



Co-funded by  
the European Union



# Fashion & Food synergy for sustainability. New courses and innovative digital tools in higher education F&F4sustainability

KA220-HED - Cooperation partnerships in higher education  
Project number KA220-HED-1A225A8C

## LM 2 – CIRCULARITY

### CONTENT STRUCTURE OUTLINE

This document describes the structure of the first learning module (out of six) developed as part of the "Fashion & Food Synergy for Sustainability" project. It is meant as a tool for teachers that can be adapted to a specific audience.

It is the basis of the corresponding e-learning module published as self-directed course on EduOpen platform <https://learn.eduopen.org/>

All the mentioned additional materials in brackets to create your own course can be asked to 'Centro per lo studio della moda e della produzione culturale', writing to [centro.modacult@unicatt.it](mailto:centro.modacult@unicatt.it)

#### An international and interdisciplinary team contributed to the design and testing of the modules:

**Emanuela Mora**, Scientific Coordinator, Università Cattolica S.C. Milano (IT)

Carla Lunghi, Università Cattolica S.C. Milano (IT)

Silvia Mazzucotelli, Università Cattolica S.C. Milano (IT)

Eleonora Noia, Università Cattolica S.C. Milano (IT)

Ludovica Carini, Università Cattolica S.C. Milano (IT)

**Silvia Pérez-Bou**, ISEM, Universidad de Navarra (E)

María Ángeles Burguera Pérez, ISEM, Universidad de Navarra (E)

Marta Torregrosa, ISEM, Universidad de Navarra (E)

Patricia San Miguel, ISEM, Universidad de Navarra (E)

**Anneke M. Smelik**, Radboud University Nijmegen (NL)

Maarten Mejer, Radboud University Nijmegen (NL)

Sol Aletta, (ex) Radboud University Nijmegen (NL)

**Marta Smagacz-Poziemska**, Uniwersytet Jagiellonski (PL)

Ewa Kopczyńska, Uniwersytet Jagiellonski (PL)

Anna Szwed, Uniwersytet Jagiellonski (PL)

**Patrizia Musicco**, Altrmercato IMPRESA SOCIALE SOC. COOP (IT)

**Susanne Urschler**, Steirische Wirtschaftsförderungsgesellschaft m.b.H. (AT)

**Julia Fernandez Valdes**, (ex) Acción Laboral - ACCION LABORAL PLATAFORMA PARA LA IMPLANTACION DE PROGRAMAS DE INCLUSION LABORAL EN COLECTIVOS DESFAVORECIDOS (ES)

**Christina Skoubridou**, Envolve Entrepreneurship - Elliniko Vraveio Epicheirimatikotitas (GR)

Konstantinos Kissas, , Envolve Entrepreneurship - Elliniko Vraveio Epicheirimatikotitas (GR)



UNIVERSITÀ  
CATTOLICA  
del Sacro Cuore



Universidad  
de Navarra

**Radboud University**  
Nijmegen, the Netherlands



JAGIELLONIAN UNIVERSITY  
IN KRAKÓW

**SFG**  
NEUES DENKEN. NEUES FÖRDERN.

**ACCIÓN  
LABORAL**

**altrmercato**

**envolve**  
ENTREPRENEURSHIP



## STRUCTURE

### WELCOME

#### 0. INTRODUCTION TO THE PROJECT AND TO THE CIRCULAR ECONOMY

- 0.1. The project “Fashion & Food, synergy for Sustainability”. Slideshow
- 0.2. The Syllabus of the LM “Circularity”.
- 0.3. Knowledge Clips: Project, and Introduction to the Circular Economy.

#### 1. UNIT 1 – FIVE FIELDS OF ACTION OF THE CIRCULAR ECONOMY

- 1.1. Introduction to Unit 1. Videoclip
- 1.2. Lecture Circular Economy. Slideshow
- 1.3. Lecture Industrial Symbiosis. Slideshow
- 1.4. Glossary Readings
- 1.5. Multiple-Choice Test Unit 1
- 1.6. Extra Resources

#### 2. UNIT 2 – TAKE AND MAKE

- 2.1. Introduction to Unit 2
- 2.2. Lecture Take. Slideshow
- 2.3. Video 1.
- 2.4. Lecture Make. Slideshow
- 2.5. Video 2
- 2.6. Case Study: NEFFA
- 2.7. Case Study: 3 Quarters
- 2.8. Glossary Readings
- 2.9. Multiple-Choice Test Unit 2
- 2.10. Extra Resources

#### 3. UNIT 3 – DISTRIBUTE AND USE

- 3.1. Introduction to Unit3
- 3.2. Lecture Distribute. Slideshow.
- 3.3. Lecture Use. Slideshow
- 3.4. Case Study: Wawelska Food Cooperative (Main Case and Questions)
- 3.5. Video: Virtual Tour to Amazon
- 3.6. Glossary Readings
- 3.7. Multiple-Choice Test Unit 3
- 3.8. Extra Resources

#### 4. UNIT 4 – RECOVER /RECYCLE

- 4.1. Introduction to Unit 4.
- 4.2. Lecture. Recover. Slideshow
- 4.3. Glossary Readings Unit 4
- 4.4. Case Study: Mending for Good
- 4.5. Multiple-Choice Test Unit 4
- 4.6. Extra Resources



## CONTENT DETAILS & ORGANIZATION

### WELCOME

Welcome to the "Circularity" learning module.

This is one of the six Learning Modules developed as part of the "Fashion & Food Synergy for Sustainability" project, an avant-garde initiative in an interdisciplinary and international context funded under the Erasmus+ programme - Higher Education, and that explores the intersecting trends and demands within the fashion and food sectors, emphasizing the need for informed and skilled professionals dedicated to sustainable practices.

The Learning Module 2, "Circularity" provides basic knowledge to address and understand what the Circular Economy is and how it impacts the fashion and food sectors.

The LM 2 "Circularity" was initially designed and tested for BA and MA students, providing them with in-depth insights into sustainable practices and challenges. However, it is now open to a broader audience, welcoming anyone interested in learning about circularity. Whether you are a student, professional, or simply someone passionate about our impacts, this course offers valuable knowledge. It is ideal for individuals seeking to understand circularity issues and solutions in various fields, making it accessible and relevant to all who want to contribute to a more sustainable future.

Click on the folder to access the Learning Module and its content.





## 0. INTRODUCTION

In Unit 0, also known as the Introduction, of the "Circularity" learning module you'll be presented with:

- an overview of the "Fashion & Food Synergy for Sustainability" project, with a short video.
- An in-depth look at the "Circularity" learning module, detailing its aims, structure, and assessment methods (Slideshow).
- A Knowledge clip including the presentation of the project and the structure of the Learning Module 2: Circularity.
- A document with the system of grading
- A Lecture led by prof Silvia Pérez Bou with the introduction to the Circular Economy and the content of the units.

This foundational unit is designed to prepare you for the journey ahead, ensuring you understand the course objectives and how to navigate through the content effectively.

### 0.1 The project "Fashion & Food Synergy for sustainability"

The "Fashion & Food Synergy for Sustainability" project explores the intersecting trends and demands within the fashion and food sectors, emphasizing the need for informed and skilled professionals dedicated to sustainable practices.

Funded under the Erasmus+ programme – Higher Education, it aims to equip learners with the knowledge and tools necessary to navigate and contribute to these vital industries' sustainable futures.

To get into the spirit of the project, please watch this short video: [Fashion & Food\_Intro.mov]

More information on the project can be found at this link: <https://centridiricerca.unicatt.it/modacult-la-ricerca-fashionfood-for-sustainability?rdeLocaleAttr=en>

### 02. The Syllabus of the LM "Circularity"

#### **Introduction Lecture**

This lecture, led by Prof. Silvia Pérez-Bou, from ISEM Fashion Business School, University of Navarra, and recorded, introduces students to the project Fashion & Food, to the concept of Circular Economy, and the approach of the course for the specific sectors of fashion and food.

Our world is in transition from a linear economy in which products are manufactured, used, and discarded, to a circular economy in which the value of products, components, and resources, in general, is maintained in use as long as possible. How do we transition from a linear to a circular economy? Are there any synergies between the fashion and food industries in this transition?

This course will equip students with concepts and tools to understand the Circular Economy and explore its applications to the fashion and food industries.





At the end of this module, the student will be able to understand the concept of circular economy, its history, fields of action, the European framework for its implementation, and how to apply this vision to the fashion and food industries.

concept of sustainability, examining its significance in contemporary society.

### Objectives

- To provide **basic knowledge** about the circular economy and the possibilities of this model in both the fashion and food industries.
- To provide students with a **space for practical experimentation** to test themselves with concrete reflection and suggestions to personally contribute to a more circular consumption and, eventually, circular production.
- To address the impact of non-circular patterns on **consumer behaviour** and industry practices.

### Learning outcomes

- B2 Students can undertake their studies with autonomy, employing a critical point of view. Students can also interpret relevant data within the fields of fashion and food, and they can critically assess and evaluate their points of convergence in relation to social, scientific, and ethical issues.
- G2 Students can define the circular economy and apply this concept to the food and fashion industries.
- G3 Students can reflect upon the global and cultural implications of their social responsibility as citizens and future professionals in relation to the SDGs, and how these can be implemented into the fashion and food industries.
- S1 Students acquire a general understanding of the concept of circular economy as a model of production and consumption that aims to extend the life cycle of products and minimize waste.
- S2 Students can employ their own local or cultural perspective as they apply the six principles of a circular economy to the textile (fashion) and food fields: 1) waste is food, 2) resilience through diversity, 3) use of renewable energy resources, 4) systems thinking, 5) prices reflect real costs, 6) proximity as a priority.
- S3 Students can recognize, explain, and accurately communicate the main tasks involved in a circular framework such as sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products.
- S5 Students can integrate the knowledge acquired to create examples of more durable, reusable, repairable, recyclable, and energy-efficient production systems in the fashion and food sectors, to render regions or cities more sustainable.

### Evaluation:

The "Circularity" learning module consists of 4 comprehensive units.

At the end of each unit, learners will complete a self-assessment test, earning up to 25 points per test. This evaluation method allows learners to monitor their progress and understanding throughout the module, fostering a thorough grasp of sustainability challenges and solutions within the fashion and food sectors.

The cumulative score from these self-assessment tests will determine the result of the course. The grading rubric is published here [\[Grades and descriptions LM#2docx\]](#).

To complete successfully the "Circularity" learning module, learners must:

- Complete all 4 Unit Tests.
- Achieve a grade of Satisfactory or above based on the total marks from all Unit Tests.

### Badges and Certificate of Attendance





Learners meeting the criteria stated above will be awarded a digital badge indicating their result in the learning module. Additionally, all learners will receive a certificate of attendance.

Badges and attendance certificates will be issued upon completion of the learning module and sent via email.

More info on the content, structure, and aims of the Learning Module "Circularity" can be found in these documents:

- [LM2\\_Introductory Lecture \[LM2\\_Lecture\\_Introduction\\_Silvia Perez Bou.mov\]](#)
- [\[Circularity\\_Detailed Syllabus\]](#) (which also includes the content outline and planning for the LM)
- [\[LM2\\_Unit 0\\_Introduction\\_Lecture.pdf\]](#)





## 1. UNIT 1 – FIVE FIELDS OF ACTION OF THE CIRCULAR ECONOMY

In this Unit, we will cover the general concepts of this module *Circularity*.

### 1.1. Introduction to the Unit 1

In this unit, we will explore the fundamental concepts that define Circularity. To help you delve into this topic, we have prepared a comprehensive array of materials, including:

- A recorded lecture
- Two lectures in slideshows
- A glossary of key terms
- Some videos with explanations and best practices

After engaging with the lecture, knowledge clips, and glossary entries, you will be prompted to complete a multiple-choice test to assess your understanding. For further details and instructions, please proceed to the next section.

### 1.2. Lecture “Five Fields of Action and Introduction to the Circular Economy.

This lecture, led by Prof. Dr. Silvia Pérez-Bou from ISEM Fashion Business School, University of Navarra, offers an overview of the Circular Economy, starting with main definitions and history, and following with the transition from the linear to a circular economy. It consists of a slideshow.

Prof. Pérez-Bou explains the levels of the Circular Economy: micro (within a company), meso (among different companies in proximity), and macro (among different sectors and locations). Then, she explains the principles of the Circular Economy, and how waste is used as a resource in different ways. Finally, this session finishes with an explanation of the Five Fields of Action of the Circular Economy. They cover the Complete life-cycle of products and components. Namely, Take (extracting raw materials and selecting the resources), Make (the process of manufacture), Distribute (regarding the system of distribution and logistics), Use (including how consumers can contribute to extending the life of products and components), and Recover (in which end of life operations maintain the value of products and components to reintroduce them in the loop again).

Many examples of circular economy are shown from small details in textiles and fashion to big implementation of food waste (cooking oil) in fueling an AIRBUS 380.

Please, watch the video [[LM2\\_Unit1\\_Five Fields of Action and Introduction to the Circular Economy](#)] and read carefully the PowerPoint of the lecture [[LM2\\_Unit1\\_Lecture Five Fields of Action.pdf](#)] and then proceed to the next lecture

### 1.3. Lecture: Industrial Symbiosis. Slideshow

This lecture explains briefly the concept of Industrial Symbiosis, the objectives and the benefits in the context of the Circular Economy. Some examples of Industrial Symbiosis in both the food and fashion sectors are shown.

Please read carefully the PowerPoint of the lecture [[L2\\_Unit1\\_1.3\\_Lecture\\_Industrial Symbiosis.pdf](#)] and then proceed to the next section.





Now proceed to the following section and read the GLOSSARY entries.

#### 1.4. Glossary Readings

[The Glossary of Sustainability](#) is a digital, open and participatory resource. Through keywords, it describes the dimensions of sustainability in the fashion and food industries and brings together case studies, research practices, and exemplary European-level information sources that are freely accessible and useful for education and research. It is designed with the aim of strengthening and developing the understanding of sustainability as a concept, by interpreting terms and issues of growing importance for the fashion and food sectors. Accordingly, it aims to inform and advance action and debate on the most pressing challenges affecting the environment, available resources, respect for workers' rights, etc.

Regarding Circularity, the following entries are paramount to understanding the concept and complexities. Please read the following from the glossary:

- Circularity
- Circular economy
- Circular design
- Environmental sustainability
- European Green Deal

#### 1.5. Multiple-Choice Test Unit 1

After watching the video of Lecture 1 and reading the PowerPoint for Lecture 1.2 “Five Fields of Action and Introduction to the Circular Economy”, and Lecture 1.3 “Industrial Symbiosis”, as well as reading the glossary entries, please complete the following multiple-choice test for self-assessment. The test consists of 5 questions, each worth 5 points, allowing you to earn up to 25 points.

1. Which of the following sentences reflects better what the Circular Economy is?
  - a. A system based on the selection of organic raw materials.
  - b. An economic system in which resources are continuously cycled in various forms, following a reuse, repair and recycle loop.**
  - c. A system aimed to optimize the energy efficiency of products.
  - d. An economy based on recycling.
2. Which of the following sentences is not a principle of the circular economy?
  - a. Waste is designed out
  - b. Think in systems
  - c. Recycle as much as possible**
  - d. Proximity as a priority
3. Circular Economy:
  - a. Has four pillars: economic, environmental, political and social issues.
  - b. Focuses on decoupling economic growth from increasing the use of resources.**
  - c. Refers only to environmental issues.
  - d. All the answers are true.





#### 4. Industrial symbiosis

- Is economically good but socially bad
- Is economically bad but environmentally good
- Is good both, economically and environmentally**
- Is environmentally good but socially bad

#### 5. Industrial Symbiosis

- Usually takes place at the Micro level, within a company
- Can be achieved at the Meso level.**
- Only can take place at the Macro Level, when many industries are involved.
- None of the previous answers is true

#### 1.6. Extra Resources

To better understand the main concepts of the circular economy and the problems in fashion and food, this additional material is highly recommended:

- An **Introduction to the Circular Economy** can be also found in an interview with Ellen MacArthur, posted on the web Ellen MacArthur Foundation (9 min): <https://youtu.be/NBEvJwTxs4w>
- Another approach to the Circular Economy is found in the video **The Circular Economy** from the World Economic Forum <https://www.youtube.com/watch?v=prJTB19dnaU&t=1s>
- Europe's Circular Economy Action Plan**, explains the framework for the Circular Economy developed in the European Union, to help decarbonize the industry. It focuses mainly on 7 key value chains. <https://www.youtube.com/watch?v=9cajOuFDA54>
- The circular economy: A €4.1 trillion opportunity?** explores the potential of the new business models based on the Circular Economy <https://www.youtube.com/watch?v=uPBVk4kRMDM>
- Students must reflect and understand the Butterfly Diagram (biological and technical cycles). [The Butterfly Diagram: Visualising the Circular Economy \(ellenmacarthurfoundation.org\)](https://ellenmacarthurfoundation.org)
- Waste food problem (1 min): <https://youtu.be/hmc3tIFfkyc> (1)
- Big Food Redesign Challenge: It's time to redesign food for nature to thrive** ([ellenmacarthurfoundation.org](https://ellenmacarthurfoundation.org))
- Butterfly Diagram. Ellen MacArthur Foundation.



## 2. UNIT 2 – TAKE AND MAKE

In this unit, we will talk about two fields of action of the circular economy: Take, the selection of the raw materials, and Make, the process of manufacture.

### 2.1. Introduction to Unit 2

- 2.1. Introduction to Unit 2
- 2.2. Lecture “Take”. Slideshow
- 2.3. Video: Episode 1: The beginning: using unwanted or Forgotten materials (EMAF)
- 2.4. Lecture “Make”. Slideshow
- 2.5. Video: Episode 2:
- 2.6. Case Study: NEFFA
- 2.7. Case Study: 3 Quarters (Main case and Questions)
- 2.8. Glossary Readings
- 2.9. Multiple-Choice Test Unit 2
- 2.10. Extra Resources

In this unit, we will talk about two fields of action of the circular economy: Take, the selection of the raw materials, and Make, the process of manufacture.

To explore this topic, besides the presentations for the lectures, we have selected some case studies that illustrate the selection of raw materials and two different manufacturing processes. The material for this unit consists of:

- Two presentations
- Two videos
- Two case studies, NEFFA and 3 Quarters, with some questions to guide the reading.
- Reading some entries in the Glossary
- Extra Resources

After reading the presentations, the cases, and the entries in the Glossary, and watching the videos, you will be asked to complete an individual multiple-choice test to self-assess your understanding of the concepts discussed.

Visit the following section for further details and instructions.

### 2.2. Lecture “Take”. Slideshow

In this lecture, you'll be introduced to the world of materials selection, focusing primarily on the profound repercussions of the food and textile industries on our ecosystem. Up to 80% of the environmental impact is determined in the design phase. It is relevant in the fashion and textile sector. Up to 60% of the impact depends on the selection of raw materials.

The criteria for selecting the raw materials are explained, as well as the objectives and benefits. Although the presentation focuses more on textiles, it can also be applied to any sector.

Click here to access the lecture [LM2\_Unit2\_2.2\_Take.ppt]



### 2.3. Video: Episode 1: The beginning: using unwanted or forgotten materials (EMAF)

You can find the video elaborated by the Ellen MacArthur Foundation following the link <https://www.ellenmacarthurfoundation.org/videos/the-beginning-using-unwanted-or-forgotten-ingredients>

In this video, the field of action “Take” is explained using examples of how it is possible to design food products from previously unwanted or forgotten ingredients. Three pioneers in different parts of the world explain how they have been able to produce new food for nature to thrive:

- Vincent, Founder /E.D, Dunia Bora, harnesses the power of invasive species to create cookies and refreshing juices
- Gustavo, CEO, Nutricandies, transforms often discarded parts of the cocoa bean into a rich and nutritious chocolate spread
- Annie and Jonny, Co-founders of Spoon Cereals, creatively repurpose oat milk leftovers and ancient grains to create hearty and nutritious porridge

### 2.4. Lecture “Make”

In this lecture, you'll be introduced to the world of manufacturing circularly, with an overview of the objectives and the possibilities of contributing to decarbonization by reducing water, energy and materials in the processes. Some examples from fashion brands are shown, including facilities, headquarters, factories of the providers and stores. Special attention deserves the chapter Health and Safety in the Fashion Industry, which can be also applied to some processes in the food value chain. To learn the specificities of the food sector, you should read the following entries from the Glossary: Food Safety and Food Security.

The last slides show the avenue that AI can open to new processes of manufacturing and the use of blockchain to register all the steps.

Click here to access the lecture [LM2\_Unit2\_2.4\_Make.ppt]

### 2.5. Video 2: Old Ideas with Modern Thinking (EMAF)

You can find the video elaborated by the Ellen MacArthur Foundation following the link <https://www.ellenmacarthurfoundation.org/videos/old-ideas-with-modern-thinking>

In this video, the field of action “Make” is shown in four examples: The Wild Hare Group, Porcus, Agüita Divina, and Spoon Cereals. They are working on mixing old ideas with modern thinking, changing the processes of manufacturing from a linear to a more circular one.

- Carlos Manzano, Co-Founder of Agüita is revisiting old methods of Tequila production when producing Pulque, a Tequila alternative, to ensure that waste is reduced at every step
- Darren, Nat & SJ at Porcus are battling public perception by jarring their meat-based products to ensure they stay on the shelves for longer.
- Dominie, Founder of The Wild Hare Group is utilizing a traditional farming system that not only leads to better soil health but provides healthier cattle.
- There is an update from Spoon Cereals (see Video 1), who are rethinking their product recipe.

### 2.6. Case Study: NEFFA

NEFFA, New Fashion Factory, is a 3D Fashion Manufacturing based in The Netherlands, that uses Mycelium and other natural materials to develop new garments. The business model is based on the principles of circularity. The company faces a challenge: how can NEFFA be presented as a manufacturing model that appeals to fashion brands?





After reading the case, you will be able to answer the questions proposed in the case and reflect on the challenges they are facing.

### 2.7. Case Study 3 Quarters

3QUARTERS is an innovative sustainable fashion brand founded in 2015, in Athens, Greece. Focusing on upcycled fashion accessories and committed to the principles of sustainable design, they work intentionally on a small scale, reusing discarded leftovers from the awnings manufacturing, and transforming them into beautiful bags and backpacks. The case shows the difficulties (in costs) of small-scale manufacturing and other complexities, such as transportation, penetration in the market (education of consumers), etc. This case offers another example of a circular business model.

After reading the case, you will be able to answer the questions suggested.

### 2.8. Glossary Readings

To better understand the importance of the selection of the raw materials for circularity, and the different manufacturing processes, we recommend the following entries in the Glossary:

- Certifications
- Community supported agriculture
- Eco-design
- Fibers
- Food Deserts / Food Swamps
- Food Safety
- Food Security
- Organic Products
- RAPEX
- REACH

### 2.9. Test

1. When thinking of the best materials for fashion circularity, which are the main criteria (select all the correct answers).

- a. **Reduce material (quantity and amount (number of different materials))**
- b. **Use recycled materials**
- c. **Phase out hazardous materials**
- d. Use scarce and rare materials

2. After watching video 1, which sentence better reflects its content?

- a. There is no chance of food production using discarded food products.
- b. **It is possible to design new food products from unwanted materials –or redesign existing ones – to regenerate nature.**

- c. Dunia Bora in Kenya uses invasive species (banana trees) to produce new cookies.
- d. Currently, cocoa plants are utilized 100% in food products, without options for better profit.

3. A safe product is

- a. **one that under normal foreseeable conditions of use does not present a risk or only minimum risks consistent with a high level of protection for the safety & health of people.**
- b. one that can be modified by the effect on other products, if they can interact.
- c. one that is safe for any kind of user, irrespective of their age and condition.



d. one that does not contain any hazardous substance.

4. The main objectives when thinking of a process of manufacturing in a circular way are (select all the correct answers):

- a. To reduce emissions
- b. To improve energy efficiency
- c. To reduce water consumption
- d. To use chemical products in a safe way

5. After reading the Case Study NEFFA, which of the processes of manufacturing is not addressed:

- a. To use and produce biodegradable materials/products.
- b. To use renewable energy sources
- c. To make-to-order garments, avoiding overproduction
- d. Local manufacturing and a centralized distribution

### 2.10. Extra Resources

1. Read the report [UNLOCKING THE TRILLION-DOLLAR FASHION DECARBONISATION OPPORTUNITY: Existing and innovative solutions](#), written by the Apparel Impact Institute and Fashion for Good in November 2021.
2. Read the Strategy of the EU, [From Farm to Fork](#), which translates many of the postulates of the European Green Deal aiming to make food systems fair, healthy and environmentally friendly.
3. Read the EU [Strategy for Sustainable and Circular Textiles](#), which addresses the production and consumption of textiles in the framework of the European Green Deal.





## Unit 3: Distribute and Use (packaging and delivering, and process of use and conservation)

- 3.1. Introduction to Unit3
- 3.2. Lecture Distribute. Slideshow.
- 3.3. Lecture Use. Slideshow
- 3.4. Case Study: Wawelska Food Cooperative (Main Case and Questions)
- 3.5. Video: Virtual Tour to Amazon
- 3.6. Glossary Readings
- 3.7. Multiple-Choice Test Unit 3
- 3.8. Extra Resources

### 3.1. Introduction to Unit 3: Distribute and Use

In this Unit, we will cover two Fields of Actions of the Circular Economy: Distribute (with the process of logistics and transport), and Use (related to the use and conservation of products or services). To help you delve into this topic, we have prepared a comprehensive array of materials, including:

- Two lectures in slideshows
- A glossary of key terms
- Some videos with explanations and best practices, including a Virtual Tour to a Logistics Provider.

After engaging with the lecture, knowledge clips, and glossary entries, you will be prompted to complete a multiple-choice test to assess your understanding. For further details and instructions, please proceed to the next section.

### 3.2. Lecture “Distribute”. Slideshow

This PowerPoint, prepared by Prof. Dr. Silvia Pérez-Bou from ISEM Fashion Business School, University of Navarra, offers an overview of the Delivery system for a Circular Economy: objectives, main goals, challenges (geopolitics, last mile, and returns) and some examples of different systems, mainly from the fashion industry. Some examples of the problems with packaging and new trends of packaging-free are shown. In case you have time to go deeper on the topic, some academic papers and reflections are suggested to illustrate the data.

Please, watch the slides [LM2\_Unit3\_3.2\_Distribute.pptx] and then proceed to the next lecture.

### 3.3. Lecture: Use. Slideshow

This PowerPoint, prepared by Prof. Dr. Silvia Pérez-Bou from ISEM Fashion Business School, University of Navarra, explains briefly some aspects about the Field of Action “Use” in the Circular Economy. It is mainly focused on fashion. Apart from some characteristics of fashion design to make easier to use for a long time (design for durability, resistance, emotional durability, etc.), in this unit the reuse (through rental and second-hand services) is explained. For food, we are not users but consumers, and some concepts or strategies as durability easy maintenance, etc. cannot be applied. The idea of “servitization” is applied to many new business models based on food choices and delivery.

Please, watch the slides [LM2\_Unit3\_3.3\_Use.pptx] and then proceed to the next reading.

### 3.4. Case Study: Wawelska Food Cooperative

Wawelska Food Cooperative is an informal network consisting of consumers, producers and food processor, who aim at establishing more sustainable, shortened food production and supply chain. It is based in Krakow (Poland). In this case, many concepts around distribution (the ways of shortening supply chains, etc.), users



and members of the cooperative, motivations to join the network, the role of physical space in distribution, zero-waste, reuse and packaging are put in practice. The questions regarding Circularity and zero-waste are critical to guide the lecture of this case, for the purpose of this Learning Module 2: Circularity.

### 3.5. Glossary Readings:

To better understand the importance of the setbacks and challenges related to the delivery process and the options available for reusing with different business models, we recommend reading and thinking of the following entries in the Glossary:

- Click and collect
- Glocalisation
- Packaging-free
- Proximity
- Second hand
- Sharing
- Short Supply Chain
- Vintage
- Zero-waste

### 3.6. Multiple-Choice Test Unit 3

1. Distributing in the circular economy means:

- To prepare a logistics system based on concentric routes.
- To adopt circular and spherical packaging for products.
- An easy system of delivery based on optimization.
- Bringing a product to consumers while having the smallest possible environmental impact.**

2. To design a good process of distribution, we need to think of (select all the correct answers):

- Reducing packaging**
- Using reusable containers**
- Using only cardboard boxes
- To design containers and packaging in a way that improves logistic efficiency.**

3. Which are the approximate internal dimensions of an ISO standard container of 20 feet?

- 5.9 m (length), 2.4m (width), 2.4 m (height)**
- 5.9 m (length), 1.5m (width), 3.0 m (height)
- 7.9 m (length), 2.4m (width), 2.6 m (height)
- 11.9 m (length), 2.4m (width), 2.8 m (height)

4. The Digital Product Passports are:

- Labels attached to the products containing information for the customs
- Required in the Ecodesign Regulation, containing essential information for product's sustainability and circularity for customers and producers**
- QR codes with AI and AR about the products
- None of them

5. Wawelska Food Cooperative:

- Is a supermarket based only on vegan and vegetarian options
- Is a social company recruiting people in risk of exclusion







- c. Has a packaging-free system and is based on voluntary work
- d. Has a commitment of not using any kind of plastic as containers

### 3.7. Extra Resources

- Video: Virtual Tour to Amazon:

You can sign for a [Virtual Amazon Fulfillment Center Tour](#), where you will be engaged in a combination of live streaming, videos, and real-time Q&A for 45 minutes, to know more and better understand the process of logistics of a big company operating worldwide. Once you have watched the video, you can think (or discuss in group), about the problems and advantages of this delivery process.

- Das Gram Case Study: It is a cooperative in Graz (Austria), focused on organic and local food producers, and packaging-free deliveries. You can read the case and reflect on the main questions and challenges.





## Unit 4: Recover (repair, reuse, remanufacture, recycle)

- 4.1. Introduction to Unit 4.
- 4.2. Lecture “Recover-Recycle”. Slideshow
- 4.3. Glossary Readings Unit 4
- 4.4. Case Study. Mending for Good
- 4.5. Multiple-Choice Test Unit 4
- 4.6. Extra Resources

### 4.1. Introduction to Unit 4.

This unit tackles the fifth Field of Action of the circular economy: Recover, recycle, etc. The rationale behind this field of action is to maintain the value of products and components as longer as possible and reduce the amount of waste. The idea of this unit is to show how fashion and food should be managed in a circular way in the end-of-life stage. A crucial concept is the “Hierarchy of Waste”: waste should be prevented; if not possible, should be reduced; if not possible, reused for other purposes, or, if it cannot be reused, recycled as much as possible. Once these steps have been taken, the rest should be disposed into a landfill. The “Butterfly Diagram” shown in the first unit of this Learning Module exemplifies the hierarchy, through different circles: repair, share, reuse/remanufacture, recycle.

### 4.2. Lecture “Recover-Recycle”. Slideshow

This PowerPoint, prepared by Prof. Dr. Silvia Pérez-Bou from ISEM Fashion Business School, University of Navarra, explains briefly some aspects about the Field of Action “Recover” in the Circular Economy. Starting from the Hierarchy of Waste, it follows different circles. Repair is the first loop of the Circular Economy diagram. A Directive was released in June 2024 by the European Parliament, promoting the right to repair goods. It is useful also for fashion companies, which had adopted practices of repairing year ago (Patagonia, Nudie Jeans, Zara, etc.). A video explaining the origin of this initiative is shown. Reuse in fashion is promoted until Second-hand options. Although some explanations were given in Unit 3 (when explaining the field of action Use), some other platforms and examples are shown here. The process of remanufacture, third loop of the Butterfly Diagram, is also applied to the fashion industry, with brands as Nike or Camper being good examples. Finally, the fourth loop is for recycling: when nothing else can be done to obtain value of a product or its components. Some steps for the process and videos from the recycling textile process complete this unit. Fashion and food are linked in recycling: waste food is used for creating new fibers, and containers coming from the food industry (beverage), have been traditionally recycled to make recycled polyester. Recently, the European Union is promoting the textile-to-textile recycling.

Please, watch the slides [[LM2\\_Unit4\\_4.2\\_Recover.pptx](#)] and then proceed to the next reading.

### 4.3. Glossary Readings Unit 4

At the final unit of this Learning Module, the main concepts of Circularity have been mastered. Before finishing it, we address you a final invitation to reflect about our patterns of consumption. The reading of these entries can be inspiring for change.

- Consumerism and Sustainable Consumption
- Behavioural change
- Recycle
- Life Cycle Assessment





#### 4.4. Case Study. Mending for Good

Mending for Good is a consultancy service working mainly for the fashion sector, based in Milan, aiming to address the overproduction for fashion brands. It offers creative and ethical solutions to overstock.

This case can be used for many purposes and highlights important aspects of sustainability: the transition to a sustainable production, how to create networks in proximity, etc. For this unit, it is especially relevant the creative approach to waste and craftsmanship. The challenges that in terms of viability face this kind of organizations are also explained.

After reading the case, please reflect and answer the questions proposed in the section: a) Transition to sustainable production.

#### 4.5. Multiple-Choice Test Unit 4

1. Recycling is:

- a. The most suitable process to recover value from discarded products.
- b. A process to recover some value from discarded material when we cannot reuse, repair or remanufacture more.**
- c. A very expensive process that is not giving good results due to the low commitment of users.
- d. The best option in the circular economy.

2. According to the manager of Mending for Good case, waste-washing means:

- a. Fashion brands pass on what they no longer want to the cooperatives as a charity, but no to help them make business**
- b. Fashion brands wash their trash before donating it to the charities
- c. Textile waste can be used only when it is in good condition and is fully traceable
- d. Handling with waste is very profitable, although it is not well communicated

3. What is Honest Fashion, according to the artistic director of Mending for Good:

- a. A system of fashion in which all the workers in the value chain are guaranteed safe conditions
- b. Fashion committed against greenwashing
- c. The connection between fashion and craft with a framework that recognizes the value and the importance of safeguarding both people and the planet**
- d. Fashion based on the traceability and transparency of its value chain

4. The Right to repair applies to: (select all the true answers)

- a. The right to repair during the legal guarantee period**
- b. The right for vendors to change pieces of components and updating them
- c. The right to repair after the legal guarantee has expired**
- d. The right for consumers to repair products themselves**

5. Remanufacture means:

- a. A process of manufacturing in which there is a 40% of recycled material
- b. Mixing virgin and recycled material for creating a completely different object
- c. A process of manufacturing using discarded material obtaining a low-quality product
- d. Reusing components of pre-owned products, combining them with new parts to make a product with both looks and perform as new**

#### 4.6. Extra Resources





Co-funded by  
the European Union



Once you have studied the previous units and taken the tests, we recommend watching the documentary [Closing the Loop](#) (90 min). It showcases many examples of best practices in circularity, across the world. The knowledge you may have acquired will be useful to better understand the initiatives and tools they have developed in each one of the selected industries that appear in the movie. You can take notes and compare and discuss them with other friends who are involved in the same Learning Module 2: Circularity.

After taking this Learning Module, we hope you have learnt and be inspired with the content and committed to become an agent of change for circularity in our society.



UNIVERSITÀ  
CATTOLICA  
del Sacro Cuore



Universidad  
de Navarra

**Radboud University**  
Nijmegen, the Netherlands



JAGIELLONIAN UNIVERSITY  
IN KRAKÓW

**SFG**  
NEUES DENKEN. NEUES FÖRDERN.

**ACCIÓN  
LABORAL**

**altomercati**

**envolve**  
ENTREPRENEURSHIP