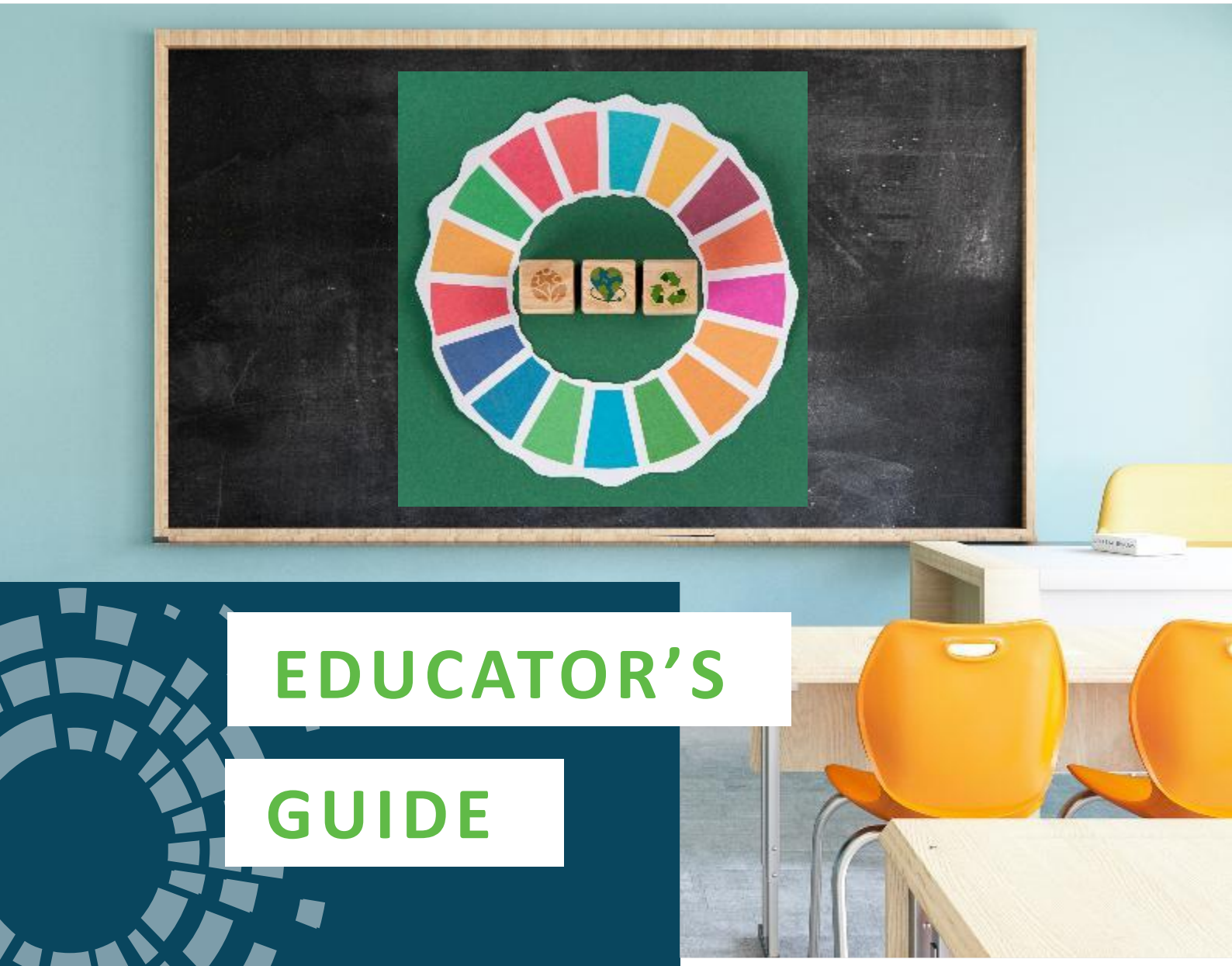
waste2worth
creating circular communities



EDUCATOR'S GUIDE

Co-funded by the European Union

2025
Educators Guide

By
W2W Consortium

CONTENTS

Co-funded by the European Union

This project has been funded with support from the European Commission. The author is solely responsible for this publication (communication) and the Commission accepts no responsibility for any use may be made of the information contained therein. In compliance of the new GDPR framework, please note that the Partnership will only process your personal data in the sole interest and purpose of the project and without any prejudice to your rights.

01 | INTRODUCTION

Welcome to the Waste2Worth Educator's Guide! This guide has been designed to provide you with the resources and strategies needed to effectively deliver this training course using OPEN EDUCATION RESOURCES (OERs). Whether you are an experienced trainer/teacher or new to teaching, this guide will support you in creating an engaging and impactful learning experience for your students.

Objectives of Open Education Resources (OERs),

The main objective is to provide educators & teaching staff with **new pedagogic approaches and teaching resources** so that Food SMEs are equipped with new skills & knowledge concerning valorising waste and circularity for sustainability and empowered to face challenges in their professional careers in their sectors. A further goal is to enable SME's and future generations to develop the practical skills & competences to become agents of change for climate action through their professional careers.

The ultimate aim is to deliver a CAPACITY BUILDING PROGRAMME in VET (& HEI) education.

Course Overview

The Waste2Worth training course is a comprehensive training programme aimed first at teachers and trainers with the objective to provide them with new methods and contents to enable a transformation in the sector. Secondly, the course is aimed at the final beneficiaries: students and SME's of the food and catering sector with the goal to improve their skills & confidence to foster and promote sustainable thinking, methods and practices by gaining access to food circularity, bioeconomy and sustainability education & subsequently have an impact on the SDGs and therefore also promote sustainable food production and consumption.

01 | INTRODUCTION

Learning Objectives:

1. Teachers/Trainers: Thanks to this course teachers and trainers will become more knowledgeable and prepared to modernize their teaching. They will be able to adopt new pedagogical strategies which enable a more student-centred focus and more effective development of transversal skills, in this case, critical & innovative thinking. They will also be equipped to integrate new teaching and content almost immediately in a way that complements their existing curricula.

The curriculum is structured to include a mix of theoretical knowledge and practical application, ensuring that learners can immediately apply what they have learned.

2. Students/SME's: They will participate in new types of learning experiences, develop their sustainability & innovation competences and will consequently become confident in their role to take on challenges and act as changemakers within their businesses and for the wider community

01 | INTRODUCTION

Guide Structure

This guide is organised into the following sections:

1. **Overview of the Project:** Outlines the project idea, its objectives and activities
2. **Meet the partners:** presents you the professionals involved in this project
3. **Course delivery options** refers to the methods used to design, deliver, and assess courses.
4. **Teaching approaches:** Teaching approach is a set of principles, beliefs or ideas about the nature of learning, which is translated into the classroom
5. **Artificial Intelligence:** Provides an introduction to AI in teaching and some tools which can be useful for the delivery of the course.
6. **Teaching Tips:** you will find some useful suggestions and advise for your teaching.
7. **Overview of the Modules:** each overview contains the learning objects, an overview of the contents, suggested case studies, exercises, videos and further readings

Using This Guide

We recommend that you read this guide thoroughly before beginning the course. Familiarise yourself with the modules and resources, and feel free to adapt and change the materials to better suit your teaching style and the needs of your participants. Keep in mind, the goal is to create a dynamic and supportive learning environment where all participants can thrive.
We hope you find this guide helpful and inspiring.

02 | THE PROJECT

Waste 2 Worth is a forward-thinking European initiative that addresses one of the most pressing environmental and economic issues of our time: food waste. At its core, the project aims to empower vocational educators and small to medium-sized enterprises (SMEs) in the food production sector with the tools, knowledge, and confidence to drive change toward a more circular, sustainable economy.

Turning Food Waste into a Resource for Learning & Change

A Mission Rooted in Action

The mission of Waste 2 Worth is clear: to build the capacity of educators and agri-food SMEs to manage food waste, valorise waste streams, and implement circular practices that unlock both environmental and economic value. By equipping those closest to food production with innovative, accessible, and practical resources, the project supports a vital shift in how we view and handle waste.

This transformation is not only technical but also educational. By changing mindsets, fostering collaboration, and providing practical solutions, Waste 2 Worth helps turn waste into worth—economically, socially, and environmentally.

Vision for Sustainable, Inclusive Change

Waste 2 Worth envisions a food system where waste is no longer seen as an inevitable by-product but as a valuable resource. The project supports long-term sustainable development by advancing key EU priorities: environmental protection, digitalisation, and inclusion. Through a focus on vocational education and training (VET), it promotes responsible consumption, climate resilience, and innovation in bioeconomy practices.

Aligned with the United Nations Sustainable Development Goal 12 (Responsible Consumption & Production) and the EU's Farm to Fork Strategy, the project delivers real solutions to systemic challenges—bridging the gap between policy and practice, and between the classroom and the field.

02 | THE PROJECT

From Research to Ready-to-Use Resources

At the heart of Waste 2 Worth is a comprehensive set of Open Education Resources (OERs) tailored to the needs of educators & food SMEs. These include:

- A curriculum of **12 modular topics**, covering everything from resource efficiency and innovation to marketing and compliance.
- An **educator's guide** and **learner workbook**, designed for flexible use across digital, hybrid, or in-person learning environments.
- A **compendium of good practices**, **regional waste-stream maps**, and **design-thinking tools** to support place-based, learner-driven innovation.

Each element has been developed in response to real gaps identified by stakeholders, chief among them, the lack of quality educational materials on food circularity.

Building Skills for a Circular Future

Food waste is not just a loss of food—it is a loss of water, energy, labour, and biodiversity. Across the EU, approximately **88 million tonnes** of food are wasted annually, with SMEs contributing to 42% of that figure. Yet the vast majority of this waste is avoidable.

Waste 2 Worth takes a strengths-based approach, helping communities and businesses recognise waste streams as opportunities for innovation, entrepreneurship, and local resilience.

Through a structured learning journey, learners and educators alike explore how to design out waste, extend resource life, and implement circular business models with real impact.

03 | MEET OUR PARTNERS

Our choice of participant countries was not accidental: spanning Ireland to Finland, Spain, and Italy, we are inclusive of Nordic, Mediterranean, and Western European food cultures. By working together, we are developing resources that better reflect **a European approach to food waste management and innovation through ethical and sustainable approaches**. We have the powerful opportunity to bring together the best of innovative teaching approaches, food valorisation innovation, and sustainability practices as the basis to create wholly new and innovative content and pedagogies that will stimulate learning and teaching practices in the food sector to tackle societal challenges.

Our partnership is motivated by the fact that all target group's participation in decision-making is good for the planet: By meeting needs & investing in skills training for these target groups & adding climate action leadership we will consequently **elevate the visibility, leadership & collective impact of educators, primary producers and Food SMEs**, leading to a more sustainable future for EUROPE.

By sharing our unique perspectives and strengths, the Waste 2 Worth resources will be more responsive and effective in diverse scenarios, rather than being narrow and prescriptive.

MEET THE EXPERTS

Pablo Moreno

Role: Project Co-Ordinator

LinkedIn

Key Skills: Pablo holds a Master's degree in European Affairs from the University of Bologna. His passion for EU policy has shaped a career dedicated to advancing European funding programmes that foster regional development and sustainability. He began by advising regional administrations on the strategic use of EU structural funds, gaining deep expertise in cohesion policy and its role in driving sustainable territorial growth.

Over the years, Pablo has specialised in the management and implementation of European collaborative projects—including Erasmus+, Interreg, ERDF, and ESF+—with a strong orientation toward sustainability. His work spans key thematic areas including green economy strategies, sustainable food systems, food safety, traceability frameworks, and food waste avoidance. Through these projects, he has also supported the development of vocational education and training, innovative entrepreneurship, and transformative learning methodologies. Currently at BIA Innovator Campus, Pablo coordinates EU-funded initiatives that promote innovation and sustainability in the agri-food sector. As Lead partner to this project, he ensures the project is efficiently delivered, aligned with European policy goals, and generates tangible, long-lasting impact for regions, communities, and stakeholders.

What they do…

BIA Innovator Campus, situated in Co. Galway (Ireland), stands as Ireland's premier National Centre of Excellence for start-up, micro, and small food businesses. The campus offers state-of-the-art facilities, including food-grade production units, innovation kitchens, training centers, and collaborative workspaces. This infrastructure is designed to support the entire food production journey, from concept to market, fostering innovation and entrepreneurship in the agri-food sector.

From its inception, BIA Innovator Campus has embraced a strong European Outlook, actively participating and leading several EU-funded projects that align with its mission to promote sustainability and innovation in the food industry. EU BIA Team, of which Pablo is proudly a part, coordinates over 6 Erasmus+ and 3 Interreg projects, while developing partnerships for future opportunities.

Through these initiatives, BIA Innovator Campus not only contributes to regional and national agri-food development but also plays a pivotal role in shaping sustainable food systems education across Europe.

MEET THE EXPERTS

momentum
[educate + innovate]

Orla Casey

Role: Managing Director of Momentum

LinkedIn

Over the last 20+ years, Orla Casey has built a solid reputation for economic development vision and action, innovative problem-solving, transfer of innovation, and delivery of game-changing projects both at an Irish and European level.

Paula Whyte

Role: Project Co-ordinator

LinkedIn

Key skills: Paula holds a BSc in Food Science (UCC) and has 20+ years' experience in the agri-food sector and food systems, specialising in skills development, innovation, and sustainability. She holds a Postgraduate Certificate in AI for Business (UCD), a Green Belt in Lean & Six Sigma, and a Postgraduate Certificate in Innovation & Enterprise Development (TCD).

Paula served as an industry assessor in the validation of a new food redistribution programme at ATU Sligo. As head of Momentum's food team, she is passionate about bridging skills gaps, leveraging AI for transformation, and driving sustainable change through innovative education initiatives.

What they do…

Momentum is an award-winning Irish educator focused on developing progressive learning programmes (course curriculum and content development) and platforms for education, with a special focus on adult – further education in sustainability & digital skills. Their experienced team helps educators and SMEs respond to the dynamic and changing needs they experience and thus Momentum aims to provide more sustainable employment and futures to adult learners. They train and mentor hundreds per annum, and they advise networks and policymakers.

Momentum also has a strong marketing and dissemination division specialising in brand development, content generation, communication strategies, digital media, and social media, attracting high-profile attention to their programmes. Momentum is very proud of its role in developing the Waste 2 Worth brand which is carried through the project, along with the website build and management, which showcases and acts as an information hub for Waste2Worth

MEET THE EXPERTS

SAVONIA
UNIVERSITY OF APPLIED SCIENCES

Anna-Maria Saarela
Role: Project Coordinator from Finland
LinkedIn
Key skills: Anna-Maria has been a senior research lecturer at SUAS for 25+ years. She has specific competence, for example, in the collaboration of international projects, food product development, consumer behaviour, consumer food, and multidimensional research approaches. She has developed an internationally recognised method called *verbal-analysis-protocol* combined with wireless audio-visual observation in real-life settings.
Anna-Maria is a member of the Chemistry Association of Finland, the Association of Clinical and Public Health Nutritionists in Finland, and the Finnish Society of Food Science and Technology.

Dr. Saarela has been a creator of the Future Food RDI unit, along with managing several regional, national, and international projects, for example, under the EU's framework FP7 programme, the project "*Network for the Transfer of knowledge on traditional foods to SME*."
She has long-standing connections in the food industry, especially with Food SMEs and emerging entrepreneurs, and is continuously improving systems and the transfer of knowledge and skills to them.

What they do…

Savonia University of Applied Sciences (SUAS) is one of the largest Universities of Applied Sciences in Finland, with approximately 6500 students and 600 staff members. Savonia is a multidisciplinary institution of higher education, offering approximately 30 Bachelor's level degree programmes. Operations also include adult education and research, development, and innovation activities. Its selected focus areas for research and development are Food industries, BIO AND CIRCULAR ECONOMY, Wellbeing Technology, Water Safety, and Innovative Engineering.

The food sector is an area of specialism for SUAS which is committed to strengthening the vitality of the region and the wellbeing of food businesses through food chain business skills and capabilities, business development, and creating new innovative tools and resources for SMEs to assist them in the green transition.

MEET THE EXPERTS

CDEa:

Irida Tase

Role: Project Coordinator from Spain

LinkedIn

Irida brings extensive experience as a coordinator of Erasmus+ and other EU-funded projects, with a strong focus on green skills, sustainability, & community development. As a VET educator, she integrates practical, skills-based learning with real-world environmental challenges. Having lived and worked across three continents, she has a deep understanding of diverse social & environmental contexts. Her leadership in international collaborations—linking educational institutions, public bodies, & businesses—makes her well-suited to support the goals of W2W in fostering circular economy practices & community engagement.

Leire Urkola

Role: Teacher

LinkedIn

Leire, a VET educator at CDEA, brings valuable firsthand experience from the food industry, where she witnessed the scale of food waste driven by aesthetic standards. She now integrates sustainability, circular economy principles, & ethical food practices into her teaching, prioritising smart menu planning, food reuse, and waste reduction. Through her systems-thinking approach, she empowers future food professionals to make responsible, eco-conscious decisions, making her a key contributor to the W2W project's mission.

What they do…

CDEA has led the way in vocational training in Gipuzkoa, Basque Country, since 1978 and delivers Hospitality, Tourism & Health courses. The college also aims to meet individuals' lifelong learning needs. The broad range of courses brings them into daily contact with the business community and enables them to adapt to the ever-changing skill needs. As a VET provider CDEA recognises the value of training future leaders in the sector, developing their role as changemakers and has benefited from this project by gaining insights, regional best practices, new pedagogic strategies and teaching resources, so that their students as future workers or owners of food SMEs are equipped via new skills and knowledge to valorise waste and promote sustainable thinking, methods and practices The role of their center is to offer access to food circularity, bioeconomy and sustainability education to everyone in the community.

MEET THE EXPERTS

Nadia Glaeserer
Role: Project Manager
LinkedIn
Nadia holds a four-year Master's degree in Educational Sciences from the University of Vienna. She brings over fifteen years of experience in vocational training, rehabilitative, and inclusive education, ten of which have been in leadership roles. Through these positions, she has developed strong skills in organisational management, team leadership, and budget oversight.
Her expertise includes project management, fundraising, and strategic development, further strengthened by a postgraduate qualification in the Management of Social Enterprises, Non-Profit Organisations, and Cooperatives. Nadia has successfully led initiatives as a project manager at Hope Onlus, and as a branch manager, coordinator, and project manager at Fondazione Luigi Clerici.
She is also qualified in the accreditation of training institutions in the Marche Region (DGR 1071/05 – Certification of Competencies for the Supplementary Regulation to the Accreditation System for Training Institutions). Over the past six years, she has coordinated and managed Erasmus+ and other EU-funded training programs.
Currently, Nadia continues to expand FLC's international partnerships, particularly in the areas of sustainability, youth engagement, and vocational education and training (VET).

What they do…

Fondazione Luigi Clerici (FLC) is a private, non-profit Vocational Education and Training (VET) organisation based in Italy, established in 1972. With a network of 30 branches across the country, FLC provides training services to individuals, businesses, and social organisations.
Its mission is to promote social and professional inclusion in the labour market by offering training programmes aligned with current labour market needs.
FLC operates 7 VET centers dedicated to training in the catering sector and 2 centers focused on pastry and bakery training. Recognising the significant issue of food waste in Italy and across Europe, FLC is committed to integrating knowledge and skills related to food waste management into its training programmes. In this context, the W2W project is of particular interest.

04 | COURSE DELIVERY OPTIONS

Considering a variety of course delivery options can significantly enhance the learning experience for students. Different methods can satisfy diverse learning styles and preferences, ensuring that all students have the opportunity to engage with the material in a way that suits them best. Incorporating different delivery options is fundamental for creating a dynamic, inclusive, and effective educational environment. This consideration enables educators to meet the diverse needs of their students, enhance technological advancements, and promote lifelong learning.

The following pages give an overview of a selection of delivery options.

Traditional Classroom Training & Tools required

Classroom training remains one of the most popular training techniques for building skills capacity. Typically, it is instructor-centered face-to-face training that takes place in a fixed time and place. The following table outlines Waste2Worth training tools and their use and additional suggested resources that can be used.

Classroom Tool	Suggested Use in the Classroom	Additional Resources Required
PowerPoint presentation	Training materials are developed in PowerPoint. We suggest that these will be displayed on a large screen for classroom delivery	Laptop/ Computer Projector Large screen / wall
Videos	Videos are used to explain certain sections of the training content and to present case studies for discussion.	Audio / sound system
Exercises	Exercises can be used either as homework activities or as group activities in class. Their use promotes active engagement, practical application of the gained knowledge, and collaboration if used for groupwork.	Whiteboard/Flip Chart/ Big Sheets of Paper Pens/Markers
Case studies	The analysis of Real-World Case scenarios can be analysed by the students and discussed.	Whiteboard/Flip Chart/ Big Sheets of Paper Pens/Markers
Self Assessment Questionnaires	They invite students to reflect on their own skills, knowledge, and attitudes, providing insights into areas for improvement and growth	Google/Microsoft forms/printed versions

04 | COURSE DELIVERY OPTIONS

Online Synchronous Lessons and Tools required

Online synchronous lessons have become increasingly popular. Using online applications such Teams, zoom, Google Meet, or others, instructors and students interact in real-time via the Internet. These lessons offer the benefits of traditional classroom settings while allowing the flexibility of attending classes from any location reducing travel time and costs and accessibility of online platforms.

Online Tool	Suggested Use	Additional Resources Required
Online Platform	Create an online classroom and provide the students with a calendar of the lessons. Make sure that all participants can access the platform	Teams, Zoom, Google Meet
Technology	Online lesson rely on stable internet connections and appropriate software to facilitate smooth communication and interaction.	Each participant needs a Laptop or other surface with stable internet connection.
PowerPoint presentation	Training materials are developed in PowerPoint. We suggest that these will be displayed on a large screen for classroom delivery	Create an online training material depository for example on teams to share materials in advance.
Videos	Videos are used to explain certain sections of the training content and to present case studies for discussion.	Make sure that everybody hears the sound of the videos
Exercises	Exercises can be used either as homework activities or as group activities in class. Their use promotes active engagement, practical application of the gained knowledge, and collaboration if used for groupwork.	Use Breakout rooms to divide the online class in smaller groups. Use online shared whiteboards such as Padlet.
Case studies	The analysis of Real-World Case scenarios can be analysed by the students and discussed.	Use Breakout rooms to divide the online class in smaller groups Use online shared whiteboards.
Self Assessment Questionnaires	They invite students to reflect on their own skills, knowledge, and attitudes, providing insights into areas for improvement and growth	Google/Microsoft forms/printed versions

04 | COURSE DELIVERY OPTIONS

Online Learning

This delivery method utilises Internet technologies embedded in the Waste2Worth learning platform to deliver a broad array of solutions to enable learning. The W2W course is provided as an online learning programme, for direct access by all stakeholders including trainers, students, Food Entrepreneurs/SMEs & employees, on the topic of effective Food Waste Management.
The project platform will be a multilingual, interactive site combining informative resources with this Educator's Guide, and the aforementioned Learner's Workbook, digitalised exercises, and enterprise & innovation skills development activities. Additional suggested reading and multimedia links will also be provided.

Blended Learning

Also known as hybrid learning, it combines traditional face-to-face classroom methods with online educational materials and opportunities for online interaction. This approach promotes the best of both worlds to create a more flexible and effective learning experience. Blended learning offers students the ability to learn at their own pace and on their own schedule, while still providing the structure of traditional classroom learning. It makes learning also more accessible to a wider group of students by including those who may not be able to attend in-person classes regularly. Furthermore, it allows personalisation of learning experiences. Students can put additional focus on areas where they need more help and skip over material they already understand.

Hybrid Lessons

Hybrid lessons combine both in-person and online learning. They offer a flexible and inclusive approach to education since they promote the strengths of both modalities to create a comprehensive and inclusive learning experience. Hybrid lessons provide flexibility, allowing students to choose between attending in-person or online and thus accommodating different needs and preferences. Since this option provides access to lessons regardless of the location, education becomes more inclusive. However, hybrid lessons require a very effective use of technology to ensure seamless interaction and communication between all participants.

05 | TEACHING APPROACHES

Teaching approaches refer to the various methods and strategies teachers/trainers use to facilitate learning. These approaches can be tailored to suit different learning styles, objectives, and contexts. Teaching methods help students:

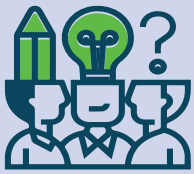
- **master the content of the course**
- **learn how to apply the content in particular contexts**

Trainers and Educators should identify which teaching methods will properly support a particular learning outcome. To make the most appropriate choice, you, as the course facilitator, should consider learning outcomes, student needs, and the learning environment. The effectiveness of the teaching approaches depends on this alignment.

The following table presents different useful teaching approaches, their characteristics, benefits and applicability.

Approach	Characteristics	Benefits	Applicability
Flipped Classroom 	• Students gain necessary knowledge before class; • instructors guide Students to actively and interactively clarify and apply that knowledge during class;	• Students learn more deeply. • Students are more active participants in learning. • Interaction increases and students learn from one another. • Instructors and students get more feedback	Face to face lessons Online Synchronous lessons Hybrid lessons
Discussion-Based Teaching 	• Students are required to sit around a table and are tasked to find new information together, talk, wait for answers, and ultimately think for themselves. • The teacher plays the role of facilitator. • Focuses on critical thinking and exchanging ideas.	• Promotes active learning and engagement. • Helps students develop communication and analytical skills.	Face to face lessons

05 | TEACHING APPROACHES

Approach	Characteristics	Benefits	Applicability
Collaborative Learning 	• Students work together in groups to complete tasks and solve problems. • Emphasises teamwork and peer learning	• Enhances social and communication skills. • Encourages cooperative problem-solving and knowledge sharing.	Face to face lessons Online Synchronous lessons Hybrid lessons by allowing collaboration online Blended learning
Project-Based Learning (PBL) 	• Focuses on real-world problems and challenges using problem-solving, decision-making and investigative skills. • Foresees the presence of a driving question or central concept. • The presence of a task, a process, a product and a reflection. • Students learning through investigation of defined goals supporting knowledge building. • Student-centred projects with teacher facilitation, guidance and/or mentorship. • Projects that have significance to the student.	• Its capacity to engage students in developing self-directed learning skills. • It can be focused on academic, personal or industry problems and involve external stakeholders such as clients or partners • Enhances problem-solving and critical thinking skills. • Provides opportunities for practical application of knowledge.	Face to face lessons Online Synchronous lessons Hybrid teaching by allowing to work on projects online Blended learning

05 | TEACHING APPROACHES

Approach	Characteristics	Benefits	Applicability
Gamification 	Incorporates game elements into the learning process like point systems, leaderboards, badges, or other elements related to games into "conventional" learning activities. Focuses on motivation and engagement through challenges and rewards.	• Increases student motivation and participation. • Makes learning fun and interactive.	Face to face lessons Online Synchronous lessons Hybrid Lessons Blended lessons Online Learning
Differentiated Instruction 	• Tailors teaching methods and materials to meet diverse student needs • Focuses on individual learning styles and abilities.	• Addresses the unique needs of each student. • Promotes inclusivity and equity in the classroom.	Face to face lessons
Game-Based Teaching 	• Involves designing learning activities so that game characteristics and game principles inhere within the learning activities themselves. • Use of games to refresh old concepts or solidify new ones.	• Helps problem-solving • Encourages critical thinking • Increases student engagement and motivation • Introduces situational learning • Addresses special education needs	Face to face lessons Online Synchronous lessons Hybrid Lessons Blended lessons Online Learning

05 | TEACHING APPROACHES

Approach	Characteristics	Benefits	Applicability
Experiential Learning 	• Learning through direct experience and reflection. • Focuses on hands-on activities and real-world applications	• Provides meaningful and memorable learning experiences. • Develops practical skills and knowledge	Face to face lessons Online Synchronous lessons Blended lessons Online Learning
Technology-Enhanced Learning 	• Utilises digital tools and resources to support learning. • Focuses on integrating technology into the curriculum.	• Provides access to a wide range of resources and information. • Enhances interactive and personalized learning experiences.	Face to face lessons Online Synchronous lessons Hybrid Lessons Blended lessons Online Learning
Inquiry-Based Learning 	• Students explore questions and problems, conducting research and investigations. • Focuses on student-driven learning and discovery.	• Encourages curiosity and independent thinking. • Develops research and inquiry skills.	Face to face lessons Online Synchronous lessons Hybrid Lessons Blended lessons Online Learning
Critical and Design Thinkings 	• It emphasises active learning and encourages students to question, analyse, and evaluate information. • It focuses on developing skills like problem-solving, communication, and decision-making.	• Become Future-Ready • Enhanced Creative Problem-Solving Skills • Promote Self-Assertion & Self-Reflection • Enhanced Interdisciplinary Learning	Face to face lessons Online Synchronous lessons Hybrid Lessons Blended lessons Online Learning

05 | TEACHING APPROACHES

Approach	Characteristics	Benefits	Applicability
Lecture Based Teaching 	• Instructor-centered approach where the teacher delivers content through lectures; • Focuses on transmitting information to students;	• Allows to cover a large amount of material in a short time and for structured and organised presentation of content.	Face-to-face lessons Online Synchronous lessons Hybrid Lessons
Storytelling 	• Using a story creates constructive and creative comprehension of the given matter. • A storyline provides the acquisition of new knowledge and skills in a veiled manner.	• It enhances learning and helps students connect more deeply with the material. • It creates a dynamic and inclusive environment that nurtures curiosity, empathy, and lifelong learning.	Face-to-face lessons Online Synchronous lessons Hybrid Lessons Blended lessons
Scenario Analysis 	• It involves presenting students with hypothetical situations or case studies to analyse and solve. • It allows critical thinking, problem-solving, and the application of theoretical knowledge to practical situations	• Enhances critical thinking, practical application, engagement, collaboration, and the development of essential soft skills.	Face-to-face lessons Online Synchronous lessons Hybrid Lessons Blended lessons Online Learning
Framing/ Reframing 	• It involves presenting information in different ways. • It helps students view problems and concepts from multiple perspectives, leading to deeper insights and more effective learning.	• It enhances understanding, critical thinking, creativity, and engagement. • It allows teachers/trainers to create a dynamic and inclusive learning environment that supports diverse learning styles and promotes lifelong learning.	Face-to-face lessons Online Synchronous lessons Hybrid Lessons Blended Lessons

06 | ARTIFICIAL INTELLIGENCE

Benefits for teaching and learning

Artificial Intelligence is innovating education by enhancing both teaching methods and learning experiences. One of its most impactful contributions is personalized learning, where AI adapts content to suit individual students' needs, learning styles, and progress. Intelligent tutoring systems provide real-time feedback and customized explanations, simulating one-on-one instruction. AI offers automated administrative tasks such as grading and attendance, freeing up time teachers' time for more meaningful interactions with students. Interactive platforms, gamification, and immersive technologies like virtual reality improve students' engagement. AI can also be used to analyse student data, in order to get valuable insights that help educators identify learning gaps and tailor interventions. Language translation and accessibility features, provide inclusivity by ensuring all students can participate fully. Furthermore, AI assists in content creation, enabling teachers to generate quizzes, lesson plans, and visual aids efficiently. Overall, AI is a powerful ally in creating more effective, inclusive, and engaging educational environments.

Keep in mind that the responsible use of AI is fundamental to ensure ethical practices, data privacy, and equitable access.

EU Ethical Guidelines on the use of AI in teaching

These guidelines provide clarifications about common misconceptions regarding AI that very often confuse people and cause anxiety and negative opinions over its use, especially in education. They contain ethical considerations and requirements, and practical advice on how to integrate the effective use of AI and data into school education.

Furthermore, they discuss emerging competences for the ethical use of AI and data among teachers and educators, suggesting ways of raising awareness and engaging with the community.

> ***Ethical guidelines on the use of AI and data in teaching and learning are an incremental process of continuous deliberation and learning***
>
> **Expert Group on AI and data in education and training**

Trustworthy AI requirements

Human agency and oversight, including fundamental rights, children's rights, human agency, and human oversight.

Transparency, including traceability, explainability, and communication.

Diversity, non-discrimination, and fairness, including accessibility, universal design, the avoidance of unfair bias, and stakeholder participation,

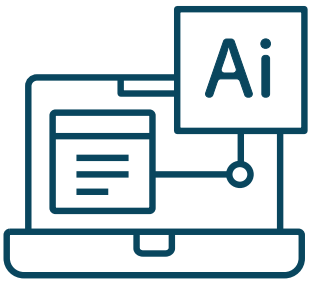
Societal and environmental well-being, including sustainability and environmental friendliness, social impact, society, and democracy.

Privacy and data governance, including respect for privacy, quality and integrity of data & access to data.

Technical robustness and safety, including resilience to attack, security, and general safety, accuracy, reliability, and reproducibility.

Accountability, including auditability, minimization, and reporting of negative impact, trade-offs, and redress.

06 | AI Teaching Tools



Personalised Learning Platforms

- **Khan Academy (Khanmigo)** – AI tutor that helps students with math, science, and more.
- **Socratic by Google (App)** – Uses AI to help students solve problems and understand concepts.
- **Century Tech** – Adapts learning paths based on student performance and behavior.

Assessment and Feedback Tools

- **Gradescope** – AI-assisted grading for assignments and exams.
- **Turnitin** – Detects plagiarism and provides writing feedback using AI.
- **Edulastic** – Allows teachers to create assessments with instant AI-powered analysis.

Language and Accessibility Tools

- **Duolingo** – AI-driven language learning with personalized lessons.
- **Microsoft Immersive Reader -** Enhances reading comprehension with text-to-speech, translation, and grammar tools.
- **Speechify** – Converts text to speech for students with reading difficulties.

AI Teaching Assistants

- **ChatGPT / Copilot** – Assists with lesson planning, answering student questions, and generating educational content.
- **Quizlet** – Uses AI to generate flashcards and quizzes tailored to student needs.
- **Carnegie Learning** – Offers AI-driven math tutoring and feedback

Gamification and Engagement

- **Kahoot!** – AI-enhanced quiz games to make learning fun.
- **Classcraft (APP)** – Uses AI to gamify classroom management and student motivation.

Content Creation and Planning

- **Canva for Education** – AI tools for designing presentations, infographics, and worksheets.
- **Curipod** – Generates interactive lessons and presentations using AI.
- **MagicSchool.ai** – Helps teachers create lesson plans, rubrics, and parent emails.

07 | TEACHING TIPS

01

Definition of common Rules

- Involve the students during the first lesson in defining common rules. Rolling out this activity at the beginning of a course is essential for setting clear expectations and creating a positive learning environment.

02

Defining the roles & responsibilities of professional figures

- This is crucial for ensuring clarity, efficiency, and effective learning outcomes. Common professional roles are: coordinator, tutor, teacher/trainer, IT support etc.

03

Interim and final assessments

- Assessments are a fundamental component of any training course since they serve different purposes which contribute to the overall effectiveness of the learning experiences. First of all, they measure Learning Outcomes by tracking student's progress and by also validating that students have understood the training content and can apply their knowledge. Secondly assessments provide feedback not only to students about their strengths and weaknesses but also to the trainers/teachers about the effectiveness of their teaching methods and materials.

04

Establish a Rapport

- The first five minutes set the tone for the rest of the lecture, and indeed subsequent lectures – get their attention and make the most of it. Make a connection early on; get the students on your side and set a tone. Chat with them as they come in and find out what they are expecting. Introduce yourself at the start of the lecture.

05

Maintain a professional relationship

- Maintaining a professional relationship with students is essential for creating a positive and effective learning environment. Treat all the students with respect regardless of their background, abilities, or opinions. It is important that you maintain clear boundaries between professional and personal interactions. Ensure equal treatment and opportunities for all students. Also, respect students' privacy and confidentiality.

07 | TEACHING TIPS

06

Classroom layout

- Familiarise yourself with the classroom layout and technology before the lesson starts. Make sure that you check acoustics, IT and login protocols, remote controls and ask for IT support should you need it on the day. Classrooms in which you can modularise the setting are beneficial since they promote group work and collaborative learning.

07

Class Size and Engagement Preferences

- Consider adapting your subject matter to your class size, number of students, and learning preferences, even though they apply to most lecture settings. Add variety to enhance student engagement. This improves learning and retention. Students tend to develop critical-thinking attributes and use their knowledge outside the classroom if active participation is facilitated

08

Accessible and Inclusive Learning

- A nurturing, inclusive, and accessible learning environment guarantees that all students have an equal opportunity to have a successful learning experience and gain from the lecture delivery. Try to be aware of any physical/cognitive and learning disabilities, to allow you to provide appropriate tools and learning materials.
- Also, be aware of any language problems. Additional language support or other measures might be necessary to support students with special needs.

09

Lesson Plans

- Lesson plans are a fundamental aspect of teaching since they provide a clear roadmap for what will be taught, how it will be taught, and what goals should be achieved. This helps teachers stay organised and ensures that lessons flow logically. Lesson plans are aligned with learning objectives or curriculum standards. This ensures that each lesson contributes to broader educational goals and student development. Furthermore, with a lesson plan teachers/trainers can allocate time effectively to different parts of the lesson—introduction, instruction, practice, and assessment—ensuring that nothing important is skipped. Well prepared lesson plans allow teachers to anticipate potential challenges and prepare alternative strategies or materials. It also makes it easier to adjust lessons for different learning styles or needs.

10

Time

- Plan enough time for each lesson, in order to make sure that training goals can be achieved. We suggest 1,5 ours for each training modules.

08 | MODULE OVERVIEW

MODULE 1
Introduction to Circular Economy
Initiates the journey, with information & tools to minimise waste, harness circular economy principles, and drive sustainable innovation

MODULE 2
Resource Efficiency
Focuses on strategies for food businesses to optimise the use of materials, water, and energy while minimising waste and environmental impact

MODULE 3
Sustainable Sourcing and Procurement
Deepens the concept of sustainability within procurement and defines & explores different strategies

MODULE 4
Planning & Forecasting
Explores the concept of planning & forecasting food needs, and we study some strategies and tools that help minimise waste

MODULE 5
Inventory Management
Looks at the importance of proper inventory and stock management to fight food waste.

MODULE 6
Redirecting Surplus Food
Explores practical strategies & innovative initiatives for redirecting surplus food within the food system

MODULE 7
Optimising Production Processes
Focuses on the concept of optimisation and how it can be applied to the food sector to prevent and manage waste.

MODULE 8
Innovation & Technology
Explores different types of innovations that are applied in the food sector to optimise processes

MODULE 9
Educating Employees & Customers
Highlights the importance of education and awareness of food waste for all

MODULE 10
Marketing & Storytelling/Sharing
Explores how storytelling can be used in marketing to create strong brand identities & drive customer engagement

MODULE 11
Compliance & Certification
Examines the regulatory & certification landscape shaping food waste management and the circular economy

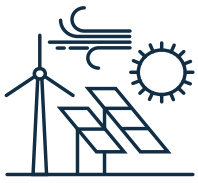
MODULE 12
Evaluation & Impact
Highlights the importance of evaluation and impact assessments in sustainable food businesses

[Learning Journey Download Link]

MODULE 1

MODULE 1	Introduction to Circular Economy
Overview	Module 1 equips SMEs and VET educators in the agri-food sector with the knowledge and tools to minimise waste, harness circular economy principles, and drive sustainable innovation. It examines historical and modern reduction approaches, SMEs' role in circular practices, and the regulatory landscape shaping the bio-based economy.
Learning Objectives	By the end of this module, learners will be able to grasp the concept of the circular economy in the context of food waste, to recognise the value of traditional food practices in reducing waste and to identify the role of SMEs in circular food systems and waste reduction. They will also know key EU policies & regulations supporting circular economy models and be able to explain how food waste reduction aligns with the UN SDGs
Topics Covered	▪ What is a Circular Economy in the Context of Food Waste? ▪ Learning from Our Past: Traditional Practices & Waste Reduction ▪ Role of SMEs in the Circular Economy & Food Waste Reduction ▪ EU Policies & Regulations on Food Waste & Circular Economy ▪ Alignment with SDGs: Food Waste as a Global Challenge
Case Study	DeliKatetxe, a Basque cooperative that transforms free-range hens into high-quality broths, reviving the once-valued tradition of using mature hens while minimising waste
Suggested Exercises	Slide 12 – A Self-reflection on your food habits and practices Slide 24 – Common food products journey and how it could be improved
Suggested Videos / Podcasts	Ellen MacArthur on the basics of the circular economy Ellen McArthur & her podcast on circular economy in the food waste context What is the European Green Deal and why is it important? Jobs and growth in the EU bioeconomy Explaining the Circular Economy and How Society Can Re-think Progress | Animated Video Essay
Further Reading	The Waste 2 Worth Waste Stream Maps The Asia-Europe Environment Forum (ENVforum) Annual Conference 2021, The European Green Deal The Farm to Fork Strategy EU Circular Economy Action Plan EU Bioeconomy Strategy Waste Framework Directive UN Sustainable Development Goals

MODULE 2



MODULE 2	Resource Efficiency
Overview	Module 2 introduces learners to the concept of Resource Efficiency, with a focus on supporting food SMEs to become more sustainable. Using core principles such as the 3Rs (Reduce, Reuse, Recycle), the module explores how efficient resource management can lead to cost savings, environmental benefits, and long-term business resilience. It also highlights how energy efficiency, smart management, and supportive policy frameworks can drive practical change within organisations and communities.
Learning Objectives	By the end of this module, learners will be able to define resource efficiency in the context of food businesses, to apply the 3Rs to reduce waste and use materials and water more sustainably. In addition to this, they will know how to improve energy efficiency through smart practices and how to identify policies and incentives that support efficiency.
Topics Covered	▪ What is Resource Efficiency? ▪ The 3Rs: Reduce, Reuse, Recycle ▪ Sustainable Use of Raw Materials & Water ▪ Energy Efficiency: Saving, Green Energy & Smart Management ▪ Incentives & Policies for Resource Efficiency
Case Studies	Zelai Txiki, a Basque restaurant that turned the challenges of the pandemic into an opportunity for sustainability, transforming into a zero-waste establishment MyGug, an Irish company that transforms food waste into valuable biogas and liquid bio-fertiliser through innovative micro-scale biodigesters.
Suggested Exercises	Slide 17 – reflection on the 3Rs in your Food Business
Suggested Videos / Podcasts	What is Food Waste Valorization and How Does it Contribute to Sustainable Solutions? European Resource Efficiency Knowledge Centre *The Food Fight* Spotlight: RethinkResource on creating value from food waste - The Food Fight | Podcast on Spotify
Further Reading	cicular economy principles Circular economy – Ellen MacArthur Foundation Sustainable Development Goals. Food Waste In Europe Statistics and Facts – eufic The 3Rs framework The Waste 2 Worth Good Practice Compendium Eurobarometer survey Energy Efficiency Directive (EU/2023/1791) A RESOURCE-EFFICIENT EUROPE the Europe 2020 Strategy OECD Policy Guidance on Resource Efficiency

MODULE 3

MODULE 3	Supplier collaboration, Sustainable sourcing & procurement
Overview	This module provides useful materials and knowledge regarding the importance of implementing sustainable sourcing in your business. It offers key explanations and concepts, from an economic, social and environmental point of view, revising challenges and opportunities.
Learning Objectives	Learners will gain a better understanding of the concept of sustainable procurement, and the strategies that can be applied in their business in order to ensure economic, social and environmentally sustainable mechanisms, that will bring long-term profits to their businesses. Moreover, the user will understand the different types of networking and relations, acknowledging the difference between collaboration, coordination and cooperation.
Topics Covered	▪ Sustainable sourcing: basic concepts and key elements ▪ Defining partnerships: differences between collaboration, coordination and cooperation partnerships ▪ Strategies for sustainable procurement ▪ Challenges for sustainable procurement
Case Study	The Rice House Benefit corporation, a small start-up that has become one of the main organic businesses in the rice sector in Italy thanks to sustainable sourcing
Suggested Exercises	Slide 10 - Reflection about the coordinative partnership Slide 18 - Economic, Social and Environmental Sourcing Slide 23 - Questions testing differences in Sustainable Sourcing Slide 28 - Scenario based exercise
Suggested Videos	Sustainable Procurement: It's not just about being green – webinar. Mastering Sustainable Procurement: Essential skills you need to know. Partnerships for change – Fairuz Taqi-Eddin
Further Reading	C.Chauhan, P.Kaur, R. Arrawatia, P. Ractham, A. Dhir (2022), 'Supply chain collaboration and sustainable development goals (SDGs). Teamwork makes achieving SDGs dream work', Journal of Business Research, Volume 147, https://doi.org/10.1016/j.jbusres.2022.03.044. McNamara, M. (2012). Starting to Untangle the Web of Cooperation, Coordination, and Collaboration: A Framework for Public Managers. *International Journal of Public Administration*, *35*(6), 389–401. https://doi.org/10.1080/01900692.2012.655527 H.Zarei, M. Rasti-Barzoki, J. Altmann, B. Egger (2023), 'Cooperation, coordination or collaboration? A structured review of buyers' partnerships to support sustainable sourcing in supply chains', Environmental Science and Pollution Research, Volume 30, https://doi.org/10.1007/s11356-023-2754

MODULE 4

MODULE 4	Planning and Forecasting
Overview	This module explores the concept of planning and forecasting food needs. Furthermore, it provides strategies and tools that help minimise waste, especially at the food production and distribution stages. These practices are essential, especially in canteens, restaurants, and supermarkets, where efficient management can make the difference between maximum resource utilisation and excessive waste.
Learning Objectives	In this module, learners will explore the benefits, challenges, and various types of planning and forecasting. They will also gain an understanding of the advanced technologies used in this field. Additionally, the module provides insights into different strategies for effective planning and forecasting, including optimal quantity determination, strategic use of raw materials, demand forecasting, and sales and operations planning. Finally, learners will examine the risks associated with planning and forecasting.
Topics Covered	• Planning and Forecasting • Types of Forecasting • Advanced Technologies used in Planning and Forecasting • Optimal Quantities • Strategic use of raw materials • Demand Forecasting in the food sector • Sales Operations Planning • Risk Management
Case Studies	**Tuidi** is an Italian startup specialized in using artificial intelligence to optimize inventory management in the retail sector, with the goal of reducing food waste and improving operational efficiency. **Escatafood** uses the waste from anchovy production; that is, heads and bones, to make a Garum, a very intense and flavourful condiment.
Suggested Exercises	Slide 16/17: Understand how seasonality and customer preferences help choose the right products and avoid food waste. Slide 27: Create your own management software Slide 32: Learn how to reduce food waste through creative reuse of ingredients.
Suggested Videos	How Can Blockchain Benefit the Food Industry & Supply Chains
Further Reading	Tuidi — Più vendite, meno problemi di stock con l'AI Recuperiamo Srl Società Benefit Tre startup italiane azzerano lo spreco lungo la filiera alimentare Tuidi: come una startup pugliese risolve lo spreco alimentare grazie all'intelligenza artificiale - Economyup

MODULE 5

MODULE 5	Inventory Management
Overview	This module focuses on the importance of proper inventory and stock management to fight food waste. In particular, it explains the implementation of effective strategies such as FIFO and FEFO and the use of new technologies that automate all processes and keep track of goods in stock
Learning Objectives	Thanks to this module, learners will gain a clear understanding of what inventory management is, how it functions, and why it is essential. They will explore different types of inventory and learn about various inventory management methods. Furthermore, the module provides insights into optimisation strategies and the technologies used to enhance inventory management. In addition, learners will become aware of common errors to avoid when managing inventory
Topics Covered	▪ Types of inventory ▪ Inventory Management Methods ▪ Strategies for Optimization ▪ Technologies to optimize inventory management
Case Studies	Just in time: A company using a Just in Time strategy to address significant inefficiencies. EasyFill TurnLoader is a rotating shelving system designed for efficient inventory management in supermarkets and grocery stores using First In, First Out method. Wasteless is a start-up that has developed an artificial intelligence-based solution to reduce food waste in supermarkets through dynamic pricing.
Suggested Exercises	Exercise Slide 16: Exercises about FIFO and FEFO Exercise Slide 28: Exercise about Smartshopping with IoT
Suggested Videos	• Inventory Management in 11 minutes • TurnLoader™ Multideck FIFO merchandising shelving • Wasteless Dynamic Pricing Technology – YouTube • Unlocking a greener future: How IoT tackles food waste! (
Further Reading	Waste Not, Want Not! 10 Tips for Food Inventory Management Using RFID for Inventory Management: Pros and Cons - Camcode

MODULE 6

MODULE 6	Reorientation of Food Surplus
Overview	It delves into the redirection of food surpluses and climate change, defining and exploring different strategies for the redistribution of these surpluses in the business environment. It shows various initiatives that have been implemented to reduce food waste, promoting innovative and sustainable solutions that encourage the reuse and redistribution of surpluses, in line with the principles of circular economy and sustainability.
Learning Objectives	Learners will understand the definition, causes, and types of food surplus across the supply chain and explore innovative initiatives and strategies for its reduction and redistribution. They will analyse the links between food surplus and climate change, evaluate the role of technology, legislation, and community actions, and assess the challenges posed by strict food regulations. The module also encourages learners to critically reflect on sustainable solutions within a circular economy framework to minimize food waste and promote equity in food systems.
Topics Covered	▪ Definition of Food surplus, types and data ▪ Initiatives for the reduction of food surplus ▪ Climate-change and challenges ▪ Disadvantages of strict food standard regulations
Case Studies	**The ELIKA No Desperdicio programme,** also known as Zerodespilfarro, is an initiative promoted by ELIKA Fundazioa in collaboration with the Basque Government. **Rexcatering** is a comprehensive project focused on the recovery of surplus food from central kitchens and collective canteens. **Recircular** platform offers a space where different companies can register and upload their surplus for free. Using artificial intelligence, it analyses available resources and automatically identifies opportunities for reuse and recycling, notifying companies that could benefit from them. **Plan B** is an innovative initiative launched by the Federación Española de Bancos de Alimentos (FESBAL) to enhance the efficiency of food banks across Spain.
Suggested Exercises	Slide 11,12: Types of Food Surplus Slide 21, 33: Initiatives to reduce Food Surplus
Suggested Videos	Lanzamiento PLANB
Further Reading	European Commission – Date Marking Explanation Feedback Global – Awareness Campaigns Food Waste & Education FAO's "Do Good: Save Food!" Toolkit: Tailored for schools and youth groups. EPA's Food Too Good To Waste: Free curriculum and community templates. ec.europa.eu/

MODULE 7

MODULE 7	Optimising production processes
Overview	This module explores the concept of optimisation and its application in the food sector to prevent and manage waste. Implementing optimisation strategies is crucial for addressing waste at every stage Through a visually engaging approach, this module introduces the conceptual framework, reviews key concepts, and demonstrates how businesses can enhance their processes to improve efficiency in their food production processes
Learning Objectives	The module provides a general conceptual framework regarding what optimisation is – relevant concepts and important definitions such as the bottleneck concept or Waste Management Systems. One of the fundamental aspects of that learners will obtain is what is the optimisation process composed of –data collection, selecting a method, implementing and monitoring. Moreover, this module addresses the best strategies to achieve an efficient production in food-related businesses, according to the procurement, stock and production stages.
Topics Covered	▪ Concept and definition ▪ Optimisation Processes ▪ Strategies for Optimisation
Case Studies	BiaSol: This Irish company is focused on upcycling food waste into nutritious products. The key of their efficiency relies in their optimisation processes: Sourcing from local breweries and establishing long term relationships in procurement: Utilising climate-controlled storage and maximising space utilisation in storage and implementing a demand-driven approach in production Meade Farm Group. This is a great example of a business that has successfully implemented optimisation strategies to reduce waste. In procurement they have ensured to get support from FoodCloud's gleaning network to collect and distribute surplus. This surplus that is not fit for fresh sale, goes to alternative markets in the stock phase, while in production they have implemented strong recycle and reusing mechanisms – such as the starch extractor
Suggested Exercises	Slide 21– Waste streams, Slide 22 - Waste in Business, Slide 23 – Scenario-based exercise Slide 24 – Creating an Action Plan
Suggested Videos	Four Principles Lean Management – Get Lean in 90 seconds Optimising the heat treatment of particulate foods Implementing LOWINFOOD innovations: Software for optimization of bakeries production – from the Horizon project LOWINFOOD

MODULE 8

MODULE 8	Innovation & Technology
Overview	This module will analyse and explore different types of innovations that are applied in the food sector to optimise processes and minimise waste. It provides digital solutions designed for food waste avoidance, including artificial intelligence and smart technology. It also contains important information on the role of Biotechnology in food preservation.
Learning Objectives	The module introduces learners to the transformative role of innovation and technology in the food sector, focusing on how digital tools, AI, automation, and biotechnology address global challenges like food waste, sustainability, and food security. It explores practical applications such as IoT-based monitoring, digital food redistribution platforms, blockchain for transparency, and biotech solutions for preservation.
Topics Covered	▪ Introduction to Innovation and Technology in the food sector ▪ Digital solutions for food waste reduction; Digital Platforms QR codes ▪ AI - Automation and intelligent technology in the food processing ▪ Biotechnology and food preservation
Case Studies	**Winnow**-smart tech automatically records what type of food is wasted. **Limetrack** adds value to food waste by capturing data about it. **Kitro** automates the collection of data on food waste in kitchens. **Oscillium** - biodegradable labels that indicate the condition of the food. **Olio** allows individuals and businesses to share food and other items they no longer need with people nearby. **Fooddiverse** is a platform that directly connects food companies with community organizations to redistribute surplus food of good quality. **ECOFEAST** is a digital platform developed to provide a sustainable solution to food waste. **Get wasted** gets surplus vegetables into soup for Antwerp schools.
Suggested Exercises	Slide 13: Innovation & Technology Slide 29: Digital Solutions Slide 38: AI or Blockchain solution Slide 52: Panel discussion on Genetically modified organisms Slide 54: Building a circular food tech ecosystem Slide 55: Personal innovation log
Suggested Videos/Podcasts	The Spoon Podcast - Podcast - Apple Podcasts(Topics on food tech) 20 Food Industry Technologies That Are At Another Level
Further Reading	How New Technology is Transforming the Food and Beverage Industry IBM Food Trust and Walmart: Ensuring Food Safety and Transparency Dynamic QR ; Smart Packaging Technologies for automating and optimizing food processing An Advanced Inventory Management System Powered by IoT and AI for Real-Time Tracking and Optimization How AI and IoT are Transforming the Food Industry? EATABLE ADVENTURES: Startups and innovations like blockchain in food traceability Is fermentation the secret weapon in a shifting food landscape?

MODULE 9

MODULE 9	Educating Employees & Customers
Overview	This module highlights the importance of education and awareness in food waste management and how to prepare individuals to understand and address the complex environmental, social, and economic challenges our world faces. Through visually engaging content, interactive materials and self-assessment mechanisms, this module provides interesting and valuable learning outcomes.
Learning Objectives	Users will learn about the importance of education and awareness in business, related to circular economy, and the possibilities for raising awareness and changing behaviour that can be applied in life and business to ensure economic, social, and environmentally sustainable mechanisms, which will bring long-term profits to humankind. Moreover, the user will understand the different stages and methods of learning, acknowledging intergenerational learning.
Topics Covered	• Introduction to Education and Awareness in Business • Employee Training and Development Programmes • Intergenerational learning and behavioural change • Methods and stages of learning
Case Studies	Practical circular economy playbook for ambitious companies - Circular Economy business models for SMEs in the manufacturing industries provided by Sitra, Technology Industries of Finland and Accenture Strategy. Circular Economy Competence Badge provides a ready-made, national model for identifying and recognizing expert-level circular economy skills. Raising Consumer Awareness – several links as an example how to learn Methods of learning – several links as an example how to learn
Suggested Exercises	Slide 8-9 - Learn to understand relevant circular economy key definitions. Slide 13-14 - Learn to know implemented results/actions in your region. Slide 24-25 - Learn to know development programmes from your region. Slide 33-34 - Learn to know implemented actions/successful behavioral change programmes in your region. Slide 38-43 - Learn to know educational opportunities/mobile apps/digital tools developed for supporting waste management/behavioural change techniques/awareness campaigns in your region.
Suggested Videos	Learning to change the world! What is social sustainability - Regulatory Compliance Intergenerational Learning in the 21st Century: Importance, Role, Features, and Types Barriers to implementation of circular economy strategies within plastic manufacturing industries Systems thinking and behaviour change in a circular economy Using community based social marketing to enable behaviour change
Further Reading	Circular Economy Alliance. Empowering Communities for Sustainable Change: The Role of Circular Economy. 2023. Tiippana-Usvasalo M et al. The role of education in promoting circular economy. International Journal of Sustainable Engineering. 2023. Turku AMK. Methods for Circular Economy Teaching – Method Guide and Tool Kit. 2019.

MODULE 10

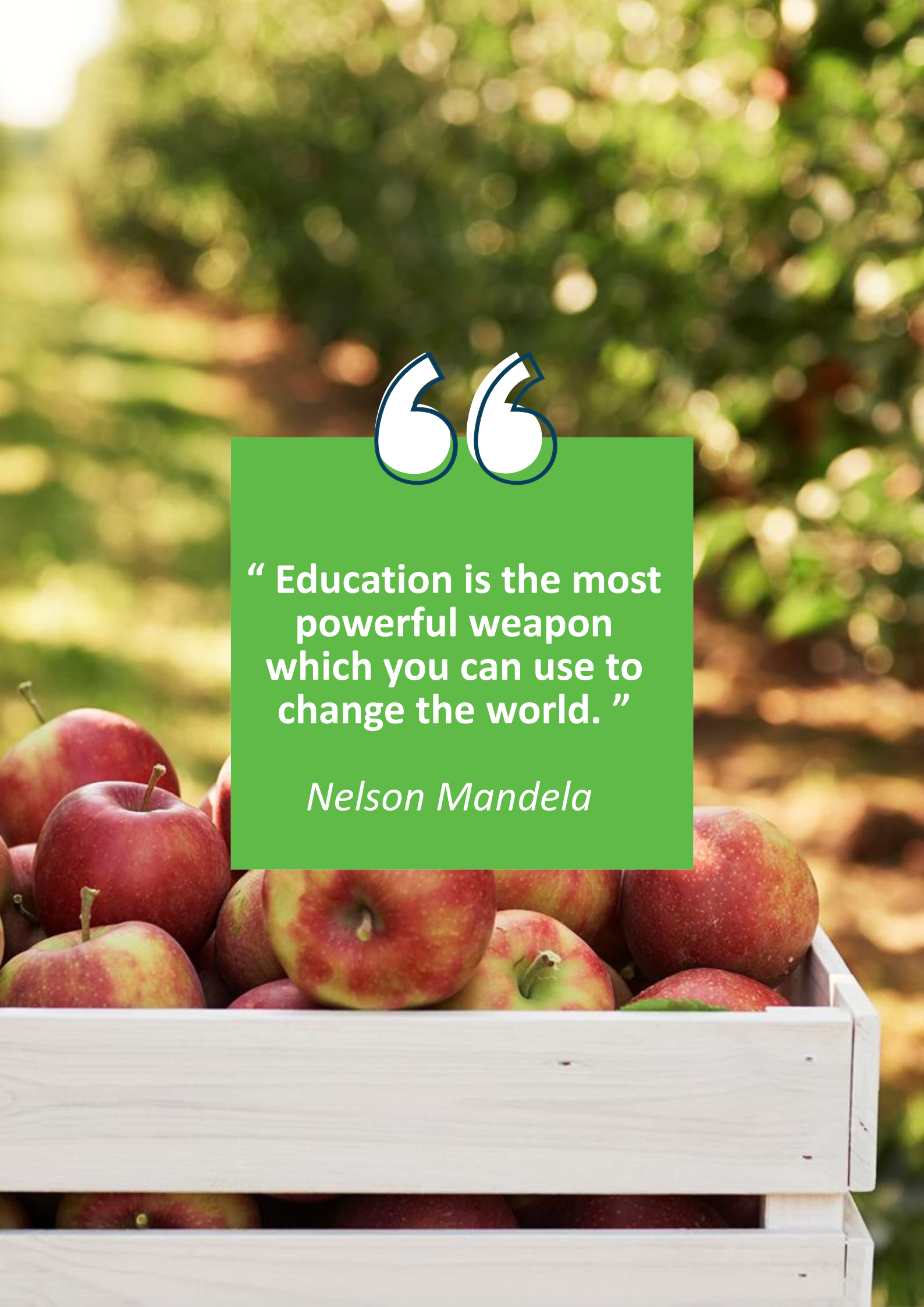
MODULE 10	Marketing and Storytelling
Overview	This module examines the role of storytelling in marketing, highlighting its power to build strong brand identities and enhance customer engagement. By introducing storytelling as a strategic tool, we demonstrate how compelling narratives attract new consumers, boost profitability, and establish a foundation for consistent and predictable sales. Additionally, this module delves into brand development, offering practical tools to strengthen your business's branding. Finally, all the concepts explored will be applied to the issue of food waste, showcasing marketing strategies that amplify your message, supported by real-world examples.
Learning Objectives	This module will provide the learner with impactful learning outcomes as it delves into key concepts regarding marketing and storytelling, specifically tailored to the food waste topic. The learner will comprehend what does storytelling mean and what are the crucial elements for delivering an impactful story. Then, these elements will be transferred into marketing and will explain how can storytelling be a perfect marketing strategy. The learner will also understand the best marketing strategies for exploiting your food waste commitment in your businesses and how can that be turned into a successful marketing tool. Lastly, the learner will be provided with specific branding tools, with advantages and disadvantages explained.
Topics Covered	▪ Introduction to storytelling ▪ Integrating storytelling in marketing ▪ Brand development ▪ Food Waste Marketing approaches
Case Studies	FoodCloud FoodCloud is an example on how efficient is to implement the partnership marketing approach, as they integrate with retailers and social enterprises Orange Fiber this company is focusing on marketing their innovative approach and products, representing this another strategy to enhance branding promotion
Suggested Exercises	Slide 9 – Creating a Story using the elements suggested Slide 23 – Creating a brand using the elements discussed
Suggested Videos	Leaf and Root Farm In this docu-video, Fergal Anderson, the owner of an organic-certified farm tell us his story and how he started his business from a narrative point of view. This video showcase the different storytelling approaches used to transmit Fergal's added value in the farm.
Further Reading	

MODULE 11

MODULE 11	Compliance and Certification
Overview	Module 3 examines the regulatory and certification landscape shaping food waste management and the circular economy. It explores EU and national policies, key certification schemes, and compliance requirements relevant to the agri-food sector.
Learning Objectives	By the end of this module, learners will gain practical knowledge of audit preparation and reporting obligations, enabling you to meet legal standards while fostering sustainability and business credibility.
Topics Covered	▪ European Policies & Regulations ▪ National Policies & Targets ▪ Certification & Compliance Standards ▪ Audit & Compliance Planning ▪ Best Practices & Case Studies
Case Studies	Orbisk and its ability to automate waste monitoring using image recognition & smart weighing, helping reduce food waste by up to 50% Spanish Energy group Calor Renove, which specialises in renewable and ecological energy solutions
Suggested Exercises	Slide 30 – A Scenario -Identify the main issue(s) related to food waste
Suggested Videos / Podcasts	The Business End of Farm to Fork: How can companies help deliver truly sustainable food systems? Waste Monitoring - Orbisk - Hyatt Regency Amsterdam
Further Reading	EU environmental policies and regulations to tackle food waste Waste Framework Directive EU Circular Economy Action Plan European Green Deal, EU Platform on Food Losses and Food Waste (2016) Council Regulation (EC) No 852/2004 on Food Hygiene National Food Waste Prevention Roadmap 2023-2025: of Ireland Finnish Waste Act Amendment (2011/646): Introduced Spanish Strategy More Food, Less Waste Italian Gadda Law (Law No. 166/2016): EU Organic Certification HACCP ISO 22000 B Corp Certification ISO 14001 EMAS

MODULE 12

MODULE 12	Evaluation & Impact
Overview	The module highlights the importance of evaluation and impact assessments in sustainable businesses. By systematically assessing waste streams, we see the positive impact on environmental, economic, and social outcomes.
Learning Objectives	The module provides learners with a general overview of various types of evaluation and impact assessment methods and key performance indicators – relevant examples, case studies and important definitions related to the circular economy and food waste management. One of the fundamental learnings users will obtain is how to evaluate environmental and socio-economic impacts of action in business.
Topics Covered	• Introduction to Evaluation and Impact Assessment • Types of evaluation - formative, summative, process, outcome, impact • Setting Objectives & Key Performance Indicators KPIs • Data Collection Methods for Evaluation • Evaluating Economic Impact
Case Studies	Corporate responsibility tools by Finnish Business & Society – FIBS is the largest corporate responsibility network in the Nordic countries acceleraing responsibility changemakers towards more sustainable world. International Association of Impact Assessment IAIA is the leading global network on best practice in the use of impact assessment for informed decision making regarding policies, programmes, plans and projects. Tools for measuring and developing a company's circular economy performance – SITRA introduces three proven tools for measuring and developing a company's circular economy performance. Digital product passports are a way of bringing together data on product sustainability, raw materials, materials and safety. Sitra introduces a playbook for digital product passports.
Suggested Exercises	Slide 8 - Update your knowledge about the latest publications of International Association of Impact Assessment. Slide 18 - Learn to find required statistics about your country. Slide 22-23 – Determining if methods are quantitative and/or qualitative and finding research articles related to the method.
Suggested Videos	What is impact assessment. What is formative assessment. - Summative assessment. - Outcome evaluation. What is impact evaluation. - Brief Introduction to Developmental Evaluation. - Participatory Evaluation Overview of the Product Environmental Footprint (PEF) method - What is PEF? - What is Life Cycle Assessment? Money Circulating Through An Economy: Economic Impact Analysis - Direct, Indirect, & Induced Effects - What is the Point of Economic Impact Analysis? Investment Analysis Tools - Input-Output Analysis (IOA) - Scenario Analysis. What is a Cost Benefit Analysis. - What is Life Cycle Assessment. - Stakeholder Engagement in 5 Slides
Further Reading	EU. Circular economy: indicators, tools and methods. EU. Environmental Footprint Methods - Calculating the environmental impact of products and service.


“ Education is the most powerful weapon which you can use to change the world. ”
Nelson Mandela

waste2worth

creating circular communities

Follow Our Journey

www.waste2worth.eu

Co-funded by
the European Union