to debate in groups about the 4 key points and,
- 15 minutes to present conclusions and to open general debate about them.

Methodology

1. Divide the group in sub-groups of 4 people.
2. Ask each group to select a case study in Julie's Bicycle Resource Hub: https://juliesbicycle.com/resources/
3. In the menu "Explore the resources" choose:
   - Resource type: *CASE STUDY*
   - Topic: *MATERIALS & WASTE*
4. Each group choose 1 case study among those available.
5. Group members read individually the case study chosen.
6. Once they have read it, the members of the group put in common their findings about 4 key points in a sustainable material selection work.
7. Each member of the group explains to the trainer and to the rest of participants the findings of his/her group on the key point assigned to him/her.
8. Once the members of the group have explained their conclusions about the 4 questions in their case study, the trainer opens a brief discussion about it with the rest of the class.

Resources

- Computers to access the Julie's bicycle Resource Hub.
- Paper, pens, notebooks for participants to write down their conclusions on the 4 key points.
- Flipchart or post-it notes to write down the conclusions obtained by the group.

To find out more

- A guide to material selection in sustainable product design
- Julie's Bicycle Resource Hub
- Case studies on Materials&Waste

Practical Activity 2

Name of the Activity

Smart material choices

Aims of the Activity

Learn to make smart material choices by asking the right questions. These steps will help participants make better choices about what materials go into their products, as well as their impact on the wider system.

Materials play an essential role in a circular economy, so we need them to be made of safe ingredients that can be continuously cycled. By designing products with materials that come from, and safely flow, into their respective nutrient cycles, you can be part of creating an optimised materials economy that eliminates the concept of waste.

This activity allows participants to reflect on the components of a product and determine where each of the materials goes after use in the product under study.

Description of the Activity

Type of activity

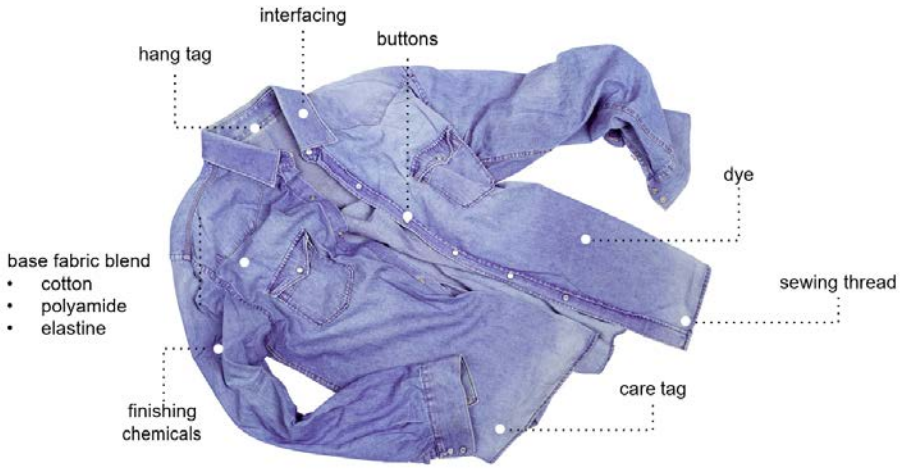
This activity can be developed individually, so that each participant chooses a product and reflects upon the origin of the materials used to make it, by answering a set of questions and designing a decision tree.

Time

40 minutes.

Methodology

In order to make synergies and encourage discussion, the trainer can choose one product easy to identify by all participants like, for example, a shirt.



STEPS

1. Consider what parts your product is made of (tags, zipper, basic fabric, buttons etc.)
2. Look at the individual parts and create a list of the raw materials and components required to build or manufacture your product.
3. Now using the decision tree in the worksheet, see if you can estimate the value of what goes into your product and how smart your material choices are.
4. If any material(s) are not yet fit for the circular economy, ask yourself: "What would be better alternatives?" "Is it possible to meet the user need without wasteful materials?" .

Resources

Working document: *Activity 2_Worksheet*

To find out more

- The Circular Design Guide
- Worksheet on Smart Materials choices

C.2. ADAPTATION OF THE CONCEPTS OF CIRCULAR ECONOMY TO THE CCI SECTOR

Aims of the Learning Unit

The aim of this unit is to provide students with knowledge of the basic principles of the Circular Economy, its benefits and limitations, the problems related to waste disposal and pollution, and to equip them with the tools to identify and apply appropriate technology to produce Ecodesign concepts for the CCI sector.

Through unit concepts, the student will be able to:

- Implement Circular Economy strategies in CCIs.
- Maintain an unbiased approach to problem solving.
- Apply prototyping techniques to build Ecodesign products for the CCI sector and evaluate them.

Suggested contents

What is the Circular Economy? The CE as an alternative to the linear economy

Students will learn the basics about Circular Economy and its differences with the so-called linear economy.

Initial concept to be understood: The Circular Economy (CE) as a *system that makes the most of resources by reducing waste, as well as recycling and reusing everything that is discarded, giving it a second life*. In a broad sense, it is a non-linear economic model based on the principle of closing the "life cycle" (which is the set of stages from the useful life of a product to the final management of its waste) of products, services, waste, materials, water and energy. The circular economy is a continuous cycle of positive development that enhances and conserves natural capital, optimises resource use and minimises system risks by managing a finite stock and renewable flows. It works effectively at all scales (Ellen MacArthur Foundation).

It is an economic system that replaces life cycle thinking with that of REDUCE, REUSE, RECYCLE and RECOVER materials in the production, distribution and consumption processes.

Circular Economy and the CCI sector

In this section the student will be able to relate the Circular Economy with the activities developed in the CCI sector from a broad perspective.

In general, the circular economy agenda often springs from a focus on waste management (as opposed to e.g., a social orientation). In the German language, the word for circular economy is

rooted in waste-management, making it even more difficult to bring the agenda out from this sector and make it a wider societal issue, as circular economy is. Having the circular economy so heavily rooted in the waste management sector might also be a barrier for increasing the focus on the reuse and repair aspects, which are traditionally not the responsibility for the waste management sector. As the circular economy is a complex and comprehensive framework, there are also many ways of approaching it, and the CCI sector can take advantage of this broader dimension. For example, the ability to present information in an unusual or interesting manner, through different mediums or from different perspectives, that is, the storytelling ability of the sector, can be considered as a strength that can be exploited to help drive systemic change towards more sustainable practices, well beyond the creative sector, and into mainstream society. In addition, it is evident that the relationship with materials in the creative space can be more intimate and aligned, which lends itself to seeing inherent value in items which others may consider to be of little or no use, and that the arts have a long tradition of this type of practice. Those working in the creative industries also have an extensive bank of skills to draw upon, practical abilities associated with artistry and making, that can help support the development and implementation of more circular practices.

Advantages and limits of circular economy models

Students will learn that CE counts on important benefits, but it also has disadvantages and limits that must be considered for project development.

The transition to a circular model will bring economic growth and environmental improvements, but above all it will benefit business and society as a whole.

MAIN BENEFITS

- Economic benefits: the circular economy can boost economic growth, create new jobs, generate net savings in raw material costs and foster innovation.
- Environmental benefits: reduction of CO2 emissions, reduction of raw material extraction, increased productivity and soil quality.
- Social benefits: reduced pollution, increased employment, as well as income and consumption, resulting from lower prices and improved living standards.
- Business benefits: the transition to a circular model will facilitate the emergence of new business models and the expansion into new product demand.

DISADVANTAGES AND LIMITS

- Legislative and policy constraints: lack of support from governments.
- Financial constraints: lack of public funding to implement circular economy initiatives.
- Technological limitations: the change of model requires a highly qualified workforce, specialisation, competences, skills and knowledge.
- Cultural constraints: cultural acceptance by both producers and customers.

The Circular Economy and Ecodesign in the Creative and Cultural Industries

Students will learn the close relationship between CE and Ecodesign and how these concepts can be applied in CCIs, contributing to reducing environmental impacts.

Ecodesign not only plays a crucial role in making the circular economy model operational, but also has a strategic role as a driver of innovation and a key steppingstone towards sustainability and responsible consumption.

The closed-loop circular economy focuses on material and resource efficiency. In contrast, Ecodesign prioritises the overall reduction of environmental impact. Ecodesign is presented as an essential tool in the manufacture of products and services that meet the required criteria of efficiency and sustainability and of being socially responsible and differentiating. It contributes to reducing the different environmental impacts of a given product/service throughout its life cycle. This tool, linked to the circular economy model and "Cradle to Cradle" principles, constitutes an alternative to programmed obsolescence that is committed to long-term sustainability strategies.

How to apply Ecodesign to our creative products:

- Choose materials that have the lowest possible impact.
- Go for clean and efficient processes.
- Plan optimised logistics.
- Analyse whether you can apply modularity to your product.
- Design multifunctional, repairable and durable products.
- Design collaborative and shared products or services and incorporate the social component.

Usability testing with Ecodesign prototypes and material selection

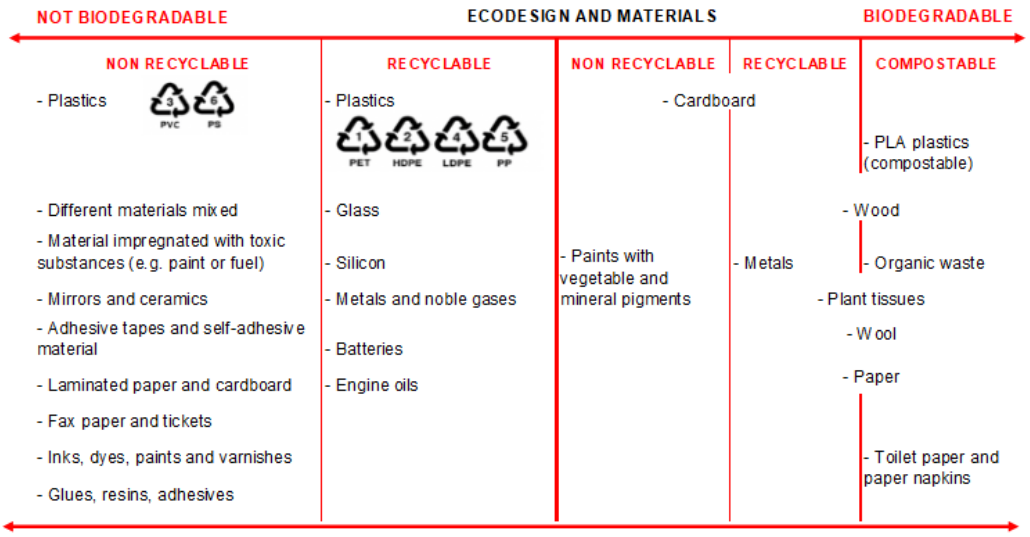
Students will learn the importance of performing usability tests to new products, to measure the ability of the product to fulfil the purpose for which it was designed. The perspective for product development will be centred on Ecodesign, for which the selection of materials is a basic principle. Students will learn to differentiate between biodegradable and non-biodegradable materials and the different scales on recyclable and non-recyclable materials, as well as the compostable ones.

SELECTION OF MATERIALS

In Ecodesign, the selection of eco-friendly materials is decisive for the sustainability of a product. It is estimated that 80% of a product's environmental impact is determined in the design phase.

Selection of materials:

- Biodegradable - non-biodegradable
- Recyclable - non-recyclable
- Compostable materials



Source: Arte Casellas

USABILITY TESTING

Usability testing is a tool to evaluate our product in a prototype state with representative groups of users. One task (with objective and sub-tasks) is chosen per test, and the user is observed to perform it. Usability testing can be performed throughout the design process.

General outline of the stages of a usability test:

1. Product prototype
2. Design test: define test objective (task) and subtasks.
3. Contact of participants
4. Running tests
5. Test analysis and reporting

Methodology

The proposed content is not meant to be exhaustive, but it is a brief introduction to the contents that should be covered for the development of the Unit. Thus, trainers will need to develop the topics with additional information when implementing the Unit and adapt the material to suit their audience. The information provided is a summary and will be supported by in-depth theoretical and practical information on the topic.

For the content and the suggested activities of this unit, an experiential and inquiry-based learning approach will be used. In general, the whole approach will be "learner-centred" including practices that focus on trainees. The participants will be given the chance to share ideas, discuss and analyse issues.

First, an icebreaker will be used in order to make the participants feel comfortable and know each other. The activities are to be implemented in small groups so that the participants are given the chance to communicate with each other and exchange ideas and points of view.

The instructor needs to give clear instructions and be motivated, encouraging and supportive, and focus on practices and creative techniques that are most effective for high motivation such as brainstorming.

In the end of the session, Assessment & Evaluation tools will be provided including reflection questions, checklists etc. to assist the self-assessment and self-reflection of individuals and motivate them for further learning.

Assessment

At the end of each section, ask the participants to write one thing they have learned about the topic of the unit and to ask questions they may still have. The trainer will use this information to assess where learners are in their understanding of the topic. In the following session, the trainer will provide clarification or more information for those who may still have questions. At the end of the unit, each trainee will have to be able to complete the activities proposed by the trainer and will have to complete the third column of the KWL chart:

What do you Know about the topic?	What do you Want to know?	What did you Learn?

In addition, the trainer should ask participants to come up with examples of some key aspects covered.

An example could be to identify a product created by an ICC company following circular economy or eco design principles. This type of assessment allows participants to improve their ability to find a practical connection with the theory explained by reinforcing the concepts.

Tips for teachers, trainers and educators

- It is recommended to start the lesson with an icebreaker activity to make everyone comfortable and to know each other or to know something more about each other.
- Illustrative examples and interactive material are preferable to engage participants and keep the interest high and to make the theory more understandable and clearer.
- Encourage discussion and participation to create a dynamic and stimulating environment.
- Explore the provided references and further readings to reinforce the contents and get inspiration on the development of the lessons.
- It is important for the teachers/trainers/educators to let the learners explore by themselves the knowledge provided by the course without interfering.

References

- Discover the Circular Economy
- How to apply eco-design to our creative projects
- Proposal for Ecodesign for Sustainable Products Regulation
- Introduction to Usability Testing: Prototype Evaluation
- Usability testing
- Idemat App for sustainable materials

Practical Activities

Practical Activity 1

Name of the Activity
Discover the Circular Economy
Aims of the Activity
To learn about and explore new ways of managing scarce resources. The basis of the reasoning will be the concept of circular economy and its differences with the linear economic model.
Description of the Activity
The hegemonic economic model on the planet is based on "*use and throw away*". It is a "*linear economy*" that depends on the massive exploitation of resources. Faced with this model, a new alternative is emerging, the Circular Economy, which introduces new values by seeking more efficient production and consumption systems. As its name suggests, the aim is to create a model of circular value chains in terms of the use of resources that breaks with the traditional "use and throw away". Under the circular model, a reduction in the consumption of raw materials and energy is achieved, with the consequent reduction in waste generation and atmospheric emissions from the processes involved. **Type of activity** Group discussion and brainstorming activity aimed at developing the following competences: - Learning to learn: learners are presented with content on the topic to be covered and are encouraged to seek information and deepen their knowledge on the topic. - Digital competence: the activity is completed with a search on the Internet for information that allows learners to find examples of practical applications of circular economy. - Linguistic competence: after analysing the topic and drawing their own conclusions, participants will have to present their conclusions and opinions on the topic.

Time

40 minutes including discussion time.

Methodology

This activity will allow participants to explore the concept of circular economy and the contrast with the linear economy model.

To this end, the following activities will be carried out:

1. Click on the following link and watch the video to learn more about the concept of Circular Economy: https://www.youtube.com/watch?v=RstFV_n6wRg&t=1s
2. Form groups of 4-5 people.
3. Each group member summarises, in their own words, what he/she understands by the circular economy and how it differs from the linear economy.
4. Each group uses the Internet to search for examples of companies that are implementing circular economy models and members reflect on: what differentiates them from companies that use linear economy models? Do you think these initiatives are positive for society? Why?
5. Each group selects a spokesperson and presents its conclusions.

Resources

- Audio-visual equipment or individual computers to watch the starting video.
- Flipchart or post-it notes to write down the main ideas contributed by the students.
- Students will use notebooks or notepads to write down the main conclusions of their group and will use digital resources (their own computers or classroom computers) to carry out the Internet search required by the activity.

To find out more

- Discover the Circular Economy
- Circular economy: definition, importance and benefits
- An EU fashion revolution? Why we need to make the fast fashion industry go circular

Practical Activity 2

Name of the Activity
Brainstorming exercise to apply Ecodesign improvements to a creative project
Aims of the Activity
Application of the knowledge acquired on the concept of Ecodesign through the application of the brainstorming methodology to a concrete example of a cultural or creative project.
Description of the Activity

Brainstorming takes place in a meeting with a moderator, in which the aim is to create a relaxed atmosphere that favours communication and the participation of the participants. It is essential to create a relaxed and even fun atmosphere that favours communication and the free presentation of ideas. The participation of all members of the team should be encouraged and, in the first stage, the ideas of others should not be criticised, no matter how crazy they may seem.

The moderator has to keep the meeting flowing smoothly, avoid criticising ideas in the early stages of the process and encourage everyone's participation. The group should not be too large, between 5 and 7 members.

The aim is to bring the imagination and memory of the participants into play, so that one idea leads to another. The method tries to encourage associations of ideas by similarities or by opposition.

There are 4 basic rules to follow:

1. No criticism: it is necessary to avoid preconceived ideas and expressions that can block the generation and free expression of ideas. Avoid the blockages that habits, established procedures, culture, norms, etc. place on the generation of ideas.
2. Not being conventional: not everything has been invented. Current procedures can be replaced by others that require less time, less expense, fewer resources, or that pollute less. Do not take anything for granted.
3. The more ideas the better, however crazy they may seem.
4. Building on other ideas: learning from some ideas to reach others.

The meeting will consist of two distinct phases:

- In the first phase, everyone contributes ideas, but no criticism or judgement of the ideas is allowed. From the initial ideas proposed by the different members of the group, new rounds of ideas or derived ideas are generated. In the first phase, the aim is to produce many ideas, even if they seem useless or far-fetched.
- In the second phase, led by the moderator, the ideas are selected and critically analysed. The selection of ideas can be left for a second meeting, or it could even be another group that selects and critically assesses the ideas.

The moderator must bring a proposal for a cultural or a creative project to be discussed. From here, the development of the activity is directed in 9 distinct steps:

1. The first step is to create a relaxed atmosphere by discussing a simple, non-committal topic for a few minutes.
2. The moderator poses the problem: the application of Ecodesign improvements to the proposed project. The starting point, the current situation and experiences are presented.
3. The components reflect and each write a comprehensive list of solutions or alternatives.
4. Each member presents his or her solutions aloud, without debating them. No rebuttal or judgement of each other's alternatives is allowed.
5. Once the first round is over, the group, starting from the initial ideas, jointly proposes new solutions or alternatives. Resulting ideas will be written down in a visible place.
6. The way to combine the different alternatives and generate new ideas is analysed. The aim is to analyse how previously scattered ideas can be related. Ideas are grouped and related.
7. All selected ideas are listed.
8. The selected ideas are evaluated, the most useful ideas are selected and, if necessary, weighted.
9. The ideas are enriched by defining them in detail, by means of an outline or drawing.

Subsequently, after obtaining the new ideas, a selection of the best ones must be made to provide a solution to the problem posed.

Resources

- For brainstorming, you should have a place where you can talk without interruptions and in a relaxed manner. Ideally, a blackboard should be available for everyone to see. You can also use a board on which post-it notes are placed with the ideas that are generated and the subsequent relationships between them.

To find out more

- Ecodesign in practice
- Brainstorming: creativity for improvement
- 25 Brainstorming Techniques for Team Inspiration
- The cultural and creative industries - one of the world's most rapidly growing economic sectors